RESOURCE AND PATIENT MANAGEMENT SYSTEM

ASTHMA REGISTER SYSTEM
(BAT)

User's Manual

Version 1.0
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Division of Information Resources
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PREFACE

The Asthma Register System (ARS) component of the IHS Resource and Patient Management System (RPMS) provides Indian Health Service/Tribal/Urban (I/T/U) healthcare providers with another tool for improving the direct care and management of patients with asthma. The ARS can be used in two ways:

- As a register of patients who can be actively managed for sites with one or more Asthma Case Managers.

- To capture asthma-related patient data and provide appropriate healthcare reminders to providers.

The development of the Asthma Register System for RPMS resulted from a quality improvement effort in FY 2001 involving nine Northwest area tribal clinics, the Childhood Asthma Study team at the University of Washington, the Boston-based National Initiative for Children's Healthcare Quality (NICHQ) and the Indian Health Service. This effort was focused on improving asthma care for pediatric patients at the participating practices.

During this project, it was apparent that there was a need for an easy-to-use patient tracking system. Due to the nature of asthma and the drugs commonly used to treat it, follow-up visits for asthma patients are essential for effective disease management. Asthmatics have to monitor symptoms, adjust medication dosages, and manage possible side effects.

Asthma is a growing epidemic, but it can be managed. All sites are strongly recommended to implement at least the data entry and healthcare reminder functions of the Asthma Register System.

This manual contains instructions for setting up and using the Register, for implementing asthma-specific data entry, and for implementing asthma-specific summary and reminders.

TABLE OF CONTENTS

1.0   Introduction

Asthma is a growing epidemic. Yet, most of the problems caused by asthma could be prevented if asthmatics and their healthcare providers managed the disease according to established guidelines.[1]

The Asthma Register System (ARS) of the IHS Resource and Patient Management System (RPMS) provides Indian Health Service/Tribal/Urban (I/T/U) healthcare providers with another tool for improving the care and management of patients with asthma.

1.1   Purpose

This manual has been developed for physicians, mid-level practitioners, nurses, and case managers responsible for the care of American Indians and Alaska Natives (AI/AN) with asthma. It provides instructions for:

1. Setup and maintenance of the RPMS Asthma Register System including:

    - Medication taxonomies

    - Identifying and loading appropriate patients for the local asthma register

2. Setting up automatic register population and provider notification for patients newly diagnosed with asthma.

3. Entry of data items into the Patient Care Component (PCC) for optimizing patient care and reporting capabilities.

4. Managing individual and groups of patients, including:

    - Patient forms

    - Reports

    - Reminder letters

1.2   Using the Asthma Register System

The RPMS Asthma Register System (ARS) consists of a register with associated reports and forms for patient management, a PCC Data entry mnemonic for capturing asthma-related data items from the PCC form, a health summary supplement, and asthma-specific health summary maintenance reminders.

ARS can be used in two key ways:

- As a register of patients who can then be actively managed for those sites with one or more Asthma Case Managers.

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[1]US Department of Health and Human Services. <u>Healthy People 2010</u>. International Medical Publishing, Inc, November 2000. Chapter 24

- To capture asthma-related data in PCC and provide appropriate healthcare reminders and reports to assist any provider.

The following asthma-related data items are captured on a pre-printed PCC form and entered into RPMS PCC through the PCC Data Entry process:

- Severity Of Asthma
- Lung Function
  - FEV_1
  - FEF_{25-75}
  - PEF/Best PF
- Triggers
  - ETS
  - Particulate Matter
  - Dust Mite
- Asthma Management plan

These supplemental items are stored in the Patient Care Component (PCC) database and the values are then used in many of the reports available in this system. These data values can be captured each time a patient is seen in Asthma clinic. See section 2.4.2 PCC Data Entry for suggestions for setting up Asthma PCC forms.

Figure 1-1 displays the main menu for the Asthma Register System. There are three main components:

- Patient Management (PAT): generating visit summaries, action plans and other patient-specific documents

- Register Management (REG): adding, updating and inactivating patients; generating reports and letters

- ARS Setup (SET): setting up taxonomies, automatic update options, and other setup actions

```
                    *************************
                    **   Asthma Register    **
                    *************************
                           Version 1.0

                           DEMO HOSPITAL


   PAT     Patient Management ...
   REG     Register Management ...
   SET     System Setup ...

Select Asthma Register Option:
```
Figure 1-1: Using the Asthma Register System menu

1.2.1 System Setup (SET)

Several activities must be performed before using the Asthma Register System. These include:

- Setting up three medication taxonomies
- Prepopulating the Register (optional)
- Setting parameters for automatic register population
- Adding an asthma supplement and health reminders to the health summary (optional)
- Preparing asthma PCC forms for data entry

1.2.2 Register Management (REG)

Why Use a Register?

A register is an automated tool for maintaining a list of patients who meet criteria set by the user and providing various disease-specific reports, reminders and plans to assist providers in managing the disease. An asthma register system can help providers track and manage their patients. For example, a register can provide lists of patients whose medications have not been changed within a certain period of time, who have not been in the clinic for a maintenance visit within a specified period, or who are on medications for which there is a more effective alternative.

Call lists or address lists can be generated from the register so patients can be contacted before their therapy becomes ineffective and they are at risk of an exacerbation.

In addition to these preventative measures, the tracking abilities of a registry can help providers gain a better understanding of their patient's disease by providing patient histories without the necessity of chart review. The result is improved patient care, a reduction in expensive acute or ER visits, and ultimately a better quality of life for the patient.

