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Food and  
Consumer  
Service

Office of  
Analysis and  
Evaluation

# **Design Considerations in Joint EBT Systems for the Food Stamp Program and Special Supplemental Nutrition Program for Women, Infants, and Children**

**DESIGN CONSIDERATIONS IN JOINT EBT SYSTEMS  
FOR THE FOOD STAMP PROGRAM AND  
SPECIAL SUPPLEMENTAL NUTRITION PROGRAM  
FOR WOMEN, INFANTS, AND CHILDREN**

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## Chapter 1

### INTRODUCTION

Most, if not all State directors of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) are examining the use of electronic benefits transfer (EBT) to deliver benefits to program participants. Much has been written regarding the positive impacts that accrue to all stakeholders through the use of EBT. The Food and Consumer Service (FCS) has sponsored several demonstration projects of EBT technology for delivery of food stamp and cash programs, the results of which have highlighted the many positive impacts of EBT over a paper-based delivery system. To date, however, only one State has tested the delivery of WIC benefits using EBT.<sup>1</sup> A key decision facing each State WIC Director is which type of EBT system should be chosen for benefit delivery. The purpose of this report is to assist State WIC Directors and other policy makers in this selection process.

WIC benefits are traditionally provided in three different ways: home delivery, direct distribution of food, and retail purchase. Benefits are predominantly delivered through retail purchase. Where *home delivery* is available, the deliverer of food items is generally determined through a competitive bid situation. The prescribed food items are delivered to the participant, and the State pays for the items, plus a delivery charge as determined by contract. *Direct distribution* requires the participant to pick up their food items at a distribution warehouse. Through *retail purchase*, specific items and quantities are indicated on paper vouchers or checks. The items listed on these vouchers or checks are referred to as the food prescription, and each prescription includes

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<sup>1</sup> In 1991, Wyoming conducted a small pilot program with benefit access provided by integrated circuit (IC) chip cards, and processing handled off-line. That demonstration illustrated delivery of WIC benefits to a limited number of participants in Natrona County.

In March 1995, Wyoming began operating an EBT system to demonstrate multi-program benefit delivery (WIC and Food Stamp Program (FSP) benefits) to a larger group of program recipients using off-line technology and one IC chip access card per family. Beyond the multi-program demonstration area, WIC benefits will be provided on IC chip cards, with provisions to link other health-related program information to the card (e.g., childhood immunization records).

a valid date range when the items may be purchased. In addition, many States include a maximum dollar value which the retailer can be reimbursed for the food purchase. The maximum value is established by the WIC offices based upon expected prices of items listed in the food prescription. Each method of benefit delivery can be accommodated through EBT.

This report examines a variety of benefit access cards, on-line and off-line processing methods, and provides an overview of functional requirements to consider in establishing the system components based upon WIC regulations and State-specific needs. Since WIC is a supplemental nutrition program tailored to meet the specific needs of individual participants, the food purchases using WIC benefits are restricted to those items approved in Federal regulations which a qualified health professional at a local WIC clinic has determined as appropriate for the participant. The results achieved in this program are critical to the continued health of the participants; therefore, the goals of each State are important factors in creating an EBT system as they will help establish the system's design parameters and dictate the enhancements that can be achieved by each stakeholder.<sup>1</sup> Some examples of these enhancements include:

- reduced time spent by a WIC participant "in the lane "at a WIC retailer site;
- a reduction in retailer and participant fraud related to WIC purchases;
- reducing paper processing and reconciling functions by WIC retailers; financial institutions, and State personnel,
- providing WIC retailers with next business day financial settlement for WIC purchases; and
- enhancing individual nutrition through item level purchasing not available with paper systems.

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<sup>1</sup>Stakeholders include State and local clinic personnel, WIC participants, WIC retailers, and financial institutions. Each stakeholder group should be considered in planning for EBT. Retailers are especially critical in order to ensure that participants have adequate access to their benefits.

## OVERVIEW OF EBT

EBT is an electronic funds transfer (EFT) application which delivers federal and State benefits to recipients by combining automated financial transaction processing with point of sale (POS) terminals, automated teller machines (ATMs), and card access devices. In conjunction with the U.S. Departments of Treasury and Health and Human Services, the Department of Agriculture, Food and Consumer Service, is encouraging the development of systems to deliver multiple program benefits. EBT provides program agencies with an alternative benefit delivery mechanism, replacing paper vouchers, checks, and coupons with benefit accounts and access cards with recipient-selected personal identification numbers (PINs). Because WIC and FSP benefits are restricted to food items, access is only provided using POS devices in authorized retail locations.<sup>1</sup>

### Current EBT Projects and Initiatives

EBT systems have been in use in various areas of the country on a demonstration basis since 1982, and Maryland is the only State to offer a statewide EBT system for the delivery of benefits. Demonstrations have shown the use of magnetic stripe and IC chip ("smart") access cards, on-line and off-line technology, single program and multi-program benefits, stand-alone and integrated processing, and participation ranging from small-scale to statewide. With the passage of the Mickey Leland Memorial Domestic Hunger Relief Act of 1990 (the Farm Bill), use of magnetic stripe access cards with on-line EBT systems became an operational alternative to the paper food coupon system for the Food Stamp Program. In 1993, the Federal EBT Task Force was established to provide leadership in the development of nationwide EBT. Working with States which wish to pursue multi-state EBT systems, a strategy will be followed to create prototype or state-initiated systems which would further refine the characteristics which are inherent in an interstate EBT system.<sup>2</sup>

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<sup>1</sup> Retail stores are authorized to participate in the FSP by the FCS, and authorized to participate in WIC by the State agency.

<sup>2</sup> See Federal EBT Task Force report, "From Paper to Electronics: Creating a Benefit Delivery System that Works Better and Costs Less - An Implementation Plan for Nationwide EBT." May 1994.

The EBT system in Maryland delivers FSP and several cash program benefits through the use of an on-line telecommunications system accessed with magnetic stripe cards. In addition to the Maryland system, on-line EBT systems are operational in Reading, Pennsylvania; Ramsey County, Minnesota; Linn County, Iowa; Bernalillo County, New Mexico; and Camden, Hudson, and Essex counties in New Jersey. Texas and South Carolina are currently in the process of implementing statewide on-line EBT systems. The only operating off-line EBT systems are in Montgomery County, Ohio, where FSP benefits are accessed by approximately 11,000 recipients using smart cards; and as mentioned previously, in Wyoming, which has developed a multi-program off-line system to provide WIC and FSP recipients in selected counties access to their benefits through the use of a smart card at authorized retail locations. Many other States are in various stages of EBT planning and development for WIC and other benefit programs.

## **ORGANIZATION OF THIS REPORT**

This report is comprised of this introductory chapter, three additional chapters, and four appendices. Chapter 2 explores the different types of plastic access cards available in the marketplace, while Chapter 3 discusses the differences between on-line and off-line processing systems reflecting experience gained in Wyoming's design of an EBT system. Chapter 4 highlights some variations in State WIC Program requirements which become integral pieces in the development of an EBT system. Some of these variations include the type of benefit instrument, choice of system vendor, frequency of required nutrition visits, valid date ranges for use of food prescriptions, and maximum values.

The report concludes with four appendices which provide additional information on WIC EBT systems. These appendices address topics as follows:

Appendix A - EBT Design Through Comparison of FSP and WIC Functional Requirements

Appendix B - USDA WIC Program Electronic Benefit Transfer Vision Statement, November 1994

**Appendix C - Wyoming's Approach to WIC EBT**

**Appendix D - Alabama's WIC Financial EBT System Approach**



## Chapter 2

### ACCESS CARD ALTERNATIVES

There are two types of cards which are being used to access benefits in the existing EBT systems: magnetic stripe and IC chip. The EBT program in Reading, Pennsylvania used a "non-standard" magnetic stripe access card in order to accommodate their EBT requirements at the time the demonstration was initiated in 1984. This EBT program, delivering FSP benefits, continues to use "non-standard" cards. Due to the growing acceptance of magnetic stripe debit and credit cards in the retail food industry, EBT systems developed for the delivery of FSP benefits now use magnetic stripe plastic cards which meet industry standards.<sup>1</sup> Also, for projects which deliver cash program benefits (e.g., Aid to Families with Dependent Children) the use of cards which meet industry standards has allowed benefit access through ATMs.

In addition to magnetic stripe and IC chip access cards, States are considering using other technologies including optical memory cards and "hybrid" cards, which combine multiple technologies onto one card. All of these access cards are described in further detail below.

#### **Magnetic Stripe Cards**

Today, consumers are most familiar with magnetic stripe cards which are used for credit and debit transactions. The use of a magnetic stripe has changed the manner by which credit card transactions are processed.<sup>2</sup> It has also opened a new avenue for consumer payment and cash access by enabling the dollar value of a purchase to be "debited" or withdrawn from an account - provided that a sufficient balance exists in the account. In much the same way that the use of the magnetic

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<sup>1</sup> Industry standards for cards are promulgated by the International Standards Organization (ISO).

<sup>2</sup> Prior to the use of a magnetic stripe, credit card transactions were processed by imprinting a paper form with the embossed information from the front of the user's plastic card. Multi-part carbon forms, and later carbonless paper forms, were processed through the payment system to complete the transaction and credit the retail store at which the credit card was used.

stripe has reduced or eliminated the processing of paper associated with credit card transactions, paper food coupons, and their associated processing, have been eliminated in those States using EBT. This concept also applies to accessing cash program benefits (such as AFDC and General Assistance) at retail stores or ATMs, where an EBT card functions like a bank debit card.

The magnetic stripe on the back of the card may contain three tracks of data (the width of the stripe indicates the number of tracks which the card can accommodate). In terms of maximum capacity, Track 1 can carry 79 characters; Tracks 2 and 3 can hold 40 and 107 characters, respectively.<sup>1</sup> Magnetic stripe cards are frequently used with on-line telecommunications systems which access a database; however, some "stored value" applications - where a dollar value is placed on the card and purchases reduce the available card balance - may process transactions in an off-line environment.

From the standpoint of EBT, a magnetic stripe card could be used to carry limited amount of relevant benefit information, based on the storage capacity of the magnetic stripe.<sup>2</sup> The card would be "swiped" through a card reader and the information contained on the magnetic stripe could be displayed on screen or printed for review. A magnetic stripe card could also be used as a key to access a database through on-line communications, in a manner similar to bank ATM networks, for

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<sup>1</sup> The tracks normally operate as follows:

- Track 1 contains cardholder name and identification information of up to 76 alphanumeric characters; three additional characters mark the end of the data on the stripe and tell the terminal that the information has been read correctly.
- Track 2 contains information identifying the issuer of the card; it may also contain the personal identification number (PIN) of the cardholder, in an encrypted format as well as transaction routing instructions for the POS terminal. Thirty seven of the 40 numeric characters are available for use.
- Track 3 may contain 107 numeric characters; 104 available for use, and three reserved.

<sup>2</sup> Most magnetic stripe cards today that meet ISO standards can store up to 250 bytes of information. To compensate for this limited capacity, standard codes could be used to the extent required by the application using the magnetic stripe card.

retrieval of information. In this way, information which would be too large to be stored on a magnetic stripe could be made available to the local benefit provider or recipient.

### Integrated Circuit (IC) Chip Cards

Integrated circuit (IC) chip cards are used extensively in European and Pacific Rim countries, most notably in France where the technology was developed in the early 1970's. Cards with IC chips can perform a wide range of capabilities.<sup>1</sup> While the existing infrastructure in the United States is based upon the use of magnetic stripe technology, IC chip cards can provide restricted access to specific fields of information through the use of different security codes. There are few suppliers and limited experience with IC chip cards in the United States, however, this technology is experiencing increased interest, partially as a means of enhancing the security of information contained on, or accessed by, the card. EBT systems using IC chip cards do not exist for programs which deliver cash benefits due in part to the fact that most ATMs deployed in the United States do not have the ability to handle IC chip cards.<sup>2</sup> IC chip cards can be utilized in either on-line or off-line systems, and

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<sup>1</sup> These cards range from simple memory cards to store and transport data, to sophisticated microprocessor chip cards with internal operating systems, expanded memory (including ROM and accessible memory) and built-in software. Chip cards are generally discussed in terms of the following three categories:

- **Simple memory cards** with an electronically erasable, programmable read-only memory (EEPROM) serial chip with storage of up to 0.125 kilobytes. These cards provide no security at the card level and are used primarily as portable data files.
- **Personalized memory cards** containing an integrated processor and EEPROM memory chip ranging up to 2 kilobytes, accommodating personal identification number (PIN) code and password protection, and having a unique internal serial number.
- **Microprocessor cards** containing processing and memory capability with EEPROM memory in the range of 3 to 32 kilobytes, and the ability to provide a high level of security including internal encryption/decryption and key management. These cards are often referred to as "smart cards."

<sup>2</sup> ATMs are available with dual purpose card readers; however, they have not been widely deployed due to their additional expense and current lack of applications.

terminals are available for both POS and ATM applications. As a means of improving security, IC chips on cards could be used since they cannot be counterfeited as easily as magnetic stripe cards. However, it should be noted that several alternatives are being developed to enhance the security of magnetic stripe cards<sup>1</sup> including the use of photographs on credit and debit cards as a further means of identification.

One of the major drawbacks to using chip card technology is the lack of existing standards surrounding the data layout on an IC chip and the encryption and security functions of the card. This limits the usefulness of the card as some applications may be limited to a "closed" system.<sup>2</sup> Manufacturers are adopting standards set by the International Organization for Standards (ISO) which will make smart cards and their terminals more interchangeable, providing flexibility in the selection of terminal and cards which will be compatible with one another.

### **Optical Memory Cards**

Optical memory cards are plastic cards the size of standard credit cards with a wide reflective optical stripe on one side of the card. The stripe contains information which is "burned" onto the card using a laser. Once data are written onto the card, the data cannot be erased or modified.<sup>3</sup> The inability to erase information mitigates against the risk of data being altered. The card is useful for carrying large volumes of data that do not require frequent updating. The card has the capacity to store up to 16,000 kilobytes of digital information, equivalent to over 1,200 pages of text (depending upon data compression techniques used). There are two types of optical cards: WORM (write once, read many) and ROM (read only memory). Information can be added to WORM cards.

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<sup>1</sup> Watermark Magnetics and HoloMagnetics are alternatives for increasing security on magnetic stripe cards. Although magnetic stripe readers currently deployed are able to read these cards, the increased security provided by these technologies requires enhanced card readers.

<sup>2</sup> The card issuer controls the distribution of card "reader" and "writer" devices that will work with the cards.

<sup>3</sup> "An ABC of Optical Memory Cards (OMC)," Olympus Optical Co., Ltd., Hachioji City, Tokyo, Japan.

Optical memory cards are an emerging technology, and are used in a very limited scale at the present time. These cards have proven to be extremely durable and are capable of storing large amounts of data. Many health-related services envision a great benefit from these cards, despite the need for specialized equipment such as card reader/writers. The optical card reader can be attached to a personal computer (PC) with standard cables, making it ideal for applications which already use PCS in their activity. It is perhaps slightly premature to consider optical memory cards to access social program benefits due to the existing infrastructure used by POS terminals and ATMs. While the WIC Program is health-related, benefits are in the form of food items, and most authorized WIC retailers would be most likely to invest in electronic systems which could accommodate consumer debit and credit card transactions.

There are a small number of companies that make cards and terminals; however, the incompatibility of these cards and terminals does not enable use of one company's cards in another's terminals. One of the touted benefits of the optical memory cards is the "environmentally tolerant" nature of the card; unlike magnetic stripe and IC chip technology, manufacturer's claim that optical strips are unaffected by magnetic and electrostatic fields. Some European countries, including Spain and Scotland, are experimenting with the use of optical memory cards in health care applications.