The Asthma Register Function

ARS can be used to keep a list of all asthma patients. ARS is fully integrated with Patient Registration so that all demographic information about the patient is readily available to the user.

ARS contains the following data items:

- Patient Name
- Status (active, inactive, deceased, transient, unreviewed)
- Date Added to Register
- Date Inactivated
- Inactivated By
- Last Asthma Visit in PCC
- Calculated Next Due Date

- Next Scheduled Appointment (enter by user)
- User Who Added Patient To Register
- Case Manager
- Notes/Comments

1.2.3   Patient Management (PAT)

In addition to providing tools for managing groups of patients, ARS also gives providers patient-specific health summaries and asthma management forms.

2.0   System Setup

Sections 2.1 through 2.4 will describe the steps that need to be followed to set up and use all features of the Asthma Register System.

1. Taxonomy setup of three asthma medication taxonomies (Section 2.1)

2. Register setup (Section 2.2)

    - Initial population of the register (optional)

    - Setting site parameters for ongoing automatic register population

3. Health Summary setup (Section 2.3)

    - Adding the Asthma Supplement to all appropriate health summary types

    - Adding the asthma health maintenance items to selected health summary types

4. Data Entry (Section 2.4)

    - Setting up pre-printed forms

    - Data entry mnemonic

Menu options to perform the first three activities mentioned above are located under the Setup option on the main ARS menu.

Type SET at the "Select Asthma Register Option" on the ARS main menu. The Setup menu will display.

```
                    ************************
                    **   Asthma Register    **
                    ************************
                          Version 1.0

                          DEMO HOSPITAL


   PAT     Patient Management ...
   REG     Asthma Register ...
   SET     System Setup ...

Select Asthma Register Option: SET
```
Figure 2-1: Accessing the System setup menu

The System Setup menu will be displayed (Figure 2-2).

```
                        *****************************
                        **      Asthma Register      **
                        **      Register Setup       **
                        *****************************
                                Version 1.0

                                DEMO HOSPITAL


     TXCH    Check for Taxonomies needed for the Asthma System
     TX      Taxonomy Setup
     AAR     Automatically Populate Asthma Register
     UPL     Upload Patients into Register from Template
     SRP     Update Site Register Parameters
     SRS     Asthma Health Summary Supplement & Reminder Setup

Select System Setup Option:
```
Figure 2-2: Using the Setup System Menu

2.1   Taxonomy Setup

Taxonomies are used to find data items in PCC to identify if a patient or visit meets the criteria for which the software is looking. Three medication taxonomies must be populated for all of the Asthma Register features to work properly. The taxonomies must be named as follows:

- BAT ASTHMA RELIEVER MEDS (medications used to relieve asthma attacks)

- BAT ASTHMA CONTROLLER MEDS (medications used to prevent asthma attacks)

- BAT ASTHMA INHALED STEROIDS (inhaled corticosteroids for asthma (ICS))

These taxonomies are created when the software is installed, but they are not populated with any data. The required taxonomies may be populated with the Taxonomy Setup option or by using QMan.

> **Note**: When populating these taxonomies, you should work with your pharmacy staff that can provide you with a list of all drugs in your site's drug formulary that would fit into the taxonomies listed above.

2.1.1   What Is a Taxonomy?

Taxonomies are groupings of functionally related data elements, such as specific codes, code ranges, or terms, that are used by various RPMS applications to find data items in PCC to determine whether a patient meets a certain criteria. In the Asthma

Register System, medication taxonomies are used to determine appropriate reminders and reports.

For data elements like diagnoses and procedures, the taxonomy simply identifies the codes for which a program should look.

For other types of data elements, including medications and lab tests, taxonomies are used to mitigate the variations in terminology that exist in RPMS tables from one facility to another.

For example, one site's RPMS Drug table might contain the term "Metformin 500mg tabs" while another site's table may contain, for the same drug, the term "Metformin Tab/500 MG." PCC programs cannot deal with variations in spelling, spacing, and punctuation. Rather than attempting to find all potential spellings of a particular medication, the application would look for one or more specific taxonomy names that have been standardized at every facility.

Codes and terms contained in a taxonomy are referred to as members of the taxonomy.

2.1.2   Recommended ARS Taxonomy Members

The following is a table of medication names and RECOMMENDED categories that should be considered for inclusion into one or more of the ARS medication taxonomies. You can use this chart as a starting point to work with your pharmacist and other providers to determine which medications will be placed in which of the three taxonomies.

Drug Name	ICS	Reliever	Controller
Albuterol (Airet, Proventil, Ventolin, Volmax)		✓	
Beclomethasone (Beclovent, Vanceril)	✓		
Bitolterol (Tornalate)		✓	
Budesonide (Pulmicort)	✓		
Cromolyn (Intal)			✓
Flunisolide (Aerobid)	✓		
Fluticasone (Flovent)	✓		
Fluticasone / Salmeterol (Advair, Diskus)	✓		✓
Hydrocortisone		✓	✓
Ipratropium (Atrovent)		✓	
Ipratropium / Albuterol (Combivent)		✓	
Levalbuterol (Xopenex)		✓	
Metaproterenol (Alupent)		✓	
Methylprednisone (Medrol)		✓	✓
Montelukast (Singulair)			✓
Nedocromil (Tilade)			✓
Pirbuterol (Maxair)		✓	

Drug Name	ICS	Reliever	Controller
Prednisolone		✓	✓
Prednisone			✓
Salmeterol (Serevent)			✓
Terbutaline (Brethaire, Brethine)			✓
Theophylline			✓
Triamcinolone (Azmacort)			
Zafirlukast (Accolate)	✓		✓
Zileuton (Zyflo)			✓

> **Note**: This medication list is a RECOMMENDATION only. Providers should work with their pharmacist to set up the taxonomies. Some medications may appear in two categories.