Standards are currently being developed for data on the card, and similar to chip cards, entrance to particular fields of information can be restricted through the use of different security access codes. Several pilot programs are underway around the world to draw on the extensive data storage capabilities of this technology.

### **Hybrid Cards**

Hybrid cards combine the features of two or more technologies to store or access data. The use of a magnetic stripe card with an IC chip to enhance security is an example of a hybrid card. In addition, many colleges and universities have experimented with hybrid cards containing magnetic stripes, bar codes, and photographs which provide students with a variety of services such as building access, library use, vending and copy services and laundry facilities. While these systems tend to

operate within the school facilities, many have been enhanced to include the use of the cards in commercial ATMs and POS terminals as well.<sup>1</sup> Delaware is the first State to explore the possibility of delivering social program benefits with EBT through the use of hybrid cards, incorporating a magnetic stripe and an optical memory stripe on the access card.

### **Trends and Developments in Card Technology**

In the United States, the predominant card technology used in the EFT networks is magnetic stripe. These cards are used at POS terminals in retail stores to make purchases, and at ATMs to withdraw and transfer funds. As noted above, additional card technologies are available which offer a variety of features. Significant interest in card technologies has recently lead to major developments which are outlined below.

#### ***Developments with Chip Cards***

Chip card technology has recently been gaining recognition through the combined efforts of Europay, MasterCard, and VISA, in developing (joint) standards for chip card applications in the financial services industry. These specifications, referred to as *EMV Joint Specifications*, are comprised of three parts. Part 1 outlines electromechanical characteristics, logical interface, and transmission protocols. Part 2 provides a set of tools that define common sets of data elements and commands. Part 3 defines the flow of transaction processing. Europay, MasterCard, and VISA have all announced plans to adopt microprocessor chip cards as a standard technology over the next few years. These cards may be used in both on-line and off-line systems. The Food and Consumer Service of the U.S. Department of Agriculture has published draft functional requirements needed to facilitate the use of IC chip cards for federal food programs.

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<sup>1</sup> The Department of Defense is testing the use of a multi-technology card called the MARC card.

Several large financial institutions and other organizations are launching major pilot projects to develop pre-paid chip card ("electronic purse") applications that can be used for small dollar value purchases, vending machine purchases, and transit systems. First Union Corp., NationsBank, and Wachovia plan to have one million chip cards in circulation in time for the 1996 Summer Olympic Games in Atlanta, Georgia. One type of chip card will be in the form of a disposable card which will allow individuals to deposit cash into an ATM in exchange for a card holding the remitted cash value. The second card will be for the respective bank's customers and will allow the cardholder to transfer funds from their bank account onto the chip for use in chip card applications. In Delaware, a microprocessor chip card test is planned for early 1996 in which 50,000 cards will be issued by an undisclosed group of participating banks and will be linked to consumers' checking accounts. Cardholders will be able to purchase goods from approximately 150 merchants.

The implication of this new increased emphasis on chip cards for EBT systems development is that the costs of implementing a chip card based system are likely to decrease significantly as the commercial sector adopts this technology over the next several years. It also means that the risks associated with implementing a new technology will decrease as cards, readers, and supporting systems become more reliable and as standards are put in place.

### *Security Issues*

While magnetic stripe cards have been prone to fraud and counterfeiting, various alternatives to enhance security on these cards have been undertaken. The first initiative proposed using a repeating pattern of holographic images (different for each card) which will be read by an optical sensor based on random registration of holographic images to the edge of the card. These images become each card's signature or key code. This code is written to the magnetic stripe at the time of initial encoding and read when each transaction is performed, comparing the code and stripe for validity. For this reason, if data is re-encoded to a standard stripe, the signature of the stripe and the encoded code will not match.

Watermark Magnetics, only possible on low-coercivity magnetic stripe cards, utilizes a special magnetic code that is placed on the stripe during the production phase. This code is created by orienting the magnetic particles into a specific patterned stripe and, later, encoding this stripe in the same method as a normal stripe. The regular encoded data can be read with standard readers, however, the specially created stripe must be read with a separate reader head, aligned at an angle.

Recent initiatives to take photographic images and compress the data to fit onto a magnetic stripe are currently being explored to enable visual identification of card users. This technology stores the image on the third track of the magnetic stripe. Many of the POS terminals which read magnetic stripe cards do not read the third track; however, new terminals are equipped with this capability and the old terminals may need to be replaced as a general course of business.

## Chapter 3

### PROCESSING ALTERNATIVES

Two technological approaches to EBT processing have been demonstrated to date: on-line and off-line. In an on-line system, a message is telecommunicated to a central database for authorization of the transaction. In an off-line system, the transaction is authorized by the card and terminal without the need for external communications. Traditionally, the on-line EBT systems have employed magnetic stripe cards (both conforming to plastic card standards as well as non-standard cards); off-line EBT systems have used IC chip access cards. On-line systems, however should not be thought of as only magnetic stripe card systems, nor should off-line systems be referred to as "smart card" systems. The type of access card does not necessarily characterize the processing system; rather the distinction should be made on the basis of how the transaction is authorized. Both processing systems are functionally similar from the recipient's point of view, though many aspects of the actual processing differ. Credits to designated accounts of retail stores in off-line and on-line systems are made on a next-business day basis.

In an on-line system, transactions are authorized at the point of sale by the retailer initiating a telecommunications connection to a central location where a database is maintained. This connection may be made directly to the central location, or through the use of a third party processor which switches the transaction to the central location for approval.<sup>1</sup> In this way, any existing POS system that the retailer may have in place could handle on-line EBT transactions, although the third

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<sup>1</sup> In practice, many on-line systems allow certain types of transactions to be authorized without immediate approval from the host computer. For example, transactions below a specified dollar amount may be "preapproved" and settled in periodic batch processing. This practice is classified as part of an on-line system since the predominant procedure is direct approval from the host for transactions.

party processor would need to make system modifications to identify and route EBT transactions to the appropriate EBT processor.<sup>1</sup>

Off-line transactions are normally authorized without accessing a database at a central site. The access card contains information concerning the account balance, and authorization is obtained through an inquiry between the POS terminal and the access card. If the balance (dollars or in the case of WIC, units of a food category or subcategory) is sufficient, the transaction is recorded at the POS terminal<sup>2</sup> and on the access card, decrementing the available balance on the card. Off-line systems access a central processor to upload files of transactions representing activity since the last settlement process. In this way, off-line systems are also subject to telecommunications-related problems if the line is unavailable or encounters a problem during the file upload though the settlement is not as time critical as an on-line authorization message. Off-line systems generally receive files from all locations within a specific period each day in order to meet settlement windows (for transferring funds) at financial institutions. Off-line EBT systems have been designed to enable the retailer to establish a preferred time to upload transaction files which may either match the retail store's own settlement day, or reflect a period of low transaction activity at the retail store. (On-line systems also permit retailers substantial flexibility to settle terminals at a time convenient to their operations.)

In the same way that the retailer system could use a third party processor to handle on-line transactions, off-line transaction files could be uploaded to the third party processor and transferred to the EBT processor for settlement purposes and to update the processor's database. Alternatively, the files could be uploaded directly to the EBT processor without first passing through the third party

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<sup>1</sup> Third-party processors must conform to interface specifications promulgated by the EBT processor to ensure compatibility and correct processing of transactions.

<sup>2</sup> Each store must be equipped with a storage device which captures transaction information for subsequent transmission to the EBT processor. The storage device is also used to hold information received from the EBT processor for posting to access cards the next time the card is used. These storage devices can be stand-alone personal computers which support multiple POS terminals in a store, or they can be incorporated into the POS terminal.

processor. To date, there has been no third party involvement in off-line EBT activity due to the developmental nature of the application in food stores.

On-line systems are susceptible to system outages (at the retail store, at the third-party processor, or at the central location) or to telecommunications failures. Off-line systems, however, are not likely to incur system-wide or store-wide outages. Rather, a card or individual terminal can fail causing a particular individual or lane to be unable to access benefits, but not all stores, lanes, or recipients. In both on-line and off-line systems, a process for performing manual transactions -- obtaining the card number and gaining authorization or approval for the purchase without the automated EBT system -- is necessary, and liability issues are generally addressed by agreement. In general, manual transactions must be authorized by the processor and a hold is placed on the account in the amount of the transaction, pending receipt of the manual transaction's documentation.

Off-line EBT systems have only been demonstrated using smart cards, which are capable of storing and processing data with the use of a card reader/writer. However, off-line systems may use a variety of access cards, depending upon the functionality desired.

## **PRIMARY DIFFERENCES BETWEEN PROCESSING SYSTEMS**

Some key considerations in selecting the processing alternative would include, but not be limited to, the preferred location of the recipient's account data, the procedures for authorizing transactions, and the method in which accounts are updated and reconciled.

### **Recipient Account Information**

In current on- and off-line EBT systems, the recipient's account information (i.e., the amount of benefits — funds or food items — available from the program) is sent by the State or local office to the EBT processor's host computer. In an on-line system, the EBT processor is responsible for maintaining this data, on a host computer, and authorizing or denying transactions in progress as requested by the POS terminal or ATM. In current off-line systems the processor downloads the

information to a number of pre-selected store locations. When the recipient visits one of the selected stores, the benefits are loaded to the card. The location of recipient account information allows for on- or off-line authorization of transactions.

### **Authorizing Transactions**

Many systems in the private sector perform settlement off-line, however most of these systems use on-line authorization of transactions, even when floor limits are used. Floor limits are set by merchants based upon the amount of risk which the merchant is willing to assume in a transaction. All transactions below this floor limit are not authorized on-line, and when the transaction is processed off-line, the merchant assumes the risk that the customer's account has sufficient funds (or credit) available when the transaction is posted. For example, a grocery store or gas station may accept a bank (i.e., ATM) card for purchases. Since the average purchase amount tends to be a low dollar value, the store may determine that the cost to obtain authorization cannot be justified for the dollar amount of the transaction. The store determines that it is willing to accept the risk that when the transaction is processed off-line at the end of the day, funds may not be available in the consumer's account. This concept has been used for many years with credit card transactions.

From the perspective of EBT, a truly off-line system (such as those in Ohio and Wyoming) performs authorization without telecommunications to a central host. The transaction is authorized against the balance held on the card. There are only periodic (generally daily) uploads of transaction information (e.g., to accomplish settlement and backup file account balance maintenance) or downloads of information (e.g., "hot card" information to block further transactions from cards that have been reported lost or stolen, and manual transactions).

There has recently been increased interest in stored value applications. These applications have been in use for many years, often in closed programs such as transit systems, where cards are loaded with a specific dollar amount, and value is deducted with each use of the card. Although existing stored value applications tend to lack security features (cards are transferrable to any user), the value is deducted at the time of purchase, and the risk to the retailer of non-payment is eliminated.

Stored value programs are considered off-line applications since the approval or authorization occurs between the card and the terminal. Access cards for stored value applications include magnetic stripe cards (used with transit systems and college and university cards) and chip cards with additional functionality.

### **Updating and Reconciling Accounts**

At a predetermined time in every 24 hour period, the EBT processor in an on-line or off-line system creates a file of credits - one for each store with EBT activity during the day - and submits the file to a designated bank for clearing through the automated clearing house (ACH) network. In an on-line system this process can be accomplished independent of the retail store; in an off-line system either the retailer or the processor must initiate the process and send/collect all transactions for settlement. Since the retail store in an off-line system must provide some preliminary processing of transactions, it is necessary for the store to be involved with establishing the daily cutoff time for store terminals to ensure that sufficient time is allotted to process transactions and send them to the EBT processor to meet the processor's internal deadline or cutoff time for the host system. On-line systems can automatically perform settlement at the processor's selected time; however, the retail store may elect to have settlement performed to coincide with their business day.

### **FUNCTIONAL ISSUES FOR CONSIDERATION**

The inherent differences of on-line and off-line systems, identified in the previous section, are affected by several system functions.

#### **Processing of Issuances**

In an on-line system, the benefit information is received by the EBT processor from the State or local office, and is made available for use at a certain time (e.g., 12:01 a.m.) on the effective date. Since the data resides on the processor's system, once it has been received and edited it can be ready for access by the recipient - at an ATM or POS terminal. In an off-line system, data must be loaded

to the card, for access remotely.<sup>1</sup> The existing off-line EBT systems have established a process where a limited number of retail stores are selected by the recipients to which they would go to have benefits loaded onto their cards the first time they shop, or perform a balance inquiry, on or after the effective date of the benefits.<sup>2</sup> Benefits are loaded to the recipient's card at one of these retail stores. To ensure that duplicate issuances do not occur, a flag is set on the card to indicate that the benefits have already been added to the card. To date, none of the off-line systems has provided access to benefits for cash programs. If smart cards were used to access cash benefits, the existing ATMs would be eliminated (if they were not retrofitted) as places to load benefits onto the card since most ATMs in the United States presently do not accept smart cards.

#### **Blocking Transactions on Lost or Stolen Cards**

There is a fundamental difference in the treatment of lost and stolen cards in on-line and off-line EBT systems, due in part to where the data resides. In the on-line EBT systems, data is maintained by the processor. All transactions are authorized against the database at the processor, with the exception of manual transactions which are performed when the system is not functioning.<sup>3</sup> Even stores which cannot perform "on-line" automated transactions are able to place a telephone call to customer service and verify that sufficient funds are available in the recipient's account. On-line systems are able to quickly place a "hold" on a card that has been reported lost or stolen so that no

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<sup>1</sup> An alternative to loading the data on the card could be to download the data directly to one retail store, selected by the recipient. This method would restrict the recipient to using only that one retail store to receive benefits, and would reduce the value of using this system by restricting mobility. It would however provide an accurate account balance at any time, since there is only one place to access all program benefits.

<sup>2</sup> Benefit issuance information is prepared by the processor and sent to the retail stores during the end of day settlement process. Issuance information is transmitted in order to be available to be loaded to the recipient's card on the effective date.

<sup>3</sup> Other manual transactions may be performed, by agreement, by "non-traditional" retail sites. These retail sites may obtain authorization; however, with an off-line system the authorization cannot be performed on a real-time balance. Therefore, the retail store may assume all or part of the risk on this transaction, depending upon the agreement between the State and the retail store.

further on-line transactions can be authorized using the card following notification to customer service — even if the password security (personal identification number) has been breached.<sup>1</sup> Recipients can be promptly issued a new card and have immediate access to their remaining account balance using the new card.

In the existing off-line systems, recipients are supposed to report lost and stolen cards to customer service (or a local office) so that the cards can be "turned off" to prevent unauthorized use. However, a card is not effectively "turned off" in an off-line system until the processor downloads a negative file (containing the appropriate card information) to all participating retailers during their first settlement following the report of the lost or stolen card. If the PIN is known or obtained by anyone in possession of the card, benefits on the card are vulnerable until each retail store has received information on lost and stolen cards or the card is used at a store that has received the updated negative file.<sup>2</sup>

In existing off-line systems, recipients do not get immediate access to their remaining account balance. This balance must first be determined, which cannot occur until all retail stores have settled after the card was reported lost or stolen (which usually occurs within 48 hours after the report).<sup>3</sup>

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<sup>1</sup> In either on-line or off-line systems, benefit access is secured with the recipient's personal identification number (PIN) — in the same way that access to retail bank accounts with plastic cards is secured. This method is not foolproof, and in some cases, PINs may be unintentionally divulged by the recipient. In addition, benefits are unprotected under either system from the time the card is lost or stolen until it is noticed and reported by the recipient. The specific application of Regulation E coverage to EBT, which could limit the amount of benefits unprotected, is currently being studied.