2.1.3   Setting Up Taxonomies with the Taxonomy Menu

The Taxonomy Setup menu option allows you to review and/or add members to the medication taxonomies used in the ARS.

2.1.3.1   Check for Taxonomies Needed for the Asthma System (TXCH)

This menu option scans for missing taxonomies or those that have no entries.

1. Type TXCH at the "Select Asthma System Setup Option:" prompt. The screen will display `The following taxonomies are missing or have no entries:`.

2. Press the Enter key at the "Enter Return to Continue:" prompt. The name of any taxonomy that is either missing or that has no members should be displayed. The first time the ARS is used, expect to see each of the three medication taxonomies listed above, because they will have no members.

You will run this option again when taxonomy setup has been completed to ensure that all taxonomies have entries.

3. Review the list of taxonomies that either need to be setup or populated.

> **Note**: If multiple providers are using the ARS, everyone should review the contents of the taxonomies to ensure that no medications have been missed.

If your taxonomies have all been setup, the message `All taxonomies are present` will appear on the screen.

4. The system will return you to the main setup menu.

```
                          **      Register Setup       **

                          *****************************
                                  Version 1.0

                                 DEMO HOSPITAL


   TXCH    Check for Taxonomies needed for the Asthma System
   TX      Taxonomy Setup
   AAR     Automatically Populate Asthma Register
   UPL     Upload Patients into Register from Template
   SRP     Update Site Register Parameters
   SRS     Asthma Health Summary Supplement & Reminder Setup

Select Asthma System Setup Option: TXCH  Check for Taxonomies needed for the
Asthma System
Checking for Taxonomies to support the ASTHMA REGISTER System...

In order for the GPRA Report to find all necessary data, several
taxonomies must be established.  The following taxonomies are missing or have
no entries:

Enter RETURN to continue or '^' to exit: [ENT]
Taxonomy of Asthma Controller Meds [BAT ASTHMA CONTROLLER MEDS] has no
entries

Enter RETURN to continue or '^' to exit: [ENT]
Taxonomy of Asthma Inhaled Steroids [BAT ASTHMA INHALED STEROIDS] has no
entries

End of taxonomy check.  PRESS ENTER: [ENT]
```

Figure 2-3: Checking for taxonomies

2.1.3.2   Taxonomy Setup (TX)

Taxonomy Setup (TX) is a menu option that allows you to review, add to or edit members in the required medication taxonomies used by ARS. All taxonomies should be present after the ARS software is loaded, even if the taxonomy has no members yet.

> **Note**: All taxonomies should be reviewed for completeness before running any register functions.

1. Type TX at the "Select Asthma Register Option:" prompt.   Two options appear.

   a. Diabetes Mgt System Taxonomies (These taxonomies all begin with the name DM AUDIT. All taxonomies used in the Diabetes Management System are included in this option)

   b. All Other Taxonomies (This is a generic tool for modifying and maintaining all other taxonomies, including for Asthma Register.)

2. Type **2**, Other Taxonomies.

3. Type **2** (All Other Taxomies) at the "Which Type of Taxonomy:" prompt.

4. Type **1** (Edit Existing Taxonomy) at the "Which Option:" prompt,

5. Type the name of the taxonomy at the "Name of Taxonomy:" prompt. If you type **BAT** only, a list of the three Asthma taxonomies will appear. Type the number of the selection and then press the Enter key.

```
Select one of the following:

        1            Lab Taxonomies
        2            All Other Taxonomies

Which type of Taxonomy: 2  All Other Taxonomies

    Select one of the following:

        1            Edit Existing Taxonomy
        2            Add NEW Taxonomy

Which option: 1  Edit Existing Taxonomy

Name of Taxonomy: BAT ASTHMA RELIEVER MEDS
```

Figure 2-4: Setting up drug taxonomies (steps 1-5)

6. The unpopulated taxonomy screen will appear (Figure 2-5).

7. Type **2** (Add) Items at the "Select Item(s):" prompt.

```
Taxonomy Items              Apr 24, 2001 17:08:22        Page:    1 of    1
BAT ASTHMA RELIEVER MEDS
------------------------------------------------------------------------------




















------------------------------------------------------------------------------
'-' Previous Page  'QU' Quit  ?? for More Actions
1    EDIT the Taxonomy    2    ADD Items          3    DELETE Item(s)
Select Item(s): Quit// 2 ADD Items
```

Figure 2-5: Setting up drug taxonomies (step 6-7)

> **Note**: Option 1 Edit the Taxonomy is primarily a programmer's tool for viewing the setup of the Taxonomy. The display indicates who created the taxonomy, which file is drawn from to create the taxonomy, as well as linkages to QMan and other file cross-references. Users are only allowed to edit the Brief Description and Extended Description.

8. At the "Which Drug:" prompt, begin typing the medication name. Typing a partial name will display a list that matches the criteria, e.g., typing **alb** will display "albumin" and "albuterol." For additional help, type **?** at any prompt to see a full list to select from then type the number corresponding to the specific medication .

9. The "Which Drug:" prompt will be displayed again. Enter another medication or press the Enter key to return to the Taxonomy menu.