<sup>2</sup> When a lost or stolen card is submitted during a purchase at a store that has received the updated negative file, the EBT terminal locks the card and records a flag on the attempted transaction so that the card may be removed from the hotcard file. This issue may be designed differently in a statewide, regional, or nationwide system.

<sup>3</sup> At this time, the balance used is the lower of the "host-derived" card balance or the "last reported" card balance on the host computer. Existing off-line EBT systems maintain a host-derived card balance on the processor's host computer. This host-derived balance is updated for each cardholder during settlement each day, based upon transaction activity as reported by the retail stores. Also, with each transaction, the updated card balance is also logged. During settlement, the processor's host computer determines which balance (by date and time stamp) is the last reported card

## **Manual Transaction Processing**

Manual transactions are performed at the retailer's discretion whenever a transaction cannot be approved in an automated manner. If the on-line system is unavailable, or a communication link cannot be established between the POS terminal and the system, a manual transaction is performed. In an on-line system, the retailer obtains an authorization code from the processor following verification that sufficient funds are available in the account. A temporary hold is placed on the account, pending receipt of paperwork for the manual transaction. Similar to an on-line system, manual transactions are also possible in an off-line EBT system. However, unlike an on-line EBT system, transactions are not posted on a real-time basis, and the EBT processor has access only to account balances that result from the prior day's settlement activity. Since transactions are authorized against the database on the card, manual transaction amounts may not be reflected in the card balance. Therefore, if a manual transaction depletes the card balance, additional transactions could be authorized over-drawing the account. Off-line transactions occurring on the same day as the manual transaction would not have been posted to the recipient's account on the host computer, resulting in this additional risk. Also, a retailer's failure to settle during the prior day could further affect the accuracy of account information.<sup>1</sup>

## **Telecommunications**

Telecommunications is a factor in the type of EBT system which is chosen by a State or region for a demonstration of an EBT system. For example, Wyoming's selection of an off-line system was made in part because of the state's high cost of telecommunications and the rural environment. There are only three telecommunications nodes in Wyoming, which would result in

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balance. The maintenance of these two balances enables benefits to be replaced when cards are reported lost or stolen (or non-functioning).

<sup>1</sup> In the existing off-line EBT demonstrations, the decision to process manual transactions has been left to the sole discretion of the retailer as no guarantees for these transactions have been made by the State, county, or EBT processor. The sole exception to this is in Wyoming where a single can of infant formula may be provided, and will be covered by the State.

many locations incurring long distance charges to place calls to these nodes. In an on-line EBT system, retail stores need to have a dial-up or dedicated line to connect to the EBT processor (or third party) throughout the day. In an off-line system, transaction information is up-loaded and down-loaded between the processor and the store at least once a day, and at a selected time(s) which can be after the store is closed, or at a period(s) of low activity. In this way, an off-line system can utilize an existing (multi-purpose) phone line to handle this transfer of data. It is possible in an off-line system to better control telecommunications costs since transactions can be sent when telecommunications rates are not at their highest.<sup>1</sup> In addition to the cost of telecommunications within the area for the EBT system, the existing infrastructure should be examined to determine periods of outages - what causes the outage, and the duration of the outage. If the telecommunications service within the proposed EBT area suffers outages during periods which would coincide with peak service usage, client access to benefits could be impaired.

### **Card Capability**

As previously noted, on-line systems access benefits through a telecommunications link to a database where transactions are authorized. The cards in on-line systems are used predominantly to store transaction routing information, the card owner's identification and security code (PIN). In the United States, on-line systems have historically used magnetic stripe cards; however, as noted previously, increased concern with fraud and security have prompted many card issuers to review alternatives to enhance card security.

On-line EBT systems which have been demonstrated to date have used cards with magnetic stripes. One of these demonstration projects uses a non-standard magnetic stripe card, which provides capability within a closed system, but which cannot be used outside that specific system. Use of non-standard cards precludes the ability of the EBT card to piggyback effectively on an

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<sup>1</sup> In fact, in some on-line systems, retail stores which function as their own processors for transactions have determined that it is less costly for them to establish a telecommunications link at the beginning of the day, and leave the line "open" all day, thereby only making one call - of significant duration!

existing on-line infrastructure. For example, a non-standard card cannot be used to access cash benefits at an ATM since the information included on the card is not found in the expected place on the card. On-line systems can be designed to utilize other types of cards, including IC chip and optical memory cards; however, the benefit access points (retail POS terminals and ATMs) would need the ability to read (and possibly write to) the card.

Off-line EBT systems have demonstrated the use of IC chip cards to access benefits. These off-line programs have been used to deliver food stamp benefits and WIC food prescriptions at authorized retail locations as well as the capability of handling data such as immunization records. IC chip card capabilities range from simple decrementing to advanced data storage and logical processing capability; cards used in EBT systems have included the ability for limited logical functions. These off-line EBT systems have demonstrated the ability of the card to store benefit information, authorize transactions, store transaction history, and maintain balance information. With this functionality, benefit recipients are able to use their benefits at any authorized retail store within the system demonstration area (including some stores in adjacent areas which had a certain percentage of their business transacted by these recipients).

Exhibit 3-1, on the following pages, presents generalized approaches to meeting WIC regulations when designing an EBT system for WIC. The WIC Program requirements are addressed in terms of how they could be satisfied in an on-line and off-line WIC EBT system. It is intended that this comparison will assist State WIC Directors in discerning the sometimes subtle differences between the two system approaches.

There are several designations used in the "Basis for Requirement" column that are used to describe the source from which the "Program Specifics" were derived. A description of the designations used follow.

- "Regulation" denotes a WIC regulation.

- "Assumed to conform to FSP and/or commercial standards" denotes that the information was obtained from either the FSP regulations, commercial standards, or accepted commercial practices.
- "Stated as functional requirement" denotes the interests of WIC program management to provide this requirement within a WIC EBT system.

**EXHIBIT 3-1**

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

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Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Authorizing Household Benefits	Benefit carryover:	Monthly benefits expire at set time.	Regulation.	Benefits maintained at central computer. Benefits can be "erased" at end of month so that subsequent purchases will not utilize previous month's benefits.	Benefits are maintained at central computer and are loaded on card with an associated valid date range. At first card use after expiration of valid date range, benefits are "erased" from card and reported from retailer to processor.
	PIN selection:	Four digits minimum, selected by recipient.	Assumed to conform to FSP and/or commercial standards.	To date, only four-digit PINs have been used with both client selected and pre-assigned PINs.	To date, only four-digit PINs have been used with both client selected and pre-assigned PINs.
	Card replacement:	Replacement still remains under consideration.		Card reported lost or stolen. Access card costs begin at under \$1.00 (magnetic stripe card).	Card reported lost or stolen. Card costs vary, generally begin at around \$5.00 (basic IC chip card) depending on memory capacity.
	Ease of use:	For all participants and authorized retailers.	Stated as functional requirement.	Current commercial systems are built using on-line processing with magnetic stripe card. Minimal training would be required since system concept is familiar to retailers. Recipients may be unfamiliar with card uses. Requires fewer steps than paper system.	New type of system would require training for both retailers and recipients. Fewer steps required than paper system. Potentially less training for retail clerks if UPC codes are used to monitor and authorize WIC food purchases.

**EXHIBIT 3-1 (continued)**

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Authorizing Household Benefits (con't)	Issuance file:	Receive individual food prescription file merged into family by food category/subcategory from local health clinic for participants.	Regulation.	File sent from local health clinic. File retained at central computer.	Issuance information is either: 1) loaded onto card at local clinic (with processor mirror image), or 2) sent from local clinic to processor (who sends it on to participant selected retailers for benefit download onto card).
	Expedited benefits:	Process expedited certification of eligibility for some participants. Benefits must be issued upon certification.	Regulation.	Data is uploaded to central computer; recipient information is established on system. Data may need to be sent several times a day to meet program requirements for benefit access.	Special emergency issuance can be allowed (such as for small amounts of infant formula) until normal issuance procedure can be accomplished. Benefit data could be written to card at the local clinic or agency when certification is determined. Alternatively, benefits could be sent to processor to be loaded on card using same process as continued benefits.
	Remote replenishment of benefits:	Emergency service to client as desired by States. Store receipt of specially authorized benefits (during hazardous weather or as client nears childbirth).	Stated as functional requirement.	Benefits could be "turned on" or made available by local agency authorization to central computer.	Benefits could be "unlocked" at retailer using code provided by local agency.
Deliver Benefits to Households	Benefit availability:	On date and at time of issuance.	Stated as functional requirement.	Available on date issued, after receipt by processor.	Following pickup by retailer (possibly during settlement process), or added to card at local agency.

**EXHIBIT 3-1 (continued)**

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Deliver Benefits to Households (con't)	Issuance problem resolution:	Timely response to issuance problems.	Stated as functional requirement.	Handled by customer service or program office.	Handled by customer service or program office.
	Benefit conversion:	May specify food retail store where participant receives benefits. Authorized retail store designation may be changed within EBT area. Participants moving (intra- or interstate) are issued a "verification of certification" (VOC) to provide benefit priority in their new area.	Regulation.	Open access to benefits at authorized WIC retail stores within jurisdiction that are equipped. Potential for system compatibility across state lines and temporary cross-state eligibility.	Benefits may need to be added to card at a select retail site(s); subsequent purchases at any authorized retailer within jurisdiction that are equipped. Potential for system compatibility across state lines and temporary cross-state eligibility.
	Backup procedures:	Provide backup procedures during downtime.	Assumed to conform to FSP and/or commercial standards.	Manual transactions may be performed based upon central computer balance and authorization. If central computer is unavailable, may establish value or items allowed without authorization.	Authorization occurs between card and terminal. If terminal is down, alternate equipment may be used. If card is damaged, may establish value or items allowed without authorization.
	Media:	Benefit delivery systems must be procedurally uniform within the jurisdiction of the State agency.	Regulation.	All cards/systems same within state or jurisdiction.	All cards/systems same within state or jurisdiction.
	Replacement cards:	Within two days of reported loss.	Regulations specify no inconvenience to participant.	Cards may be replaced at local agency; balance determined from central computer.	Cards may be replaced at local agency. Balance determined following settlement process at retail stores.

**EXHIBIT 3-1 (continued)**

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Redemption of Benefits	Lane equipage:	No deployment requirement other than allow access at authorized vendors in manner that ensures WIC client is treated as other customers.	Regulation.	Determine number of lanes to equip to allow adequate access.	Determine number of lanes to equip to allow adequate access.
	Transaction fees:	Participants receive benefits free of charge.	Regulation.	No charge to participant for transactions. (Number of free transactions may be limited.)	No charge to participants for transactions.
	Minimum value / Maximum transactions:	Encourage fulfillment of food prescription. Need to allow subsequent purchase of unavailable items.	Stated as a functional requirement.	Allow subsequent purchases to fulfill food prescription. Item or food category tracking depends on time available for check-out process and telephone costs.	Allow subsequent purchases to fulfill food prescription. Tracking at food item level through store scanning and smartcard or in-store computer holding prescription.
	Balance inquiry:	Ability to print prescription balance prior to shopping.	Stated as a functional requirement.	Performed at store terminal. (Design and terminal deployment issue.) Automated Response Unit (ARU) access to "real-time" balances could be provided.	Performed at store terminal. (Design and terminal deployment issue.) ARU access to balances as of a certain point in time (e.g., close of system settlement).
		Balance of remaining prescription items, not dollars, by food category and subcategory.	Stated as a functional requirement.	Design issue; included as shopping list. Two way exchange transmitting items purchased to host computer and balance of items back to store/receipt.	Design issue; included as shopping list. Printed receipt available due to presence of smartcard or in-store data base with prescription.

EXHIBIT 3-1 (continued)

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Redemption of Benefits (con't)	PIN encryption:	Encryption of PIN from PIN pad using Data Encryption Standard (DES) algorithm.	Assumed to conform to FSP and/or commercial standards.	Provided as part of equipment.	Provided as part of equipment.
	Erroneous PIN:	Limit placed on number of unsuccessful PIN attempts.	Assumed to conform to FSP and/or commercial standards.	Card may be locked following several consecutive erroneous PIN attempts, as done in commercial on-line applications. Client must visit program office.	Card may be locked following several erroneous PIN attempts. Requires visit to local agency to reassign PIN.
	System response time:	None stated for WIC; FSP on-line regulations specify that leased lines systems: process 98% of transactions within 10 seconds or less; 100% within 15 seconds. Dial-up systems: process 95% of transactions within 15 seconds or less; 100% within 20 seconds.	Assumed to conform to FSP and/or commercial standards.	Design and performance issues for on-line systems.	Response time between terminal and card. File transfers at settlement time do not affect response time.
	System availability:	None stated for WIC; FSP on-line regulations specify that the entire system must be available 98.0% of scheduled time, 24 hours/day, 7 days/week. (Allows scheduled downtime, at non-peak hours.)	Assumed to conform to FSP and/or commercial standards.	System designed to meet requirement.	Processing is dependent upon card and terminal functioning; and the ability to perform settlement functions at end of day.
	Retailer / Vendor reimbursement:	Prompt credits provided to vendors for food costs.	Regulation.	Provides credit on banking day following transactions.	Provides credit on banking day following settlement file transfer to processor.

**EXHIBIT 3-1 (continued)**

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Redemption of Benefits (con't)	Transaction file:	Creation and transmission of ACH formatted file.	Assumed to conform to FSP and/or commercial standards.	Performed by central computer/processor as part of daily settlement.	Performed by processor as part of daily settlement.
Reconciliation and Settlement	Management reports:	Same as FSP, with financial reports showing price paid per item and per total transaction, and management reports showing items purchased by individuals for clinic use and in nutrition education.	Stated as functional requirement.	Can only be provided with transmission of item level validation via on-line system, or in-store buffer to hold item level data until periodic batch reconciliation.	Can only be provided with item level validation via off-line system. Summary data is uploaded at regular settlement
	EBT transaction activity:	Create and maintain an EBT transaction file, log and log history at processor.	Assumed to conform to FSP and/or commercial standards.	Performed by processor following settlement activity.	Performed by processor following settlement activity. Limited history maintained on card.
	Retailer tracking:	Total all credits accumulated by each retailer.	Assumed to conform to FSP and/or commercial standards.	Performed by processor following settlement activity.	Performed by processor following settlement activity.
		Provide balance information to retailers or 3rd party processors from individual POS terminals, as needed.	Assumed to conform to FSP and/or commercial standards.	System designed to meet requirement.	System designed to meet requirement.
	Account adjustments:	Allow approved adjustments to prescription at local agency/clinic.	Stated as functional requirement.	Account adjustments could be made and sent to central computer to update benefit amounts.	Account adjustments could be made on card at local clinic, or uploaded to processor for download to selected retail stores with normal transaction/benefit activity.

EXHIBIT 3-1 (continued)

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Reconciliation and Settlement (con't)	Reconciliation at household account level:	Reconciliation of individual household account balances against account activities on a daily basis.	Stated as functional requirement.	Performed at processor site as part of settlement activity.	Performed at processor following settlement as part of settlement activity.
	Activity reconciliation:	Reconciliation of each retailer's food instrument transactions per POS terminal and in total to deposits on a daily basis.	Stated as functional requirement. Regulations specify actual price recorded at time of purchase.	Performed at retail store during settlement to determine expected credit for benefits redeemed. Verify with credit received at bank on following banking day.	Performed at retail store during settlement to determine expected credit for benefits redeemed. Verify with credit received at bank on following banking day.
		Verification of retailers' credits against deposit information entered into the ACH network.	Stated as functional requirement.	Processor reconciles transaction activity with ACH file of credits. Retail store verifies expected credit with actual credit received.	Processor reconciles transaction activity with ACH file of credits. Retail store verifies expected credit with actual credit received.
	Complete system reconciliation:	Reconciliation of total funds entered into, exiting from, and remaining in the system each day.	Regulation.	Performed at processor; part of design.	Performed at processor; part of design.
	Audit trails:	Audit trails of activity.	Regulation.	System designed to meet regulations.	System designed to meet regulations.
Manage Retailer / Vendor Participation	Open opportunity to participate:	All authorized food retailers must be afforded the opportunity to participate in any EBT program.	Regulation specifies authorization to ensure adequate convenience and access for participants.	Independent of processing system.	Independent of processing system.