> **Note**: Be sure to look for both Brand and Generic names.

```
     Select an item to ADD to the

       BAT ASTHMA RELIEVER MEDS Taxonomy

Which DRUG: ALBUTEROL
       1    ALBUTEROL 0.5% SOLN
       2    ALBUTEROL 2MG/5ML SYRUP
       3    ALBUTEROL 4MG TAB
       4    ALBUTEROL INHALER
CHOOSE 1-4: 1  ALBUTEROL 0.5% SOLN

Which DRUG:
```

Figure 2-6: Setting up drug taxonomies (steps 8--9)

10. When all items are displayed correctly, press the Enter key to exit and save that Taxonomy at the "Select Item(s): Quit//" prompt.

```
Taxonomy Items                 Apr 25, 2001 08:25:14          Page:    1 of    1
       BAT ASTHMA RELIEVER MEDS
--------------------------------------------------------------------------------
     1    ALBUTEROL 0.5% SOLN
     2    ALBUTEROL 2MG/5ML SYRUP
     3    ALBUTEROL 4MG TAB
     4    ALBUTEROL INHALER
     5    METAPROTERENOL 10MG/5ML SYRUP (OZ)
     6    METAPROTERENOL INHALER




--------------------------------------------------------------------------------
         '-' Previous Page  'QU' Quit  ?? for More Actions
1    EDIT the Taxonomy    2    ADD Items              3    DELETE Item(s)
Select Item(s): Quit//
```
Figure 2-7: Setting up drug taxonomies (step 10)

11. Once you finish adding and/or removing taxonomy members, select the TXCH menu option to perform the final check for taxonomies needed for the ARS.

2.1.4   Using QMan to Populate a Taxonomy

QMan is the RPMS query utility. QMan builds queries through a series of elements. The QMan User Manual provides detailed and easy-to-follow instructions for constructing queries. The Manual can be downloaded from the RPMS web site, www.ihs.gov/CIO/RPMS/appsactiondoc.cfm.

> **Note**: You will need to work with your Site Manager or other information systems staff to use QMan to set up your taxonomies, because only the taxonomy "creator" (i.e., the person that installed the Asthma Register System) can modify the taxonomy in QMan.

Example of QMan Search:

```
What is the subject of your search?  LIVING PATIENTS //   LIVING PATIENTS

    Attribute of LIVING PATIENTS: RX

Enter RX: BECLOMETHAS
      1    BECLOMETHASONE INHALER
      2    BECLOMETHASONE NASAL
CHOOSE 1-2: 1   BECLOMETHASONE INHALER
Enter ANOTHER RX: FLUTICASONE INHALER
Enter ANOTHER RX: AEROBID  FLUNISOLIDE INHALER
Enter ANOTHER RX:

The following have been selected =>

      BECLOMETHASONE INHALER
      FLUTICASONE INHALER
      FLUNISOLIDE INHALER

Want to save this RX group for future use? No// Y  (Yes)
Group name: BAT ASTHMA INHALED STEROIDS
  Are you adding 'BAT ASTHMA INHALED STEROIDS' as a new TAXONOMY (the 111TH)?
No// Y  (Yes)
   TAXONOMY BRIEF DESCRIPTION:
EXTENDED DESCRIPTION:
  No existing text
  Edit? NO//

SUBQUERY: Analysis of multiple RXS
First condition of "RX": ^        ( You may stop here by "hatting" out.
```

Figure 2-8: Using QMan to populate taxonomies

Note: Be sure to try both Brand and Generic drug names so as not to miss any.

Continue this process for all drugs in your formulary that belong in this taxonomy.

2.2   Populating the Register

The register can be populated with patients before using the system as well as updated both automatically and manually during use.

2.2.1   Identifying Initial Patient Set

The first step is to define the asthma population that you wish to track. This is the initial set of patients that will be presented for your review and potential addition added to your register. You can define your asthma patients in any number of ways. Some elements to consider may include age, location, diagnosis, medications, and various combinations. Here are some examples:

- All patients under 21 who have had at least three reliever medication refills in the past year.

- All patients, regardless of age, who have had at least two diagnoses of asthma in the past year.

- All adult patients (19 and older) who live in a pre-defined set of communities who have had at least one reliever medication fill in the past year.

> **Note**: Remember that the more liberal your criteria is, the more patients that will be added to the register.

Asthma Register System provides one predefined search (see section 2.2.2). Searches that are more detailed will require you to use QMan (PCC's Query Utility) to generate a search template of these patients.

2.2.2   Automatically Search and Populate (AAR)

This menu option will automatically search your site's RPMS database and populate your register with a list of patients who meet the search definition below. Patients will have the status of *unreviewed* until you individually review and activate them.

The search option provided with the Asthma Register application uses the following definition: all patients within a user defined age range living in user defined community with at least two asthma visits (POV with ICD-9 codes 493.00-493.99) in the past year."

> **Note**: Depending on the size of your database and/or the options you selected, the search and auto populate function may take 10-60 minutes.

1. Type AAR at the "Select Asthma System Setup Option:" prompt. The screen will display a brief description of the search definition.

```
                    *****************************
                    **      Asthma Register      **
                    **      Register Setup        **
                    *****************************
                              Version 1.0

                              DEMO HOSPITAL


   TXCH    Check for Taxonomies needed for the Asthma System
   TX      Taxonomy Setup
   AAR     Automatically Populate Asthma Register
   UPL     Upload Patients into Register from Template
   SRP     Update Site Register Parameters
   SRS     Asthma Health Summary Supplement & Reminder Setup

Select Asthma System Setup Option: AAR
```

Figure 2-9: Searching and populating (step 1)

2. Type Y to continue with the automatic search and populate feature at the "Do you want to continue?" prompt.

3. Select the communities for which you want ARS to search at the "Include patients who live in:" prompt. Each facility generally has one or more communities predefined. If you want to set up a community definition that does not exist yet, work with your Site Manager to define a community taxonomy with a QMan search, or use the S Selected Set option to quickly create a community taxonomy.