**EXHIBIT 3-1 (continued)**

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Manage Retailer / Vendor Participation (con't)	Retailer training:	Initial training of newly authorized retailers provided by State or local clinic, on-going training provided by retailer.	Regulation.	System design. Initial training may be provided by processor.	System design. Initial training may be provided by processor.
	Prices charged benefit recipients should be same prices charged other customers:	No special charges for WIC participants.	Regulation.	Price monitoring may be independent of the EBT processing system. If it is part of the EBT system, item level validation with integrated scan enables interaction with store's pricing tables.	Price monitoring may be independent of the EBT processing system. If it is part of the EBT system, item level validation with integrated scan enables interaction with store's pricing tables.
	Timing of system access following authorization:	Within 2 weeks of authorization.	Assumed to conform to FSP and/or commercial standards.	Providing credit through ACH allows use following setup of retail store on processor system. If processor elects to send (optional) pre-note transaction, must wait 10 days to send first dollar amounts through system to retail store account.	Providing credit through ACH allows use following setup of retail store on processor system. If processor elects to send (optional) pre-note transaction, must wait 10 days to send first dollar amounts through system to retail store account.
	Add Retailers / Vendors:	Ability to add newly authorized retailers by State office.	Regulation.	System design determines process for adding retail stores. Equipment and training issues.	System design determines process for adding retail stores. Equipment and training issues.
	Delete Retailers / Vendors:	Ability to delete authorized retailers by State office.	Regulation.	System design determines process for deleting retail stores.	System design determines process for deleting retail stores.

**EXHIBIT 3-1 (continued)**

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Manage Retailer / Vendor Participation (con't)	Authorized user access:	Ensure access by authorized retailers and 3rd party processors only. Maintain authorization database to mirror State authorizations and disqualifications.	Assumed to conform to FSP and/or commercial standards.	Retailer and POS terminal database maintained by processor. Transactions received only from authorized retail stores (directly or via 3rd party).	Retailer and POS terminal ID database maintained by processor. Settlement files (with transactions) received only from authorized retail stores.
		Ability to certify 3rd party processors.	Assumed to conform to FSP and/or commercial standards.	System design. 3rd party may only route transactions to processor.	No experience to date in use of 3rd party processor in an off-line EBT system. However, should be same as on-line operations. 3rd party may only route transactions to processor.
	Compliance:	Provide compliance exception reports to State vendor compliance officer in charge.	Stated as functional requirement.	System design for reports to identify possible compliance violation.	System design for reports to identify possible compliance violation.
		Permit access to investigations by FCS compliance and OIG (for compliance buys). Also, State criminal investigations.	Regulation.	Access will be provided through issuance of EBT card.	Access will be provided through issuance of EBT card.
	Equipment functionality:	Ensure equipment and supplies are repaired or replaced within 24 hours.	Assumed to conform to FSP and/or commercial standards.	Included in agreements and/or contracts with processor and retail stores.	Included in agreements and/or contracts with processor and retail stores.
Other	Industry standards:	Meet industry standards, as they evolve.	Assumed to conform to FSP and/or commercial standards.	System designed to meet requirement.	System designed to meet requirement.

EXHIBIT 3-1 (continued)

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

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Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Other (con't)	System accuracy:	Main system accuracy: No more than 2/10,000 transactions processed inaccurately.	Assumed to conform to FSP and/or commercial standards.	Processor system issue. System handles transactions on-line, real time.	Processor system issue. System handles batches of files sent from retail stores.
	Cost neutrality:	No cost neutral requirement. Cost and effectiveness are addressed through State and Federal system planning process.	None.	Procurements of WIC issuance systems and equipment are subject to Federal approval as part of on-going systems planning. Cost and effectiveness are addressed in this process.	Procurements of WIC issuance systems and equipment are subject to Federal approval as part of on-going systems planning. Cost and effectiveness are addressed in this process.
	Data verification, with ranges:	Range checks for acceptable dates, account numbers, etc. Also check for maximum dollar per item, per prescription, and per account.	Stated as functional requirement.	Benefit and associated dates maintained on central computer/processor. Acceptable ranges for prices (item level or aggregate) may be handled as reports to State or local agency alerting on transactions beyond acceptable levels, rather than as transactions processed.	Benefit and associated dates maintained on card. Acceptable ranges for prices (item level or aggregate) may be handled as reports to State or local agency alerting on transactions beyond acceptable levels; data available following settlement, after transactions are processed.
	Contingency plans:	Contingency plans and backup procedures.	Assumed to conform to FSP and/or commercial standards.	System design. Manual transactions if retailer elects.	System design. Manual transactions if retailer elects.
	Performance standards:	Monitor system performance standards.	Assumed to conform to FSP and/or commercial standards.	System design. Processor system and interface with State agency and stores.	System design. Processor system, store terminals, interface of State agency and stores with processor.

**EXHIBIT 3-1 (continued)**

**On-line and Off-line EBT System Approaches  
to Meeting WIC Regulations**

Function	Requirement	WIC Program		On-line EBT Systems	Off-line EBT Systems
		Program Specifics	Basis for requirement		
Other (con't)	Rebates:	Report on the value and quantity of rebate items redeemed by brand and by vendor for rebate accounting purposes (e.g., infant formula)	Stated as functional requirement.	System design with item level validation. Without item level validation, current redemption assumptions used.	System design with item level validation via State UPC monitoring system. Without item level validation, current redemption assumptions used.

## Chapter 4

### SPECIFIC STATE WIC PROGRAM REQUIREMENTS

The WIC program operates under federal regulations, with individual States often incorporating reporting requirements or functionality beyond these regulations. It is important to note that the design of a fundamental WIC EBT system must accommodate the base needs for WIC on a national level, but may not incorporate all of the desired components of an individual State. When determining the EBT system which best suits the needs of that State, it will be up to each State to determine the value of their unique requirements, or the ability of the system to meet the needs in a modified style.

This chapter addresses many requirements of the WIC program and should be used as a guideline for States in determining their own needs and the possibility for using an existing EBT system. Presumably it is less expensive to follow the lead of one State in the development of an EBT system for WIC than to create a new system strictly tailored to meet all State specific requirements.

### REQUIREMENTS WHICH MAY DIFFER FROM STATE TO STATE

There are many facets to the WIC regulations which have been interpreted and implemented differently by each State. For example, WIC participants are certified for six-month periods, and are required to visit the local clinic for counseling at least once during the certification period, and again at the close of the period in order to be certified for the next six-month period. Some States require visits every other month while other States operate with visits every three months. Some States may provide all vouchers for that certification period at the time of the visit; others may deliver subsequent month's benefits by mail. Examples of other features which may differ by State include: benefit instruments, eligibility determination, number of authorized vendors at which a participant can fulfill their food prescriptions, and clearing checks and vouchers to credit retail store accounts. These and other examples are covered within this chapter; this list is not exhaustive; however, it provides a foundation from which an EBT system can be designed.

## **Eligibility**

Specific eligibility requirements are outlined in the WIC regulations, and cover pregnant, postpartum, and breastfeeding women, infants, and children (up to age 5). In general, residency within the jurisdiction of a State is a requirement; however, length of residency within that jurisdiction is not considered when determining eligibility. In addition, in order to participate in the WIC program, income and nutritional risk criteria must be met. With respect to income criteria, the State agency establishes and provides local agencies with guidelines. These income guidelines may follow the National School Lunch Program eligibility criteria of income under 185 percent of the poverty level, or may follow State or local guidelines for free or reduced-price health care (as long as the income criteria does not exceed 185 percent of the poverty level). In effect, within one State it is possible that the income criteria may vary between local agencies. Nutritional risk assessments for eligibility are performed by qualified health professionals at the local agencies using State-determined criteria for nutritional risk.

In order to use EBT, a State must create an interface between its eligibility system and the issuance handled through the EBT system. A key consideration is the use of identifiers for the participant or household if a combined family EBT card is chosen. Family formation and dissolution are important factors which must be addressed so that the EBT system will continue to correctly relate to WIC eligibility master files over time. Under special circumstances two cards may be issued in one family. For example, this may occur when one household member is responsible for all WIC shopping; however, more than one household member may access other program benefits.

## **Vendor Restrictions**

Many States specify the retailer at which WIC food instruments may be redeemed; other States do not restrict the retail store beyond the use of a WIC approved store. In States which specify the retailer on the WIC check, and wish to retain this approach in an EBT system, each participant's prescription could be downloaded to the specific store, and as items are purchased they would be deleted from the participant's prescription which would be maintained at the store. This

combines on-line and off-line technology, since only the total dollar amount of the transaction would need to be authorized by the host computer via telephone. The balance of foods for individual accounts could be transmitted to the host as part of end of day settlement. In this way, the State WIC Program could gain reports of food actually purchased in order to improve program management. A smart card using off-line technology could provide the same prescription accountability while allowing any authorized retailer to provide service to the client. Scanning of universal product codes (UPCs) eliminates the need for a clerk to key in each food product purchased. Through the use of EBT, States may elect to expand the shopping options for participants beyond a single retail store, which will enable flexibility in choice of retail store to the participants, without restricting the mobility of participants during their certification period. In several instances, the use of retail store specific WIC checks results in the need to void and reissue checks if a participant moves during their certification period. An EBT system which provides flexible choice in shopping would not require additional administrative resources for a mobile participant population.

#### **Food Prescription - WIC EBT Categories and Subcategories**

States have established a large number of variations in computerized food prescriptions to meet the nutritional needs and preferences of the participants. In considering EBT, several States have started to address their need for the myriad of food prescriptions which are available, and have found it advantageous to reduce the combinations available. In many States, a small number of these prescriptions meet the needs of the majority of participants.

In many cases, food prescriptions are generic in nature. For example, "12 ounces domestic cheese" may be specified. In other situations, the item may be more specifically identified as a particular brand of domestic cheese. The specificity of the prescription will dictate the sophistication of the EBT system to identify an entire UPC,<sup>1</sup> or just the first few characters. WIC EBT systems

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<sup>1</sup> UPCs are assigned by the Uniform Code Council following a formal application process. The 12 digit UPCs are uniquely assigned in accordance with a standard practice. The first six (6) digits of the UPC identify the manufacturer; the next five (5) digits pertain to a specific product (including package size). The 12th digit is calculated as a check digit by the UPC printer.

which are designed to accommodate item level validation may need to maintain a database (at the store level) of each complete UPC at the store which is valid for the WIC food prescription. In addition to the master database of UPCs, individual store brands may need to be included in the store's database of eligible UPCs. UPC file updates and maintenance responsibilities must be determined during the design of an EBT system. When changes occur to the UPCs, either the entire file could be provided to each authorized WIC retail store, or just the changes. Agreement must be reached as to which organization is responsible for providing the updates, and how the updates will be accomplished on an on-going basis. The file could be provided by transmission or other automated means (rather than a listing which the vendor would use to manually update the file). All authorized retail stores could receive a complete file, or just items applicable to the retail store (toy stores authorized to sell infant formula would not need a complete list of UPCs). In Wyoming, which has designed an item level WIC EBT system, the State WIC agency has accepted responsibility for maintaining and updating the entire UPC master file with input from each retailer, i.e., for both generic and retailer specific codes.

### **Formula Tracking Procedures**

Formula manufacturers offer rebates for purchases of their product by WIC participants. These rebate programs are offered through contracts with manufacturers and are often established with more than one manufacturer, depending upon the type of formula (milk- or soy-based). With the current paper food prescriptions, if a participant opts not to purchase the complete prescription (or the store has temporary shortages which do not permit purchase of the complete amount), the State does not have any direct way of knowing that the entire prescription was not purchased. Manufacturer rebates may be handled in one of two ways with paper WIC food prescriptions. The State may provide the formula manufacturer with the number of cans based upon the food instruments issued, or on the food instruments redeemed. In the former option, the number of cans of formula issued for a specific month can be accumulated and provided to the manufacturer at the close of the month. In the latter alternative, as food prescriptions clear through the settlement process, the number of cans of infant formula listed on the food instrument is accumulated and submitted to the manufacturer for rebate. In either method, the assumption is that all cans on the

food prescription are purchased. Contracts with manufacturers of infant formula have been established to provide rebates for the number of cans of formula purchased by WIC participants. These rebates in effect reduce the price of the formula, extending the funds available to the State WIC program.

The WIC Program receives a limited amount of funding each year which is not sufficient to enable all eligible individuals to participate. Funds from the rebate program enable States to provide benefits to additional eligible individuals. With an EBT system that tracks purchases at the item level, the State could be certain of the amount of formula received by recipients and formula manufacturers would be assured that the number of cans claimed by the State was in fact purchased. Contract negotiations may yield a higher rebate since tracking would be more accurate. Many current rebate contracts subtract a set percentage of formula issued as not subject to rebates due to a State's inability to fully monitor purchases of formula. Such improved tracking may also make it possible to negotiate contracts with other manufacturers (such as cereal companies) to offer rebates for their brands of WIC products. This would necessitate the food prescription to list specific brands of WIC approved items with the food prescription. The high level of detail in this type of tracking suggests that on-line systems are not conducive to collecting this type of information. It is likely that some added off-line data storage (buffer) would be needed if such tracking were to be accomplished by an otherwise on-line EBT system. Interfaces to in-store scanning equipment are critical to accomplish such tracking and are a challenge in both on-line and off-line approaches to EBT.

### **Maximum Value of Prescriptions**

Many States specify the maximum dollar value of each food prescription on the face of the check or voucher. This maximum value places an upper limit on the redemption value of the food prescription, protecting the State to some degree from price gouging by WIC retailers. It does not ensure that the value for which the prescription is redeemed is based upon the actual shelf prices for those goods at that store. As part of the current procedures for redeeming WIC food prescriptions, the participant signs the food instrument after the cashier has totaled the WIC purchases and completed the dollar value field on the WIC check or voucher. While WIC participants are aware

of the value written on the food prescription, they may not be able to completely verify that the value in fact matches the current price of the items at the retail store. This is also true in an EBT system in which the participant is provided a POS receipt.

The use of maximum prescription values may be incorporated into an EBT system, without the need to provide the participant added information. Depending upon the design of the EBT system and the degree of interface with the retail store's inventory or pricing systems, transactions exceeding expected maximum values (set at the UPC, food product category, or food prescription level) could be flagged or denied. Both on-line and off-line transaction processing systems are able to accommodate this feature.

#### **Valid Date Range on WIC Food Prescriptions**

Paper food prescriptions are valid for a precise monthly time period, and are generally split into amounts that represent single weekly shopping trips, within a specific month. All items on a paper food voucher must be redeemed within the same shopping trip; any unpurchased items are forfeited by the participant. Since the purpose of WIC benefits is to provide food items to meet the nutritional needs of participants, any items which are forfeited reduce WIC's opportunity to improve the health of the participant. The advantage of counseling services is to fully explain the purpose and benefit of the food items which are prescribed so that the participant will understand the benefit of purchasing and consuming all prescribed food. By incorporating date ranges, the participant is aware that the amount of food prescribed represents the expected supplemental intake during that period.

One of the expected benefits of EBT is to provide participants with the flexibility to purchase a portion of their benefits in one trip, and to delay the remainder without forfeiting the complete nutritional value of the benefits. In designing an EBT system, a State may determine that restricting the shopping to a complete food prescription is not desirable; however, based upon the cost of the EBT system, States may elect to phase in EBT, initially continuing to use paper vouchers and

automating only the credit to the retail store.<sup>1</sup> In this case paper vouchers continue to be accountable documents and both program staff and store personnel continue to maintain a certain amount of counting and validation efforts related to the information contained on these vouchers.

In the off-line EBT systems demonstrated to date, the issuance information has been downloaded to a pre-established group of authorized retail stores (as requested by the benefit recipient). The benefit information (whether it is a dollar amount of FSP benefits or a list of food items for WIC benefits) is written to the card the first time the card is read at that retail store following benefit availability. To avoid the situation where benefits could be loaded at more than one retail location, the card is "tagged" to show that benefits for the specific time period have been written to the card already. Retail stores maintain the benefit information until a state-established time, when "uncollected" benefits are removed from the store's data system by the processor, and subsequently reported back to the State. The time frames for this differ between WIC and FSP benefits since WIC benefits are for a specified time period, and FSP benefits, once provided to the participant, do not expire. Since benefits are downloaded to more than one retail location, and recipients are only able to place these benefits on their cards once, depending upon the design of the EBT system several of the retail stores may report benefits as "uncollected" which were in fact added to the recipient's card at another location. The EBT system should be designed to enable the processor to determine food prescriptions which were not collected.

In general, since food instrument packages are determined at the time of the participant's visit to the local clinic, either one, two, or three months worth of benefits may be reported to the processor following the clinic visit. Under the circumstances when multiple months worth of benefits are reported to the processor, the processor generally maintains the files of benefits for subsequent months. In an off-line EBT system, the processor would make those benefits available to the retail stores in time to load them onto the participant's EBT card on the first day of the effective date range. In an on-line system, the information is maintained by the processor, and on-line access would

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<sup>1</sup> This approach is often referred to as "financial WIC". It is covered in Appendix D of this report.

authorize purchases against the appropriate timely food prescription. The ability to make mid-cycle changes to the food prescription may be incorporated into an EBT system design, enabling the local WIC clinic to alter a prescription if the participant's condition or situation changes.

### **Benefit Instruments**

WIC benefit instruments are provided as paper checks or vouchers at the discretion of the State. The fundamental difference between the two food instruments is the clearing process and reimbursement to the WIC authorized retailer.<sup>1</sup> WIC checks are deposited by retail stores at their local financial institutions along with their normal business deposits of cash, checks, and food coupons. Checks are encoded (either at the bank or by the retail store) for the dollar value appearing on the face of the check, and cleared through the check clearing system. Credit is subsequently provided to the retail store's account at the financial institution. Unlike food coupons which must be separately prepared for deposit, WIC checks are treated like other checks in the retail store's deposit.

Depending upon the contract with the State's financial institution, either the State or the bank manually reviews the redeemed WIC checks. This review typically includes verifications such as whether the food prescription was redeemed within the valid time period and whether the signature of the participant appears on the check. Other reviews may be performed with automated support, including checking that the food instrument has been recorded as issued by the system, reviews for delinquent or post-dated submission by the retailer for redemption, checking for altered prices, and perhaps a limited review of the recorded cost based on the estimated value for each type of food instrument. Some States may include a maximum purchase price on their food instruments which is higher than the price of the food for which it will be used, but low enough to be a reasonable protection against potential losses of funds; in these States, the actual amount of sale is checked

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<sup>1</sup> WIC authorized retailers are considered "vendors". When EBT systems are discussed, the term vendor generally refers to the entity which provides processing capabilities: the "system vendor". In order to avoid confusion, WIC vendors will be referred to as authorized retailers.

against that maximum value. Food instruments which do not pass inspection are returned to the retail store for resolution. The retail store does not receive credit for food instruments which do not pass inspection.

In order to determine the outstanding value of issued WIC checks, a list of serial numbers is tracked, in much the same way that outstanding checks are tracked in a full reconciliation service at a financial institution. The serial number of the check and the maximum value on the face of the check (which may or may not vary by food prescription) are matched as checks clear the banking system. The redeemed value of the check is matched with the issued maximum value - flagging items redeemed for excessive amounts. The State and financial institution would have an agreement on how to handle these flagged checks (which could include returning them to the retail store and notifying the State of possible fraud). Tracking WIC checks at this level also enables the State to determine the outstanding value of WIC checks, and to verify that items are not redeemed beyond the valid date range, or cleared beyond the defined deposit time.

EBT systems eliminate numerous steps associated with the processing and clearing of paper food instruments. The retailer is no longer responsible for counting and reconciling these items, and credit is provided to the retailer on a next (banking) day basis. The process of manually verifying that each food instrument is used within the allowed time frame is replaced with the EBT system monitoring this activity (an EBT system should be designed to handle food prescription date ranges on associated food instruments). In addition to these benefits, the retail store receives credit for purchases the banking business day following the settlement process with the EBT processor.<sup>1</sup> A central question to the design of EBT systems for WIC is whether financial settlement can be designed as an initial phase with a second phase concentrating on automated tracking and system

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<sup>1</sup> The credit is posted to each retail store's account at their financial institution based in part upon deadlines established by the processor. These deadlines are established to enable the processor to prepare files and submit them to the concentrator bank in time to meet the processing schedule of the automated clearing house (ACH). The ACH is the vehicle used to transfer funds electronically to the retailer's account at their designated financial institution.

authorization of specific prescribed foods. Several States are examining approaches to adding WIC to ongoing efforts for the Food Stamp Program.

If the WIC EBT system is designed in phases (e.g., automating the financial transaction as a first step), there must be incentives to each stakeholder to move to the next step. In the case of the retail store, once the financial transaction portion has been automated, the retail store may be interested in pursuing modifications to the EBT system in order to reduce the cashier's responsibility to police authorized purchases, or decrease the in-lane handling of paper food prescriptions. Costs associated with building one completely paperless system for WIC transactions versus a phased approach, and the availability of technology in the retail environment will be important in State decisionmaking processes.

### **Vendor Certification**

WIC regulations specify that retailers must be authorized by the State to "redeem food instruments or otherwise provide supplemental foods to participants." An appropriate number of retailers must be authorized in order to provide program participants with adequate access and convenience, yet still enable the State or local office to manage these retail locations. Each State is given the ability to establish criteria to limit the number of authorized retailers within their jurisdiction. Written contracts, generally standard within one State, are made with each authorized retailer (a retailer may represent several store locations), and the State is required to provide no less than 15 days advance written notice of the expiration of the contract or agreement. Contracts generally cover a specific period of time, although a retailer may be terminated from participation in the program prior to the expiration of the contract if fraud or abuse of the program are determined. Within an EBT system for WIC benefits, contracts with retailers would still be negotiated and signed;

however, certain elements of the agreements may need to be modified such as method of payment and exchange of UPCs.<sup>1</sup>

One of the potential benefits of EBT systems is the ability to monitor and track retail store activity. Depending upon the design of the EBT system for WIC, the system could greatly enhance the State's ability to monitor and manage authorized retailers. Ultimately, the WIC EBT system could assure the State that WIC participants are charged the same amount as other store customers, and that the items for which the WIC program is charged were in fact purchased by a participant. The degree of system integration within a store is a driving force in the level of information exchange which can occur; however, each feature that is added to the EBT system must be considered with respect to the increased cost of, and opportunity afforded by, the system. Many POS systems installed at retail stores integrate scanning with store price tables; these retailers may be more readily adaptable to a WIC system which also integrates with the store price tables and inventory systems.

### **Verification of Certification (VOC)**

When a participant moves from one area to another, in State or between States, in order to remain a high priority for WIC benefits, the participant must obtain a Verification of Certification (VOC) from their current WIC clinic to verify that they have been receiving benefits within that clinic area. Since all individuals eligible for WIC benefits are not participants due to limited funds, it is necessary for participants to obtain a VOC in order to become a priority case in the new clinic area. This is especially important in areas where there is a waiting list of eligible individuals awaiting funds availability to become WIC participants. In Wyoming, the EBT system interfaces with the WIC management information system to notify the new area that a participant is moving to that clinic area. This allows the use of an existing EBT card under procedures set by the State WIC Program. The ability to transfer records to the new clinic is enhanced by a transmission of client data between

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<sup>1</sup> If UPCs are a part of the EBT system, then continuous exchange of UPC-related information will be necessary between the retailer and the program staff. Operating manuals must be available to retailers and kept updated by the State or EBT vendor.

locations without the costs associated with printing and sending reports. Within one State, or one WIC EBT system, this can be accomplished with a file transfer, since records would be in the same format. If the participant is transferring to another jurisdiction, file formats may need to be adapted.

## APPENDIX A

### **EBT Design Through Comparison of FSP and WIC Functional Requirements**

When designing an EBT system, it is important to understand and examine the needs of each program being considered. If the system is designed to address a single program with plans to incorporate other programs or services in the future, a review of the other programs' requirements during the design phase enables the creation of a flexible system. Both the FSP and WIC have regulations by which each program must abide. Although FSP is the only program with specific EBT regulations, these regulations were established to make *on-line* EBT an operational alternative to the delivery of benefits using paper food coupons. This chapter uses these on-line FSP regulations in establishing a point of comparison between WIC and FSP regulations, with WIC-specific features incorporated where necessary. WIC regulations which are in place for paper vouchers and checks are expected to govern a WIC EBT system.

When reviewing these regulations with respect to EBT, it is helpful to organize each program's unique requirements according to the following five functional areas: authorizing benefits; delivering benefits; redeeming benefits; crediting retailers and financial institutions; and managing retailer/vendor participation. Several areas addressed within the FSP and WIC regulations were considered to be of a general nature; these were incorporated into a category labelled "other." This comparison between the FSP and WIC requirements creates a framework upon which an EBT system can be designed.<sup>1</sup> The designation of "stated as functional requirement" within the WIC Program section under "Basis for Requirement" denotes the interests of WIC Program management to provide a similar requirement within a WIC EBT system. Where the FSP has designed system availability and reliability criteria, WIC Program management has expressed a similar interest in these criteria.

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<sup>1</sup> This appendix originally appeared in the U.S. Department of Agriculture, Food and Consumer Service report, "Feasibility Study of a Combined EBT System for the Food Stamp Program and the Special Supplemental Food Program for Women, Infants, and Children (WIC)," April 1993. It has been updated to reflect subsequent information from Wyoming's experience in designing an EBT system for WIC.

**APPENDIX A**  
**Comparison of FSP and WIC Functional Requirements**

A-2

		Food Stamp Program		WIC Program	
Function	Requirement	Program Specifics	Basis for requirement	Program Specifics	Basis for requirement
Authorizing Household Benefits	Benefit carryover:	Carryover to next month(s)	Regulation.	Monthly benefits expire at set time.	Regulation.
	PIN selection:	Four digits minimum, selected by recipient.	Regulation.	Four digits minimum, selected by recipient.	Assumed to conform to FSP and/or commercial standards.
	Card replacement:	Replacement fee may be assessed, not to exceed cost of the card, or cost of the replacement, which could include labor and other costs.	Regulation.	Replacement fee still remains under consideration.	.
	Ease of use:	For all Recipients and Retailers.	Regulation.	For all Participants and Vendors.	Stated as functional requirement.
	Issuance file:	Receive monthly or daily issuance files from State welfare system to refresh household files. Post one month or pro-rata share of one month's benefits.	Regulation.	Receive individual food prescription file merged into family by food category/subcategory from local health clinic for participants. Post one month or pro-rated share of one month's benefits.	Regulation.
	Expedited benefits:	Process benefit issuance in expedited manner (within five days).	Regulation.	Process expedited certification of eligibility for some participants. Benefits must be issued upon certification (generally within 24 hours).	Regulation.
Deliver Benefits to Households	Benefit availability:	On date of issuance.	Regulation.	On date and at time of issuance.	Stated as functional requirement.

**APPENDIX A**  
**Comparison of FSP and WIC Functional Requirements**

A-3

		Food Stamp Program		WIC Program	
Function	Requirement	Program Specifics	Basis for requirement	Program Specifics	Basis for requirement
Deliver Benefits to Households (con't)	Issuance problem resolution:	Timely response to issuance problems. Customer features are specified in regulations.	Regulation.	Timely response to issuance problems.	Stated as functional requirement.
	Benefit conversion:	From EBT to coupons allowed when household moves out of EBT area. Benefits are rounded down to match closest available paper coupon denominations; any remaining benefits on EBT card must be spent within one week, or forfeited.	Regulation.	May specify food retailer where participant receives benefits. Retailer designation may be changed within EBT area. Participants moving (intra- or interstate) are issued a "verification of certification" (VOC) to provide benefit priority in their new area.	Regulation.
	Backup procedures:	Provide backup procedures during downtime, and contingency plans in the event of natural disasters.	Regulation.	Provide backup procedures during downtime.	Assumed to conform to FSP and/or commercial standards.
	Media:	Cannot split benefits between paper and EBT.	Regulation.	Benefit delivery systems must be procedurally uniform within the jurisdiction of the State agency.	Regulation (for demonstrations; pilot projects may be undertaken and use alternative media).
	Replacement cards:	Must be provided within two days of reported loss.	Regulation.	Within two days of reported loss.	Regulations specify no inconvenience to participant.

**APPENDIX A**

**Comparison of FSP and WIC Functional Requirements**

		Food Stamp Program		WIC Program	
Function	Requirement	Program Specifics	Basis for requirement	Program Specifics	Basis for requirement
Redemption of Benefits	Lane equipage:	Equip all lanes if food stamp sales exceed 15% of total food sales. If under, one terminal for every \$11,000 monthly food stamp sales (maximum = number of lanes in-store).	Regulation.	No deployment requirement other than allow access at authorized vendors in manner that ensures WIC client is treated as other customers.	Regulation.
	Transaction fees:	No transaction fees to participants.	Regulation.	Participants receive benefits free of charge.	Regulation.
	Minimum value/Maximum transactions:	No minimum purchase amount, or maximum number of transactions.	Regulation.	Encourage fulfillment of food prescription. Need to allow subsequent purchase of unavailable items.	Stated as a functional requirement.
	Balance Inquiry:	Balance determination available without purchase.	Regulation.	Ability to print prescription balance prior to shopping.	Stated as a functional requirement.
		Balance displayed only at a "balance only" terminal. ("Balance only" terminals are not required by the EBT system.)	Regulation.	Balance of remaining prescription items, not dollars, by food category and subcategory.	Stated as a functional requirement.
	PIN Encryption:	Encryption of PIN from PIN pad using Data Encryption Standard (DES) algorithm.	Regulation.	Encryption of PIN from PIN pad using Data Encryption Standard (DES) algorithm.	Assumed to conform to FSP and/or commercial standards.

**APPENDIX A**

**Comparison of FSP and WIC Functional Requirements**

Function	Requirement	Food Stamp Program		WIC Program	
		Program Specifics	Basis for requirement	Program Specifics	Basis for requirement
Redemption of Benefits (cont'd.)	System response time:	Leased lines systems: process 98% of transactions within 10 seconds or less; 100% within 15 seconds. Dial-up systems: process 95% of transactions within 15 seconds or less; 100% within 20 seconds.	Regulation.	None stated for WIC; FSP on-line regulations specify that leased lines systems: process 98% of transactions within 10 seconds or less; 100% within 15 seconds. Dial-up systems: process 95% of transactions within 15 seconds or less; 100% within 20 seconds.	Assumed to conform to FSP and/or commercial standards.
	System availability:	Entire system available 98.0% of scheduled time, 24 hours/day, 7 days/week. (Allows scheduled downtime, at non-peak hours.)	Regulation.	None stated for WIC; FSP on-line regulations specify that the entire system must be available 98.0% of scheduled time, 24 hours/day, 7 days/week. (Allows scheduled downtime, at non-peak hours.)	Assumed to conform to FSP and/or commercial standards.
	Retailer/Vendor reimbursement:	Credits provided to financial institutions within two business days of the daily cut-off time for the retailer.	Regulation.	Prompt credits provided to vendors for food costs.	Regulation.
	Transaction file:	Creation and transmission of ACH formatted file.	Regulation.	Creation and transmission of ACH formatted file.	Assumed to conform to FSP and/or commercial standards.