4. Type A for All Communities, O for one community name, or S for selecting multiple communities at the "Include patients who live in:" prompt.

5. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age.

6. Type an age range (#-#) at the "Enter an Age Range:" prompt.

7. Type Y at the "Do you want to continue?" prompt. Depending on the size of your database and/or the options you selected, the search and auto populate function may take 10-60 minutes.

```
This option is used to initially populate your register with a pre-defined
set of patients.  If you continue with this option your patient file will
be scanned and all patients who have had two or more visits with an asthma
diagnosis, who live in a set of communities defined by you and who are under
an upper age defined by you will be automatically added to the asthma
register with a status of Unreviewed.

Do you want to continue? N// Y  YES

     Select one of the following:

          O          One particular Community
          A          All Communities
          S          Selected Set of Communities (Taxonomy)

Include patients who live in: O// All Communities

Patients from all communities will be included in the report.

Would you like to restrict the report by Patient age range? YES// y  YES

Enter an Age Range (e.g. 5-12,1-1): 2-18

Please be patient while I populate the asthma register, this could take
anywhere from 10 minutes to an hour depending on the size of your patient
database.

Do you want to continue? N//
```
Figure 2-10: Searching and populating (steps 2-7)

Example of Using the S Selected Set of Communities option:

```
     Select one of the following:

          O          One particular Community
          A          All Communities
          S          Selected Set of Communities (Taxonomy)

Include patients who live in: O// Selected Set of Communities (Taxonomy)
```

```
Enter COMMUNITY: bill
     1   BILL MOORES        WADE HAMPTON    ALASKA      842     0221842
     2   BILLINGS           YELLOWSTONE    MONTANA     640     3056640
     3   BILLINGS           NOBLE     OKLAHOMA     689     4052689
     4   BILLYBOY DAM        SAWYER    WISCONSIN    020     5558020
     5   BILLYSVILLE         KLICKITAT    WASHINGTON    092     5320092

CHOOSE 1-5: 2  BILLINGS         YELLOWSTONE    MONTANA     640     3056640

Enter ANOTHER COMMUNITY: crow
     1   CROW          LANE    OREGON     063     4120063
     2   CROW AGENCY        BIG HORN     MONTANA     003     3002003
     3   CROW CREEK         BUFFALO     SOUTH DAKOTA    546     4608546
     4   CROW HILL         BENSON    NORTH DAKOTA    356     3803356
     5   CROW VILLAGE        BETHEL    ALASKA     564     0203564

Press <RETURN> to see more, '^' to exit this list, OR

CHOOSE 1-5: 2  CROW AGENCY       BIG HORN     MONTANA     003     3002003

Enter ANOTHER COMMUNITY: lodge
     1   LODGE GRASS        BIG HORN     MONTANA     006     3002006
     2   LODGE POLE         BLAINE    MONTANA     036     3003036

CHOOSE 1-2: 1  LODGE GRASS       BIG HORN     MONTANA     006     3002006

Enter ANOTHER COMMUNITY:

The following have been selected =>
     BILLINGS
     CROW AGENCY
     LODGE GRASS

 Want to save this COMMUNITY group for future use? No// y  (Yes)

Group name: TEST
  Are you adding 'TEST' as a new TAXONOMY (the 304TH)? No// y  (Yes)

   TAXONOMY BRIEF DESCRIPTION: Test community

EXTENDED DESCRIPTION:  No existing text
  Edit? NO// [ENT]

Would you like to restrict the report by Patient age range? YES// N  NO

Please be patient while I populate the asthma register, this could take
anywhere from 10 minutes to an hour depending on the size of your patient
database.

Do you want to continue? N// Y  (Yes)

10 patients were added to the asthma register.

Press enter to continue: [ENT]
```

Figure 2-11: Selecting multiple communities

2.2.3   Uploading QMan Search Results into the Register (UPL)

If you use QMan to produce a specific search query, you will need to upload the search results into the register, using UPL Upload Patients into Register from Template. The patients will be added to the register with a status selected by the user: Active, Inactive, Unreviewed, or Transient. You are most likely to select Unreviewed so that you can then review each patient individually to ensure that the patient should be in the Register.

1.   To upload patients into the register, from the main ARS menu, type SET.

2.   From the Setup menu, type UPL Upload Patients at the "Select Asthma System Setup Option:" prompt.

```
                    *****************************
                    **      Asthma Register      **
                    **      Register Setup        **
                    *****************************
                              Version 1.0

                             DEMO HOSPITAL


   TXCH    Check for Taxonomies needed for the Asthma System
   TX      Taxonomy Setup
   AAR     Automatically Populate Asthma Register
   UPL     Upload Patients into Register from Template
   SRP     Update Site Register Parameters
   SRS     Asthma Health Summary Supplement & Reminder Setup

Select Asthma System Setup Option: UPL
```

Figure 2-12: Uploading patients into the register (step 2)

3.   At the "Enter Patient Search template:" prompt, type the name of the Search Template that you created.

4.   Type the Status you want assigned to the uploaded patients at the" Enter Status to be used:" prompt. The default status is U Unreviewed. The other available options are: A Active, I Inactive, or T Transient. Type ?? to view the list of options. The system will display the number of patients who will be uploaded.