**APPENDIX A**

**Comparison of FSP and WIC Functional Requirements**

A-6

		Food Stamp Program		WIC Program	
Function	Requirement	Program Specifics	Basis for requirement	Program Specifics	Basis for requirement
Reconciliation and Settlement	Management reports:	Ability to create management reports (hard copy or alternative agreed to between State Agency and FCS).	Regulation.	Same as FSP, with financial reports showing price paid per item and per total transaction, and management reports showing items purchased by individuals for clinic use and in nutrition education.	Stated as functional requirement.
	EBT transaction activity:	Create and maintain an EBT transaction file, log and log history at processor.	Regulation.	Create and maintain an EBT transaction file, log and log history at processor.	Assumed to conform to FSP and/or commercial standards.
	Retailer tracking:	Total all credits accumulated by each retailer.	Regulation.	Total all credits accumulated by each retailer.	Assumed to conform to FSP and/or commercial standards.
		Provide balance information to retailers or 3rd party processors from individual POS terminals, as needed.	Regulation.	Provide balance information to retailers or 3rd party processors from individual POS terminals, as needed.	Assumed to conform to FSP and/or commercial standards.
	Account adjustments:	Allow approved adjustments to recipient account by State agency.	Regulation.	Allow approved adjustments to prescription at local agency/clinic.	Stated as functional requirement.
	Reconciliation at household account level:	Reconciliation of individual household account balances against account activities on a daily basis.	Regulation.	Reconciliation of individual household account balances against account activities on a daily basis.	Stated as functional requirement.

**APPENDIX A**  
**Comparison of FSP and WIC Functional Requirements**

Function	Requirement	Food Stamp Program		WIC Program	
		Program Specifics	Basis for requirement	Program Specifics	Basis for requirement
Reconciliation and Settlement (cont'd.)	Activity reconciliation:	Reconciliation of each retailer's food stamp transactions per POS terminal and in total to deposits on a daily basis.	Regulation.	Reconciliation of each retailer's food instrument transactions per POS terminal and in total to deposits on a daily basis.	Stated as functional requirement. Regulations specify actual price recorded at time of purchase.
		Verification of retailer's credits against deposit information entered into the ACH network.	Regulation.	Verification of retailer's credits against deposit information entered into the ACH network.	Stated as functional requirement.
	Complete system reconciliation:	Reconciliation of total funds entered into, exiting from, and remaining in the system each day.	Regulation.	Reconciliation of total funds entered into, exiting from, and remaining in the system each day.	Regulation.
	Audit trails:	Audit trails of activity.	Regulation.	Audit trails of activity.	Regulation.
Manage Retailer/Vendor Participation	Open opportunity to participate:	All authorized food retailers be afforded the opportunity to participate in any EBT program. (Must include stores serving minority language populations).	Regulation.	All authorized food retailers must be afforded the opportunity to participate in any EBT program.	Regulation specifies authorization to ensure adequate convenience and access for participants.
	Retailer Training:	Initial training of newly authorized retailers provided, on-going training provided by retailer (same as current).	Regulation.	Initial training of newly authorized retailers provided by State or local clinic, on-going training provided by retailer.	Regulation.
	Timing of system access following authorization:	Within 2 weeks of FCS authorization.	Regulation.	Within 2 weeks of authorization.	Assumed to conform to FSP and/or commercial standards.

**APPENDIX A**  
**Comparison of FSP and WIC Functional Requirements**

		Food Stamp Program		WIC Program	
Function	Requirement	Program Specifics	Basis for requirement	Program Specifics	Basis for requirement
Manage Retailer/ Vendor Participation (cont'd.)	Add Retailers/Vendors:	Ability to add newly authorized retailers.	Regulation.	Ability to add newly authorized retailers by State office.	Regulation.
	Delete Retailers/Vendors:	Ability to delete disqualified or withdrawn retailers by FCS Regional Office.	Regulation.	Ability to delete authorized retailers by State office.	Regulation.
	Authorized user access:	Ensure access by authorized retailers and 3rd party processors only. Maintain authorization database.	Regulation.	Ensure access by authorized retailers and 3rd party processors only. Maintain authorization database to mirror State authorizations and disqualifications.	Assumed to conform to FSP and/or commercial standards.
		Ability to certify 3rd-party processors.	Regulation.	Ability to certify 3rd-party processors.	Assumed to conform to FSP and/or commercial standards.
	Compliance:	Provide compliance exception reports to FCS compliance officer in charge.	Regulation.	Provide compliance exception reports to State vendor compliance officer in charge.	Stated as functional requirement.
		Permit access to investigations by FCS compliance and OIG (for compliance buys). Also, State criminal investigations.	Regulation.	Permit access to investigations by FCS compliance and OIG (for compliance buys). Also, State criminal investigations.	Regulation.
	Equipment functionality:	Ensure equipment and supplies are repaired or replaced within 24 hours.	Regulation.	Ensure equipment and supplies are repaired or replaced within 24 hours.	Assumed to conform to FSP and/or commercial standards.

**APPENDIX A**  
**Comparison of FSP and WIC Functional Requirements**

Function	Requirement	Food Stamp Program		WIC Program	
		Program Specifics	Basis for requirement	Program Specifics	Basis for requirement
Other	Industry standards:	Meet industry standards, as they evolve.	Regulation.	Meet industry standards, as they evolve.	Assumed to conform to FSP and/or commercial standards.
	System accuracy:	Main system accuracy: No more than 2/10,000 transactions processed inaccurately.	Regulation.	Main system accuracy: No more than 2/10,000 transactions processed inaccurately.	Assumed to conform to FSP and/or commercial standards.
	Cost neutrality:	Operational costs of EBT system, plus start-up costs, not to exceed operational costs of previous issuance system.	Regulation.	No cost neutral requirement. Cost and effectiveness are addressed through State and Federal system planning process.	None.
	Data verification, with ranges:	Range checks for acceptable dates, account numbers, refund upper limits, etc.	Regulation.	Range checks for acceptable dates, account numbers, refund upper limits, etc. Also check for maximum dollar per item, per prescription, and per account.	Stated as functional requirement.
	Contingency plans:	Contingency plans and backup procedures.	Regulation.	Contingency plans and backup procedures.	Assumed to conform to FSP and/or commercial standards.
	Performance standards:	Monitor system performance standards.	Regulation.	Monitor system performance standards.	Assumed to conform to FSP and/or commercial standards.
	Rebates:	None.		Report on the value and quantity of rebate items redeemed by brand and by vendor for rebate accounting purposes (e.g., infant formula).	Stated as functional requirement.



## APPENDIX B

### **USDA WIC Program Electronic Benefit Transfer Vision Statement - November 1994**

#### **KEY POINTS OF THE WIC EBT VISION**

- Include WIC as an integral part of a national strategy towards modernizing and streamlining business practices through electronic solutions.
- Deliver WIC benefits and reconcile payments through a paperless EBT system.
- Improve client services through simplified point-of-sale transactions and greater shopping convenience.
- Increase accountability and streamline program monitoring for States.
- Make WIC benefit redemptions and payments more efficient for retailers.
- Maximize the technological advantages for WIC in line with evolving commercial sector innovations.
- Promote Federal-State partnerships in development and implementation of EBT systems for benefit delivery.

#### **BACKGROUND**

The Food Stamp Program (FSP) and other Federal cash assistance programs are rapidly moving to provide benefits through electronic benefit transfer (EBT). In the case of FSP, major changes will take place in the food retail industry in order to accommodate EBT. A substantial subset of these retailers are also authorized to serve individuals participating in the WIC Program. As both retailers and participants become accustomed to FSP EBT, and begin to appreciate the improved service EBT affords them, we believe the Department and the Food and Consumer Service will be asked to explore ways to provide WIC food benefits through EBT as well.

In anticipation of moving WIC into the world of EBT, it is important to provide a clear sense of direction. WIC, while similar to FSP in many respects, is also quite different. From a viewpoint

of improved client and retailer services, EBT systems that are effective for FSP may not provide the full spectrum of benefits which are important to WIC.

For FSP, EBT benefits include reduced administrative burden and quicker payments for retailers as well as greater dignity and shopping convenience for clients. For WIC, these benefits, too, are important. But in WIC, improved services to both retailers and clients must also focus on simplifying point-of-sale transactions so the retailer ceases to function as enforcer of food package requirements and the client receives speedy and courteous service. A recent Food Marketing Institute study indicated that current WIC redemptions are the most costly transactions retailers undertake in the course of the shopping day. Any EBT solution for WIC that does not address these additional service issues will not address the improved customer service potential that EBT affords to WIC.

This recognition has been forthcoming from Assistant Secretary Ellen Haas. During a senior managers retreat in early August of 1994, she spoke plainly about the importance of exploring EBT alternatives for WIC, and that FCS should move quickly to develop strategies that would eventually make WIC EBT a reality. This commitment has been strongly echoed by FCS Administrator William Ludwig.

Current FSP and cash assistance programs have established a policy of "piggy-backing" on existing commercial infrastructures. To the greatest extent possible, WIC EBT should follow the same course. It may be that meeting the WIC EBT objectives noted below will require use of off-line technology; we are not sure yet. There may be a commercial emergence of this technology and FCS should be poised to take advantage of it in a way which best serves WIC Program interests. With this in mind, the following objectives and plans are envisioned for WIC EBT.

## OBJECTIVES

As the WIC Program moves to full funding, State agencies should begin to incorporate EBT in their management systems to promote greater cost control and quality of client services. The EBT system should be designed to meet key WIC program goals.

- Assure that the prescribed WIC food package is purchased by the participant and no foods are forfeited or improperly substituted.
- Provide data on the type, brand, and cost of each food item so that State agencies can control food costs through informed food package decisions and maximization of rebates on infant formula and other foods.
- Assure that WIC clients are charged the same shelf price for food as other customers.
- Assure that the WIC food transaction affords the participant dignity and convenience.
- Enable the food retailer to complete the WIC transaction efficiently and properly with equipment appropriate for use for Food Stamp and other transactions so that no redundant systems or actions are required at the checkout lane.
- Assure that the cost of processing a WIC transaction is reasonable in relation to current WIC transaction costs.

## **PLAN**

The WIC Program does not yet have a fully operational EBT model. Therefore, plans are focused on supporting State agency development efforts and working to develop a strategic plan for achieving nationwide WIC EBT. The strategic plan will be in concert with the expectation that States will be moving forward in pursuing electronic solutions, with Agency efforts for re-engineering and re-inventing business practices to achieve our program goals, and in consideration of future requirements such as interstate standards and multi-state initiatives. FCS will work with the following key stakeholders in developing the strategic plan.

### **Food Retailers**

The first task is to better understand and evaluate the benefits of EBT for the WIC program, initiate discussions with retailers to inform them of these benefits, and present the business case for their cooperation in installing POS equipment suitable for WIC transactions. As the WIC transaction is now the most expensive type a retailer encounters, the business case will propose the investment expected from retailers consistent with the savings it is estimated the retailer will receive from the

simplified transaction envisioned under an EBT system. FCS plans to develop a prototype business case proposal and begin discussions with retailer associations.

### **Financial Services Industry**

Recent announcements that the financial services industry is moving into alternative technological areas such as the wider scale use of smart cards is an important development. This technology offers greater security and capacity suited to the more complex WIC transaction and may also support the WIC Program's long-term interest in exchange of data to facilitate better client service and access to health and welfare services. FCS plans to work with industry to make WIC Program objectives known so that when such technology is introduced, it accommodates WIC's needs. Additionally, FCS will continue to explore the adaption of current technology to determine if WIC's objectives can be achieved (e.g., on-line/hybrid demonstration projects). FCS plans to begin discussions with the financial services industry regarding short-term and long-term plans.

### **WIC State Agencies**

The National Association of WIC Directors (NAWD) has formed an EBT Committee to establish long-term WIC EBT objectives. FCS will work with this Committee to inform them of developments, discuss problem resolution and gain insight into the needs of the State and local providers. This Committee will also serve as a forum to discuss the enhanced coordination between WIC and Food Stamps.

### **Food Stamp Program**

It is estimated that 40 to 60 percent of WIC participants also receive food stamps. Ways to improve the referral of information, cost sharing, and nutrition education to participants in both WIC and FSP can be investigated via cooperative efforts on EBT. Further, through the data collected relative to EBT, FCS plans to explore ways to better share Federal and State resources devoted to retailer authorization and compliance.

## APPENDIX C

### Wyoming Design to Meet WIC Functional Requirements

The Wyoming EBT system will deliver benefits to WIC and Food Stamp Program recipients in Natrona County using off-line processing technology and microprocessor chip card ("smart card") benefit access devices. Smart cards and off-line technology were selected in Wyoming due in part to the State's high cost of telecommunications and the rural environment. The EBT system is being designed to anticipate statewide rollout and the potential inclusion of other benefit programs such as Aid to Families with Dependent Children (AFDC) and Medicaid, with the potential to link this card with other medical information as a health passport.<sup>1</sup> The State has initiated the development of a system with the intention to grow and adapt to other applications as time progresses. In addition to the multi-program demonstration in Natrona County, the counties of Laramie, Albany, Goshen, Niobrara, Converse, and Platte will provide only WIC benefits using the same access devices and off-line processing.

This off-line EBT system is independent of the previous demonstration of WIC benefit delivery using smart cards; however, data gathered from that demonstration has provided the State with valuable insight into the design of this multi-program EBT system. Retailers in Natrona County<sup>2</sup> (which incorporates the previous demonstration area) and the other counties, will process EBT transactions through an EBT-dedicated POS system. The POS system will integrate with each store's scanning and commercial systems only to gather price and food item information for WIC prescriptions. For purposes of delivering benefits using EBT, Wyoming has elected to combine benefits into a household level card. Although WIC food benefits are prescribed for individuals, the

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<sup>1</sup> The Western Governors' Association is exploring the use of card technology for a health passport. Eight programs in six Western states are being reviewed to determine the feasibility of incorporating their services onto a health passport. The Wyoming WIC/FSP EBT program would be incorporated onto this card, pending results of the evaluation of Wyoming's project.

<sup>2</sup> Approximately 2,600 households in Natrona County have been targeted to participate in the pilot program. This number includes 1,600 FSP-only, 500 FSP and WIC, and 500 WIC-only participants. These benefit recipients may obtain benefits at a total of 51 retail locations; 42 providing FSP benefits only, and nine authorized to provide FSP and WIC benefits.

previous demonstration of WIC benefits using EBT also used the household level; the income eligibility determination factor is based upon this economic unit. Since information on a smart card can be partitioned, FSP and WIC benefit information is written to the card in different areas, providing the household with access to only the types of benefits to which household members are eligible.

As part of the process in reviewing the Wyoming EBT system design, the comparison of FSP and WIC regulations was expanded to incorporate the features of the Wyoming EBT system. In other words, the manner in which Wyoming is proposing to meet the regulations was placed in juxtaposition with these regulations. This comparison, presented in Exhibit C-1, provides a tool for considering design of a WIC EBT system. Other States examining the use of EBT to provide WIC benefits — whether on-line or off-line processing, can use this matrix in determining how they may choose to meet the regulations. The approach taken by Wyoming is not necessarily the only approach, and in fact, some of the design features (e.g., reporting) may have been established to meet criteria or special needs established by the State.