5.   Type Y to continue or N to stop at the "Do you wish to continue?" Prompt.

```
                  Upload Patients into Asthma Register from Template


Enter Patient SEARCH TEMPLATE name: MY ASTHMA REGISTER PATIENTS

What status should be assigned to the patients when they are uploaded.

Enter Status to be used: U// [ENT]

A total of ### patients will be uploaded with a status of UNREVIEWED.

Do you wish to continue? N// Y  (enter Y or Yes to continue)
```

Figure 2-13: Uploading patients into the register (step 3-5)

6. To review the patients individually, use the UPD or AI menu options from the Register Maintenance menu.

> **Note**: QMan is the RPMS Query Utility. Detailed instructions on how to use QMan can be found in the QMan user's manual, which can be downloaded from the RPMS web site, www.ihs.gov/CIO/RPMS/appsactiondoc.cfm. You can also get assistance on generating this search template from the information systems personnel at your facility.

2.2.4   Update Site Register Parameters (SRP)

Once the register has been initially populated, it can be continually updated in two ways, manually and automatically. To manually add a patient, use the menu option UPD on the Register Maintenance menu.

The register can also be populated automatically without any user interaction. Each time a PCC form is processed in RPMS and any of the following conditions occur, the Asthma Register is checked.

- A diagnosis of asthma (ICD codes 493.00-493.99) is used for a Purpose of Visit (POV) or Problem List.

  OR

- Asthma-related PCC data elements are entered (Severity, FEV, etc).

If the patient is not currently on the register, he or she will be added with an un-reviewed status.

You can limit which patients are automatically added to the register by two criteria: by age and by eliminating the first diagnosis of asthma.

By adjusting either the upper or lower age limit parameter in the Asthma Site Parameter file, you can limit the patients who are automatically added to specific age ranges. For example, if you are only tracking children in your register, your age range selection might be 0-18 (or 2-18).

You can also limit the auto populating of the register by eliminating patients if this is their first diagnosis of Asthma. Using this option will help eliminate false positives, that is, patients who were incorrectly diagnosed or where additional information is needed.

You can also use this option to turn off the autopopulate feature.

1. Type SET at the "Select Asthma Register Option:" prompt.

2. Type SRP at the "Select Asthma System Setup Option:" prompt.

```
                   *****************************
                   **     Asthma Register     **
                   **     Register Setup       **
                   *****************************
                           Version 1.0

                           DEMO HOSPITAL

  TXCH    Check for Taxonomies needed for the Asthma System
  TX      Taxonomy Setup
  AAR     Automatically Populate Asthma Register
  UPL     Upload Patients into Register from Template
  SRP     Update Site Register Parameters
  SRS     Asthma Health Summary Supplement & Reminder Setup

Select Asthma System Setup Option: SRP
```

Figure 2-14: Updating site register parameters (step 2)

3. Press the Enter key at the "Select Asthma Register Site:" prompt to accept the default, which is based on the site you logged into. If the default is not correct, type in the correct site name. The full site name will be displayed. Press the Enter key at the "OK?" prompt to accept.

4. Type Y at the "Auto Populate?" prompt to automatically populate your Asthma Register based on the criteria listed. The default is No. If you had previously decided to auto populate, and you now want to turn off this feature, type N for No. If you type N, skip to Step 8 below.

5. Type a number representing the upper age range you want to include at the "Upper age of patient for auto adding to register:" prompt, or press the Enter key. For example, if you were just including children in your register, type 18.

6. Type a number representing the lower age range of patients or press the Enter key.

> To include all patients, press the Enter key at both the upper and lower age limit prompts.

7. Type **N** or **Y** at the "Should patients be automatically entered on 1st diagnosis?" prompt.

8. Press the Enter key to accept the default or type in the name of the facility that you want to appear on your reminder letters at the "Facility Name:" prompt. The default will be the facility that you originally logged into.

9. Press the Enter key to accept the default or type in the phone number that you want to appear on your reminder letters at the "Facility Phone Number:" prompt. You will return to the Setup menu.

```
                         Update Site Parameters

Select ASTHMA REGISTER SITE:   CROW HO//   100     BILLINGS      CROW     01
        ...OK? Yes// [ENT]  (Yes)

Do you want to have patients automatially added to your register when one
of the following occurs:  a diagnosis of asthma is entered in PCC, Asthma
is added to the PCC Problem List or the Asthma data elements are captured in
PCC?
Auto Populate Y/N?: NO// Y  YES

Upper age of patient for Auto adding to Register:

Lower age of patient for Auto adding to Register: 2

Should patients be automatically added to Register on 1st Diagnosis?: n  NO

Please enter the facility name that will appear on the reminder letter.
Facility Name: CROW HOSPITAL//

Please enter the Phone number that will appear on the reminder letter.
Facility Phone Number: 111-222-3333//
```
Figure 2-15: Updating site register parameters (steps 3-9)

Receiving Notification About Register Additions

The RPMS Mailman System can be used for generating bulletins to designated members, notifying them that a patient was automatically added to the register. The bulletin BAT NEW PATIENT ON REGISTER is added automatically to the facility Bulletin file during installation of the Asthma Register System. A mail group will need to be established and attached to the bulletin.

> Please seek assistance from your local or area information system staff if you do not have FileMan security to set up a new mail group.

To use the bulletin feature:

*   Identify all users who wish to be notified when a patient is added to the register.

- • Request your information systems staff to set up a mail group containing the users you have identified.

- • The information systems staff must assign the mail group to the bulletin.

This results in a message alert when you log into RPMS that states, `You have # new messages`.

```
Subj: PATIENT ADDED TO ASTHMA REGISTER  [#24994] 06 Nov 02 12:51  12 Lines
From: POSTMASTER  in 'IN' basket.   Page 1  **NEW**
-------------------------------------------------------------------------

The following patient was added to the ASTHMA REGISTER with a status of
Unreviewed.

Patient Name:  DRIFTWOOD,CARMEN JEAN
Patient DOB:   Dec 20, 1935
Patient HRN:   765

Date of Visit:

Asthma Severity:

This may require your follow up.


Select MESSAGE Action: IGNORE (in IN basket)//
```

Figure 2-16: Receiving notification of received messages

> **Note**: If you want to receive these messages directly in your regular office email (e.g., MS Outlook), ask your information systems staff to assist you in routing MailMan messages directly to your email account (see Appendix A for specific MailMan routine).

2.3   Asthma Supplement and Reminders Setup (SRS)

The remaining setup activities include adding the Asthma Supplement and five asthma-specific health care reminders to the health summary. This will involve your Site Manager or other information systems staff, because most sites provide only their IT staff with permissions to edit the health summary setup options.

> **Note**: It is strongly recommended to add the health care reminders to your site's routinely used health summaries (e.g., Adult Regular) even if your site does not use the other Register functions.

2.3.1   Health Summary Supplement

Supplements are usually one-page snapshots of the current status of a patient for a particular problem and are printed as the last page of the health summary. In addition to asthma, standard PCC supplements exist for Diabetes and Women's Health.

The asthma supplement (Figure 2-17) must be attached to each health summary type for which you want it displayed. Standard health summaries include Adult Regular, Diabetes Standard, Pediatric, Immunization, and others. Sites may also create and use custom health summaries.

The Asthma Supplement will print for all patients with:

- A Purpose of Visit (POV) or Problem List diagnosis of asthma (ICD codes 493.00-493.99)

  OR
- Asthma-related PCC data elements are entered (Severity, FEV, etc).

```
 ***** CONFIDENTIAL PATIENT INFORMATION -- 4/25/2001  1:37 PM  [LAB] *******

ASTHMA PATIENT CARE SUMMARY                        Report Date:  Apr 25, 2001


DUCK, DAISY                      HRN: 123456
DOB: Jan 20, 1981  Age: 14  F     Asthma Register Status: ACTIVE
Problem List: SE1  ASTHMA, PERSISTENT


Last Asthma Visit: Mar 07, 2001   Calculated Next Due: Sep 03, 2001


Personal Best Peak Flow   343 liters/minute on Mar 07, 2001


Peak Flow Zones    Green (80-100%)    274-343 liters/minute
                   Yellow (50-79%)    172-271 liters/minute
                   Red (< 50%)        < 172   liters/minute


Severity  2-MILD PERSISTENT  documented on Mar 07, 2001


Date of Last Asthma Management Plan:  Mar 07, 2001


Triggers (Last Documented Value)
      ETS                 NOT DOCMENTED, NEEDS TO BE REVIEWED
      PARTICULATE MATTER  NOT DOCMENTED, NEEDS TO BE REVIEWED
      DUST MITE           YES    Mar 07, 2001


Last 5 Asthma Visits - LUNG FUNCTION
  DATE            FEV 1               FEF 25-75         PEF/Best PF
------------------------------------------------------------------------
  Mar 07, 2001    96 % predicted   98 % predicted    343 liters/minute


Number of Reliever Fills in past 12 months:  1


  ------------ASTHMA MEDICATIONS (LAST 10 PRESCRIPTIONS FILLED)------------
2/21/01      BECLOMETHASONE INHALER (VANCERIL)  #13 (30 days) -- Ran out
             3/23/01
             INHALE 3 PUFFS 2 TIMES EACH DAY FOR BREATHING  11 refills left.
7/10/00      ALBUTEROL SOLUTION 5MG/ML FOR INHALATION #20 (30 days) – Ran
             out 8/9/00
             MIX 0.8 MLS WITH 2.5ML SODIUM CHLORIDE SOLUTION AND USE 4 TIMES
             A DAY PR~  10 refills left.
7/10/00      PREDNISONE 20MG #30 (5 days) -- Ran out 7/15/00
             TAKE 1&1/2 TABLETS (=30MG) 2 TIMES EACH DAY ~  11 refills left.
7/7/00       BECLOMETHASONE INHALER (VANCERIL)  #17 (30 days) -- Ran out
             8/6/00
             INHALE 5 PUFFS 2 TIMES EACH DAY FOR BREATHING (MAY INC~  10
             refil is left.
12/20/99     BECLOMETHASONE INHALER (VANCERIL)  #17 (30 days) -- Ran out
             1/19/00
             INHALE 5 PUFFS 2 TIMES EACH DAY FOR BREATHING (MAY INC~  10
             refil is left.
12/20/99     ALBUTEROL SOLUTION 5MG/ML FOR INHALATION #20 (30 days) -- Ran
             out 1/19/00
             MIX 0.8 MLS WITH 2.5ML SODIUM CHLORIDE SOLUTION AND USE 4 TIMES
             A DAY PR~  10 refills left.
12/20/99     PREDNISONE 20MG #30 (10 days) -- Ran out 12/30/99
             TAKE 1&1/2 TABLETS (=30MG) 2 TIMES EACH DAY ~  11 refills left.
4/29/99      TRIAMCINOLONE ACET INHALER (AZMACORT) #40 (30 days) -- Ran out
             5/29/99
             INHALE 2 PUFFS (ONE AT A TIME) 2 TIMES DA~  10 refills left.
```

Figure 2-17: Using the Asthma supplement

2.3.2   Attaching a Supplement to the Health Summary

Attaching a supplement to a health summary is a two-step process, using the PCC Manager's Health Summary Maintenance option. First, edit the health summary type and confirm that the supplements are included as the last item in the Summary Order sequence (Steps 1-9 below). Second, add the Asthma Supplement to the health summary Supplement Panel Sequence (Steps 10-13 below).