It is important to note that while the delivery of benefits via EBT can streamline several processes in the existing delivery of benefits, it may also provide a unique opportunity to evaluate the current flow of information and data, possibly restructuring this data to be more efficient, or to incorporate additional data which could not be captured with a paper-based service. All of the design issues are also dependent upon the role which EBT will have in the delivery of program benefits. Several States have discussed phasing the WIC Program into an EBT system by initially providing only automated financial settlement and program participation identification. Other States are considering expanding EBT functionality to incorporate detailed tracking and monitoring features to validate the effectiveness of the WIC EBT program. Each State may determine the WIC functionality desired on their own EBT system, noting that the sophistication of the system affects the price of the system.

In Wyoming, WIC participants are typically certified every six months, and two months' worth of benefits are provided at each clinic visit. During clinic visits, participants participate in nutrition classes, receive health check-ups, and potentially are referred to other programs within health and

human services. When a participant moves from one clinic area to another within Wyoming (or out of State) during their certification period, a verification of certification (VOC) is issued to the participant. This VOC is issued by the clinic in which the participant had been served, and provides participant information to the clinic in the new service area. With implementation of EBT, the benefit card also serves as a VOC within the EBT area.

At the check-out lane, WIC purchases are separated within the participant's food items. Items which are "WIC eligible" may also be purchased using food stamp benefits. By going from most restrictive to least restrictive in segregating these WIC items (based upon the food prescription) at the check-out lane, the participant is ensured that less restrictive FSP benefits are directed at the items not appearing on the more restrictive WIC food prescription, thereby assuring maximum use of both program's benefits. Even with an EBT system, since each participant's food prescription is established for the individual, it is not sufficient for the store to generically distinguish items as "WIC eligible" in the same manner that items may be considered "Food Stamp Program eligible". An EBT system may still address this process at the check out lane. More generally, food stamp and WIC purchases cannot be taxed, even if the State assesses tax on other food purchases. It is therefore critical that items are identified as WIC and FSP purchases so that tax will not be applied.

Wyoming has identified key enhancements for inclusion into its EBT system which are made possible by selection of IC card and UPC scanning technology. The IC card:

- carries both program benefit data for FSP and for WIC prescriptions as well as participant information regarding immunizations and other client data.
- holds current program benefit data for FSP and for WIC food prescriptions as well as histories of recent transactions.
- permits storage of client immunization history as well as selected health items that may be updated by WIC staff and shared at the client's discretion with health providers in non-EBT locations.
- bridges food categories and subcategories prescribed by WIC and the UPC scanning systems within stores. This permits specific brand and package size prescriptions to be interpreted by in-store databases and provides real-time rejection of non-prescribed items. (Clients may then pay for such items by means other than their WIC benefit.) This passive scanner-based

monitoring reduces the burden on store clerks to monitor items charged to the WIC Program, and speeds up in-lane transaction time.

- reduces the need for training store clerks and WIC clients since proper purchasing patterns are reinforced by the response of the EBT system, rather than through extensive ongoing training of individuals.
- permits diagnosis of benefit card malfunctions at the WIC clinic level.
- allows the processor to overwrite returned cards, reducing the long-term cost of card replacement. Acknowledging a high percentage annual card replacement rate observed in both on-line and off-line EBT projects to date, Wyoming has planned procedures for retrieving abandoned cards at stores and upon proper account verification, cleaning, and reissuing such cards.
- provides enhanced system security of an electronic fingerprint of all transactions
- replaces the paper VOC used to facilitate enrollment of WIC clients moving from one WIC service area to another.
- provides a benefit vehicle with added security and durability.
- provides the ability to replace remaining balance of benefits when card is lost or stolen
- while client and retailer card functionality is enhanced, backend of financial reconciliation and payment uses standard commercial practices.
- provides local authorization of WIC benefits

Other enhancements to the way WIC operates under Wyoming's off-line EBT system include:

- avoidance of the need to equip stores with dedicated telephone lines and to be subject to fees and potential delays in transaction processing by on-line methods.
- the ability to distinguish types of retailers in management reports generated by the system.
- use of a State and retailer developed master list of UPC's for WIC products, including generic and store-specific codes in a continuously updated reference file.
- creation of a UPC-specified record of item purchases which may be used to document purchases generating WIC rebates.
- passive recording of UPC-specific store prices for improved State monitoring of pricing of WIC items.

- linking of WIC and FSP clients through use of a social security number.
- issuance through a combined family prescription translated from an individual basis to a family basis by the WIC clinic and delivered by the processor to one shared card per household.
- use of a combined and uniform financial draw approach with the Food Stamp Program which makes use of HHS Payment Management System
- affords the opportunity for FSP and WIC office staff to work more effectively with clients who are participating in both programs
- provides an enhanced opportunity to focus on family nutrition education by maximizing the resources of both programs
- enables WIC nutrition staff to monitor WIC prescription utilization of high-risk clients
- provides toll-free customer service for retailer and client card and system issues for both programs, 24 hours per day
- allows client to take advantage of special store promotions as WIC prescription is no longer designated to a specific retailer.
- eliminates restrictions on shopping frequency as transactions are handled on an item-level basis, rather than on a full prescription basis.

The following pages of this appendix present how Wyoming has approached the design of its off-line EBT system to satisfy the WIC Functional Requirements presented in Chapter 3 and in Appendix A.

As in Appendix A, there are several designations used in the "Basis for Requirement" column that are used to describe the source from which the "Program Specifics" were derived. A description of the designations used follows:

- "Regulation" denotes a WIC regulation.
- "Assumed to conform to FSP and/or commercial standards" denotes that the information was obtained from either the FSP regulations, commercial standards, or accepted commercial practices.
- "Stated as functional requirement" denotes the interests of WIC Program management to provide this requirement within a WIC EBT system.

**APPENDIX C**

**Wyoming Design to Meet WIC Functional Requirements**

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Authorizing Household Benefits	Benefit carryover:	Monthly benefits expire at set time.	Regulation.	Benefit expires on the last date of each month. Any portion of the food benefit which remains unused at the end of the month will be erased from the card, and the value erased will be uploaded to the EBT host for reporting to the State for client counseling and enabling tracking of the outstanding liability. This occurs the first time the card is used in the new month (at the same time that new issuance amounts are placed on the card).
	PIN selection:	Four digits minimum, selected by recipient.	Assumed to conform to FSP and/or commercial standards.	Once the client is determined eligible for WIC or FSP a card is issued and "personalized" and the participant selects their (5 digit) PIN. The selected PIN is encrypted by the security access module (SAM) located in the card I/O device. A PIN can be reassigned at the local clinic in the event that the participant forgets their PIN. Finally, the critical case information is input into the card management system at the local clinic.
	Card replacement:	Replacement fee still remains under consideration.		In general, card replacements are performed at the appropriate local agency. If the participant receives benefits from WIC and other programs, the card may be replaced at the WIC clinic. Lost or stolen cards are reported to the EBT customer service number, and a new card is received from the program agency. There is no card replacement fee in the current pilot. Wyoming is using the pilot to determine if a fee is needed for system expansion. When the card is reported lost or stolen, the EBT system is notified so that the PAN (card identification number) is included in the negative file sent to retailers. This blocks future use of the card. 48-hour wait (for retailer settlement entries) is required to determine the outstanding card balance. The lower of the host-derived balance or the last-reported card balance is used when replacing the balance of current month benefits.
	Ease of use:	For all participants and retailers.	Stated as functional requirement.	Client training and training designed to gain quick acceptance by participants.

**APPENDIX C**  
**Wyoming Design to Meet WIC Functional Requirements**

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Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Authorizing Household Benefits (con't)	Issuance file:	Receive individual food prescription file merged into family by food category/ subcategory from local health clinic for participants.	Regulation.	WIC clinic uploads certification information to EBT system daily. Two months worth of benefits are uploaded to the EBT host, however only one month's worth are downloaded to the selected (3) retailers at a time. The remaining month is maintained at the EBT host until it is staged for download to the specified retailers. A prorated month's worth of benefits is issued from mid-month to the end of the month.
	Expedited benefits:	Process expedited certification of eligibility for some participants. Benefits must be issued within 24 hours of certification.	Regulation.	Infant formula (one can) may be added to the card at the local clinic. All other WIC benefits are added to cards only at one of the participant's three selected retail stores.
Deliver Benefits to Households	Benefit availability:	On date and at time of issuance.	Stated as functional requirement.	Intra-month prescription changes - for formula only - are written to card at clinic (notice sent to host to change current month's balance). Any changes to next month's benefits are sent to EBT processor for updating prior to issuance. On the issuance date, benefit information is downloaded to three retail locations. When issuance is picked up at retail location, a flag is set on the card (to prevent a duplicate issuance to the card), and an issuance notice is uploaded to the State.
	Issuance problem resolution:	Timely response to issuance problems.	Stated as functional requirement.	Prescription changes may be routinely made for subsequent month's benefits up to five days prior to staged down-loading date. Infant formula changes are allowed within the month. Automatic addition of infant foods (cereal and juice) at appropriate age. Customer assistance is available 24-hours a day to resolve participant inquiries following positive identification of participant via a toll-free telephone line to customer service.

**APPENDIX C**  
**Wyoming Design to Meet WIC Functional Requirements**

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Deliver Benefits to Households (con't)	Benefit conversion:	May specify food retailer where participant receives benefits. Retailer description may be changed within EBT area. Participants moving (intra- or interstate) are issued a "verification of certification" (VOC) to provide benefit priority in their new area.	Regulation.	The EBT system does not restrict the participant to a particular retailer, but enables purchases at any WIC authorized retailer. Benefits may only be added to the card at one of three participant-selected locations. Within the seven-county pilot area, all certification data is carried on the card for use when relocating. Conversion from EBT to WIC voucher is done if participant relocates from the pilot area, and value remains on the card. New agency calls customer service and requests a WIC conversion balance. There is a 48-hour waiting period after the call to obtain an accurate balance. The EBT card is turned in to the new agency, which returns it to the processor. Alternatively, the old clinic provides the new clinic with a VOC and a balance inquiry receipt.
	Backup procedures:	Provide backup procedures during downtime.	Assumed to conform to FSP and/or commercial standards.	Manual purchases enable the retailer to process a WIC purchase transaction if the EBT POS or benefit card is inoperative. Because of the supplemental nature of the WIC Program, infant formula is considered the only food item subject to manual procedures. The EBT system will only support a WIC manual transaction for one can of infant formula in powder, concentrate, or ready to feed form. WIC vendor must call customer service for an authorization number. Transaction data (PAN, product category code, sub-category code, cans, transaction code, amount of sale, authorization number, and check digit) are later entered on POS terminal for upload to host during settlement. The manual issuance is then deducted from the card the next time the card is used in the system.
	Media:	Benefit delivery systems must be procedurally uniform within the jurisdiction of the State agency.	Regulation.	Wyoming demonstration area will not split WIC benefits between paper and EBT. Participants will receive EBT card.

**APPENDIX C**  
**Wyoming Design to Meet WIC Functional Requirements**

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Deliver Benefits to Households (con't)	Replacement cards:	Within two days of reported loss.	Regulations specify no inconvenience to participant.	The recipient can get the card replaced immediately at the appropriate WIC clinic. All benefits can be restored within the 48 hours required for all transactions to post. Participant may "conveniently" notify customer service upon knowledge of lost or stolen card. Participant must visit WIC clinic for new card, to personalize card with PIN, and to add portable health information. If the 48-hour window for replacement of benefits extends beyond the expiration of the benefits, the outstanding benefits are returned to the State.
Redemption of Benefits	Lane equipage:	No deployment requirement other than allow access at authorized vendors in manner that ensures WIC client is treated as other customers.	Regulation.	Terms of lane equipage were defined in the Wyoming RFP. There are 39 WIC retailers, 9 of which also handle FSP. The 9 retailers have full lane equipage, plus a balance inquiry terminal. The remaining 30 retailers will be equipped based on a formula which approximates 50% coverage, up to a maximum of four equipped lanes, plus a balance inquiry terminal.
	Transaction fees:	Participants receive benefits free of charge.	Regulation.	No charges to participants for transactions.
	Minimum value / Maximum transactions:	Encourage fulfillment of food prescription. Need to allow subsequent purchase of unavailable items.	Stated as a functional requirement.	Card is debited by WIC food category and subcategory for the amount/quantity of the purchase. The scanning checks the UPC with the food prescription. Partial food prescription purchases may be made. Prescription items left on the card at the next month's issuance are erased as the new month's issuance is substituted. Returned balances are reported to the State each month.
	Balance inquiry:	Ability to print prescription balance prior to shopping.	Stated as a functional requirement.	The WIC balance inquiry terminal will provide participants with a printed receipt which lists the food prescription balance by food category. The printed receipt will contain this balance list at the end of each POS transaction. Customer service will provide balance inquiry information based upon host balances, for the remaining product value by food category and subcategory quantity.

**APPENDIX C**  
**Wyoming Design to Meet WIC Functional Requirements**

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Redemption of Benefits (con't)		Balance of remaining prescription items, not dollars, by food category and subcategory.	Stated as a functional requirement.	Both WIC balance inquiry and purchase terminals will provide the recipient with a printed receipt which lists the food prescription and FSP dollar value (if applicable) remaining on the card.
	PIN encryption:	Encryption of PIN from PIN pad using Data Encryption Standard (DES) algorithm.	Assumed to conform to FSP and/or commercial standards.	DES secured PIN pad is available.
	Erroneous PIN:	Limit placed on number of unsuccessful PIN attempts	Assumed to conform to FSP and/or commercial standards.	Card is locked after three attempts with erroneous PIN. The local clinic has the ability to unlock card for identified client and for selecting a new PIN, thereby enabling access to benefits remaining on card.
	System response time:	None stated for WIC; FSP on-line regulations specify that leased lines systems: process 98% of transactions within 10 seconds or less; 100% within 15 seconds. Dial-up systems: process 95% of transactions within 15 seconds or less; 100% within 20 seconds.	Assumed to conform to FSP and/or commercial standards.	Time from confirmation of purchase amount to completion of processing is equivalent to FSP on-line requirements.
	System availability:	None stated for WIC; FSP on-line regulations specify that the entire system must be available 98.0% of scheduled time, 24 hours/day, 7 days/week. (Allows scheduled downtime, at non-peak hours.)	Assumed to conform to FSP and/or commercial standards.	Stated system availability and capacity deal with updates to benefit accounts (0.4 seconds per issuance). System reliability: using Tandem computers providing fault tolerant systems which are resistant to all types of failures and errors, reliable systems that ensure an accurate and consistent database at all times.

**APPENDIX C**  
**Wyoming Design to Meet WIC Functional Requirements**

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Redemption of Benefits (con't)	Retailer / Vendor reimbursement:	Prompt credits provided to retailers for food costs.	Regulation.	A net credit is calculated by the host for each retail location which has performed an end of day settlement transaction. This credit will equal the end of day DEPOSIT total that was printed for the EBT POS location. Reimbursement is through the ACH, when possible. If the retailer's bank cannot accept ACH credits, a check will be cut. Retail stores receive credit one bank business day following settlement. FSP and WIC credit are combined to store. The State allows the EBT processor to draw funds directly through the HHS Payment Management System used for the FSP. One "Letter of Credit" is available for WIC and one for the FSP. WIC rebates are handled in State accounts and are presently directed at areas in the State not operating EBT.
	Transaction file:	Creation and transmission of ACH formatted file.	Assumed to conform to FSP and/or commercial standards.	Batch cycle for generating reports and transmitting the daily ACH file will be scheduled to allow a retailer cutoff time of 12:00 noon MT each day (for settlement). The file from the processor to the concentrator bank is sent via dial-up telephone lines.
Reconciliation and Settlement	Management reports:	Same as FSP, with financial reports showing price paid per item and per total transaction, and management reports showing items purchased by individuals for clinic use and in nutrition education.	Stated as functional requirement.	Full reporting capability includes daily and monthly reports produced by the EBT processor that describe transaction and dollar settlement activities. The WIC State system will show Retailer WIC Sales by UPC (monthly data); WIC Rebate Analysis Report (infant formula rebate, monthly data); and WIC Family Utilization Report (food prescription utilization report, monthly data).
	EBT transaction activity:	Create and maintain an EBT transaction file, log, and log history at processor.	Assumed to conform to FSP and/or commercial standards.	Transaction History Archival report shows terminal reference #, transaction date, time, STL ref. #, transaction code, "host entrance date", transaction amount, and new card balance. A report at the EBT processor shows Daily Transaction Activity by Retailer Settlement Reference #. The participant's card holds 48 most recent transactions.

## APPENDIX C

### Wyoming Design to Meet WIC Functional Requirements

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Reconciliation and Settlement (con't)	Retailer tracking:	Total all credits accumulated by each retailer.	Assumed to conform to FSP and/or commercial standards.	The EBT processor provides full reporting capability to meet the reporting needs of the Federal and State government agencies. In regard to purchasing and settlement total activity, the EBT processor will produce daily and monthly reports that describe transaction and dollar settlement activity. A Daily Retailer ACH Settlement report is available.
	Retailer tracking (con't):	Provide balance information to retailers or 3rd party processors from individual POS terminals, as needed.	Assumed to conform to FSP and/or commercial standards.	End of Day Totals report: all transaction activity, inclusive of all benefit programs, for the retailer, prints a summary or receipt depicting each program transaction settlement total for balancing purposes. Subsequent transaction activity will be logged as next business day. Local Totals (Cashier or Lane) report permits the individual cashier to view the transaction totals (by cashier ID or lane) that have occurred since the last End of Day Totals transaction was performed.
	Account adjustments:	Allow approved adjustments to prescription at local agency/clinic.	Stated as functional requirement.	WIC adjustment transactions received by the host are sent to the retailers during settlement processing. These adjustments are made to the card at the first use following receipt at the retail store. If a balance inquiry is performed, account adjustments are made prior to the balance display or shopping list creation.
	Reconciliation at household account level:	Reconciliation of individual household account balances against account activities on a daily basis.	Stated as functional requirement.	Transaction activity is used by the host to update the account master file. The most recent program balance from the card is saved on the master file. The master file contains a derived (calculated) program balance for each card. The WIC State office receives household food prescription utilization information monthly.
	Card inventory:	Storage and control measure to control blank unissued EBT cards.	Assumed to conform to FSP and/or commercial standards.	Card inventory and control is performed by the accounting office and card management office at the State and local agencies. Dual control on card issuance inventory control is performed. Vault storage is provided by the State agency accounting office.

**APPENDIX C**  
**Wyoming Design to Meet WIC Functional Requirements**

Function	Requirement	WIC Program Program Specifics	Basis for requirement?	Wyoming Design for WIC
Reconciliation and Settlement (con't)	Activity reconciliation:	Reconciliation of each retailer's food instrument transactions per POS terminal and in total to deposits on a daily basis.	Stated as functional requirement. Regulations specify actual price recorded at time of purchase.	Reconciliation ensures that the participating retail locations receive accurate crediting for their food stamp and WIC transaction activity. As the retailer completes the end of day settlement transaction, the terminal prints a confirmation receipt comprising end of day store transaction totals. The end of day settlement receipt delineates transaction totals by transaction type and COPA (card/benefit program).
		Verification of retailers' credits against deposit information entered into the ACH network.	Stated as functional requirement.	The retailer receives report of credit due from the end of day settlement, and can receive information from their bank on the amount of credit received to their account. Any discrepancy would be researched by the EBT processor.
	Complete system reconciliation:	Reconciliation of total funds entered into, exiting from, and remaining in the system each day.	Regulation.	A variety of reconciliation reports are available to the State, Federal auditors, retailers, and the processor (several of these reports have been previously identified).
	Audit trails:	Audit trails of activity.	Regulation.	Various reports provide audit trails of activity including the terminal level (by cashier), store activity, and EBT processor reports.
Manage Retailer / Vendor Participation	Open opportunity to participate:	All authorized food retailers must be afforded the opportunity to participate in any EBT program.	Regulation specifies authorization to ensure adequate convenience and access for participants.	Authorizing retailers or other POS locations to accept WIC or other program benefits can only be performed by the State of Wyoming in compliance with their established rules, procedures and regulations.
	Retailer training:	Initial training of newly authorized retailers provided by State or local clinic, on-going training provided by retailer.	Regulation.	Implementation procedures are performed by the processor's authorized agents. A training session is scheduled by the processor with the retailer. The State, through the EBT processor, provides initial training. A report listing the name and address of vendor locations as they are added to the master file is sent to FCS and the State for review and confirmation. User manuals, cashier quick reference cards, forms, and supplies will be left with the retailer after training completion. The retailer will then select the date they will begin accepting transactions.

## APPENDIX C

### Wyoming Design to Meet WIC Functional Requirements

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Manage Retailer / Vendor Participation (con't)	Timing of system access following authorization:	Within 2 weeks of authorization.	Assumed to conform to FSP and/or commercial standards.	Once the State has certified a WIC retailer, the State of Wyoming will provide the processor with a list containing the retailer information. Since the processor has stated that retailer accounts will be prenoted, dollars cannot be permitted to be sent through the ACH until ten days have elapsed from the date of the prenote (per NACHA rules). Federal Regulation 7 CFR, Part 274, sec. 274.12(g)(1)(ii) requires that "the State agency permit access by the retailer to the EBT central computer within two weeks of receipt of the FCS authorization notice and provide access to the system within 30 days or a mutually agreed time period if the retailer chooses a third party processor or chooses to drive its own terminals."
	Add Retailers / Vendors:	Ability to add newly authorized retailers by State office.	Regulation.	Upon authorizing a retailer and executing an agreement, the State will provide identification subcategories for WIC merchants to assist in identifying and controlling product price ranges for specific WIC products. The master file maintains a list identifying each location as to authorization type. A list is provided to the processor with retailer ID categories to assist in identifying and controlling product price ranges for specific WIC products. Feedback from actual system data is expected to refine the State's ability to assess product price ranges.
	Delete Retailers / Vendors:	Ability to delete authorized retailers by State office.	Regulation.	Withdrawal by FCS from food stamp participation may mean withdrawal from the State-administered WIC program according to State discretion. System report lists additions, deletions, modifications to the retailer location master file. Subsequent to the deactivation of the location, a report is mailed to FCS or Wyoming for review and confirmation. A deactivation flag set at the processor takes two daily cycles to clear (to upload transactions processed before deactivation was effective).

## APPENDIX C

### Wyoming Design to Meet WIC Functional Requirements

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Manage Retailer / Vendor Participation (con't)	Authorized user access:	Ensure access by authorized retailers and 3rd party processors only. Maintain authorization database to mirror State authorizations and disqualifications.	Assumed to conform to FSP and/or commercial standards.	Master file is maintained at host. The processor maintains strict security control over the process of adding, modifying, or deleting retailer bank depository relationships. Procedures are in place to ensure that de-authorized retailers are deleted from the system. The State provides sufficient notice to retailers and the processor ensures that beyond an established date EBT transactions are not processed
		Ability to certify 3rd party processors.	Assumed to conform to FSP and/or commercial standards.	Third party processors (or self-processors) are not addressed in the Wyoming demonstration. The ability to include third-party processors is dependent upon innovations in card operating systems available from manufacturers.
	Compliance:	Provide compliance exception reports to State retailer compliance officer in charge.	Stated as functional requirement.	System data can be extracted to produce necessary reports.
		Permit access to investigations by FCS compliance and OIG (for compliance buys). Also, State criminal investigations.	Regulation.	Access permitted and supported by the processor.
	Equipment functionality:	Ensure equipment and supplies are repaired or replaced within 24 hours.	Assumed to conform to FSP and/or commercial standards.	Equipment installation is performed by the EBT processor or by authorized agents. Equipment inventory and control, and servicing equipment procedures are conducted through the interaction of customer service, retail location and retail service contractor. Adherence to the usual 4 to 6 hour process assures equipment replacement in compliance with the 24-hour State and retail contractual requirements.
Other	Industry standards:	Meet industry standards, as they evolve.	Assumed to conform to FSP and/or commercial standards.	The system was designed to use off-the-shelf proven hardware that conforms to all applicable standards for those products. Standards include: smart card, ANSI security standards, communications, data processing, structured query language, electronic funds transfer (ISO 7812 for card identification and routing through EFT networks), and State standards.

**APPENDIX C**  
**Wyoming Design to Meet WIC Functional Requirements**

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Other (con't)	System accuracy:	Main system accuracy: No more than 2/10,000 transactions processed inaccurately.	Assumed to conform to FSP and/or commercial standards.	Performance objectives are established to meet requirements.
	Cost neutrality:	No cost neutral requirement. Cost and effectiveness are addressed through State and Federal system planning processor.	None.	Costs of paper operations versus EBT are being evaluated through a Federal contract. Wyoming and the EBT processor are providing data necessary to this evaluation.
	Data verification, with ranges:	Range checks for acceptable dates, account numbers, refund upper limits, etc. Also check for maximum dollar per item, per prescription, and per account.	Stated as functional requirement.	During the WIC transaction, all WIC items will be scanned with store integrated or handheld scanner and matched against both the WIC approved product table and the individual recipient's prescription written on the card. Any items scanned and found not to match both the approved product table and the card's food prescription will be rejected. Rejection will be communicated through the absence of a second confirming tone from the scanner. The State WIC system flags maximum dollars for each UPC. Higher than maximum transactions are also reported to the State monthly. The card maintains only the current month's food prescription; unused benefits are erased as the new month's issuance is written to the card by the store terminal.
	Contingency plans:	Contingency plans and backup procedures.	Assumed to conform to FSP and/or commercial standards.	Although the failure rate for cards is expected to be less than 5 percent, the retailer also has the option of accepting a manual transaction in conjunction with authorization from customer service. Processor has identified a Disaster Recovery/Contingency plan for the Tandem host, retailer POS and smart cards.
	Performance standards:	Monitor system performance standards.	Assumed to conform to FSP and/or commercial standards.	There are various time components that make up a purchase transaction. All times are estimates based on current experience with the card terminals. All of these numbers will be verified against actual results once card layout and terminal coding have been completed. In addition to EBT POS Processing Speeds, Host Availability and Capacity, System Accessibility and Reliability, and Communications are discussed.

**APPENDIX C**  
**Wyoming Design to Meet WIC Functional Requirements**

Function	Requirement	WIC Program		Wyoming Design for WIC
		Program Specifics	Basis for requirement?	
Other (con't)	Rebates:	Report on the value and quantity of rebate items redeemed by brand and by retailer for rebate accounting purposes (e.g., infant formula).	Stated as functional requirement.	Rebate Analysis Report is one of the WIC Certification System Rewrite Project reports. This report provides the WIC State office with infant formula rebate information. The data file used to produce this report is transmitted monthly during the settlement process. Rebates will be based upon electronically documented redeemed benefits; previously, rebates were based upon redemptions as determined by review of paper vouchers.



## APPENDIX D

### WIC Financial EBT System Approach

A conceptual model for on-line WIC EBT was developed by the State of Alabama, Department of Health. This model is designed to be used as a stepping stone to further EBT development, and provides the transfer of information at the food instrument level rather than the item level (as illustrated in Appendix C).

In Alabama, food instruments are issued at the local agencies to clients during the certification process, and monthly during nutritional counseling. Food instruments are printed in batch each month at the State health data center and mailed to local agencies for distribution. Manual food instruments are issued initially as new clients enter the system. In Alabama, clients receive four food instruments per month, each representing one week's worth of benefits. Food instruments are presented to the food retailer's bank where they processed and entered into the check clearing process, with a final destination of the State's contracted bank. The State's bank prepares a data file of food instruments redeemed and passes this information to the State health data center where it is reconciled with issuance records. In addition, the health data center checks each instrument's sale amount against a price survey on file from each authorized retail store. Settlement is accomplished when the contract bank requests funds from the State Treasury via the health department's finance section. The contract bank receives funds from the State Treasury.

Under the current process, all reporting and retail store management functions are performed by the State based upon data recorded at the health data center. Price surveys inform retail store compliance activities by establishing parameters on food instrument redemption values. Reconciliation occurs at the food instrument level, not at the item level. Under the voucher system, there is no indication whether the complete food package was purchased, or whether the participant forfeited some items at the purchase.

## Conceptual WIC EBT Model

Alabama's goal in taking the first step toward EBT for WIC benefits was to improve the process while retaining the most desirable features of the existing system. This goal results in the preservation of most stakeholder responsibilities, with automation of the retailer credit. New clients are registered on-line with the State health data center during the certification process. Registration includes recording the client's unified medical record (UMR) number, social security number, information on the food matrix prescribed to the client, and the number of transactions for which the client is authorized corresponding to that period's prescription. An authorized record is created at the EBT processor site as well, with the posting of the client's UMR, social security number, personal identification number (PIN), transaction numbers, and valid transaction dates. To maintain the current benefit availability standards, the model would utilize the on-line transfer of authorization data to the EBT processor. A four-digit transaction number would identify the participant (since each family may have more than one WIC participant), the issuance month, and the transaction number. Identification of this transaction number with a specific food prescription is maintained at the health department, not at the EBT processor.

At the local clinic, the participant would continue to receive paper food prescriptions at the close of each visit. Alabama envisions using perforated prescriptions, representing the four authorized "transactions" for the month. At the retail store, the client would continue to separate WIC items from the other purchase items, and would present the shopping list to the cashier. The cashier totals the amount of the WIC sale, selects the WIC transaction type on the POS terminal, and swipes the participant's card. After the participant enters their PIN, the cashier enters the four digit transaction number corresponding to the group of food items purchased (this number is found on the shopping list), and the dollar amount of the WIC sale. This completed transaction message is sent on-line to the WIC processor for authorization. The processor verifies the social security and UMR numbers, participant PIN, four-digit transaction code, valid date range for the transaction, and the amount of the sale. The amount of the sale cannot exceed pre-established dollar thresholds for each coded transaction. An approval or denial message is returned to the retailer's terminal, a receipt is

printed, and the transaction is completed. With the Alabama model, the participant is required to sign the receipt for audit purposes.

### **Settlement**

Credit to WIC retailers is determined at the close of the transaction day. Based upon transactions authorized by program type, the EBT processor tracks the credits and advises the State on the breakdown of credits sent by program. The settlement of WIC transactions can be incorporated into settlement models between the retailer and the EBT processor as well as between the processor and the State's fiscal agent. WIC retailers would receive a single credit representing all EBT transactions for the day, thereby streamlining the settlement process. Reports within each WIC store would provide the actual program split.

As in the current paper-based system, all program management and reporting functions would remain at the State level. Just as the State's current contract bank provides data for reconciliation of redemptions with issuances, the EBT processor would pass a file of EBT transaction information each day to the health department's data center. The file would include: UMR or social security number, transaction number, retail store number, date, dollar amount, and authorization number. This information is reconciled against the price survey data for retail store management purposes, and is used to prepare additional program reports, as designed and required.