1. From the RPMS main menu, type PCC to select the Patient Care Component Option.

2. Type MGR at the "Select Patient Care Component Option:" prompt.

3. Type HSM at the "PCC Manager Menu Option:" prompt. The Health Summary Maintenance menu will display.

4. Type MS Create/Modify Health Summary Type at the "Select Health Summary Maintenance Option:" prompt.

```
                    ********************************
                            IHS Health Summary
                       Health Summary Maintenance Menu
                    ********************************


                                 Version 2.0

                               DEMO HOSPITAL

   IS      Inquire About a Health Summary Type
   HM      Health Maintenance Reminders ...
   PP      Print Health Maintenance Item Protocols
   LS      List Health Summary Types
   LC      List Health Summary Components
   LM      List Measurement Panel Types
   LF      List Health Summary Flowsheets
   LI      List Health Summary Flowsheet Items
   MS      Create/Modify Health Summary Type
   MM      Create/Modify Measurement Panel
   MF      Create/Modify Flowsheet
   MI      Create/Modify Flowsheet Item
   DS      Delete Health Summary Type
   DM      Delete Measurement Panel Definition
   DF      Delete Health Summary Flowsheet
   DI      Delete Health Summary Flowsheet Item
   HS      Generate Health Summary

Select Health Summary Maintenance Option: MS
```

Figure 2-18: Attaching a supplement to the health summary (step 4)

5. Type the name of the Health Summary type at the "Select Health Summary Type Name:" prompt.

If you do not know the names of the Health Summaries available at your facility, type ?? at the prompt. A list of Health Summaries will display.

Examples of Health Summaries that you may want to add the Asthma Supplement to include: Adult Regular, Pediatric, Diabetes Standard, etc.

6. The name of the Health Summary type will appear then press the Enter key.

7. If there is a security key required to modify the Health Summary, type it at the "Lock: APCHZMGR//" prompt. Otherwise, press the Enter key.

Note: Many sites are setup so that only Site Managers and other information systems staff can modify the Health Summary.

---

8. Type ?? at the "Select Summary Order:" prompt to display a list of items on the Health Summary in the order they are displayed. The number specifies the relative order in which the related component will appear on the health summary. The values for this field do not need to be either sequential or entered in sequence.

9. If the last item is Supplements, press the Enter key at the "Select Summary Order:" prompt. Continuing pressing the Enter key until you get to the "Clinic Displayed" prompt.

    a. If the last item is not Supplements, type a number (e.g., 155) at the "Select Summary Order:" prompt. The number you enter should be higher than the last number on the list, so that the Supplement will appear at the end.

    b. Type SUPPLEMENTS at the "Component Name:" prompt. Press the Enter key until you get to the "Clinic Displayed" prompt.

```
Select HEALTH SUMMARY TYPE NAME:    LDF REGULAR
NAME: LDF REGULAR// [ENT]
LOCK: APCHZMGR//[ENT]
Select SUMMARY ORDER: 155// ??

Choose from:
    5       DEMOGRAPHIC DATA
   10        INSURANCE INFORMATION
   12        SCHEDULED ENCOUNTERS
   15        ALLERGIES
   20        MEASUREMENT PANELS
   25        EYE CARE
   30        REPRODUCTIVE HISTORY
   35        PROBLEMS - ACTIVE
   40        PROBLEMS - INACTIVE
   45        HISTORY OF SURGERY
   47        FAMILY MEDICAL HISTORY
   50        HEALTH FACTORS
   55        MEDS - ALL WITH # ISSUED
   60        SCHEDULED ENCOUNTERS
   65        HOSPITALIZATION STAYS
   67        IN-HOSPITAL VISITS
   70        OUTPATIENT/FIELD VISITS
   75        REFERRED CARE
   90        PATIENT ED - MOST RECENT
   95        RADIOLOGY - MOST RECENT
  100        LABORATORY DATA - MOST RECENT
  102        EXAMINATIONS - MOST RECENT
  105        IMMUNIZATIONS
  110        SKIN TESTS - ALL
  115        HEALTH MAINTENANCE REMINDERS
  150        FLOWSHEETS
  155        SUPPLEMENTS

    You may enter a new STRUCTURE, if you wish
    Enter order (1-200) in which the component should appear on the
    summary.
Select SUMMARY ORDER: 155// [ENT]
  SUMMARY ORDER: 155// [ENT]
  COMPONENT NAME: SUPPLEMENTS//[ENT]
  ALTERNATE TITLE: [ENT]
Select SUMMARY ORDER: [ENT]
CLINIC DISPLAYED: YES//[ENT]
```

Figure 2-19: Attaching a supplement to the health summary (steps 5-9)

The following steps should be followed to add the Asthma Supplement in the appropriate sequence to the health summary. Standard PCC supplements also exist for Diabetes and Women's Health. A patient could potentially have all three supplements appear on their health summary. The following process will identify in what order the supplements should be printed.

10. At the "Clinic Displayed:" prompt, type ^SUPPLEMENT PANEL. This will allow you to skip ahead several lines to the Supplement Panel sequence.

> Otherwise, continue to press the Enter key until you reach the "Select Supplement Panel Sequence" prompt.

11. If there is a number displayed at the "Select Supplement Panel Sequence:" prompt, other supplements already exist in your health summary. Type ?? to view the list.

    To find out what the supplement type is, type the appropriate number from the list at the "Select Supplement Panel Sequence" prompt. In the example below, 10 is the Diabetes Summary and 15 is the Women's Health summary.

```
CLINIC DISPLAYED: YES// ^SUPPLEMENT PANEL
Select SUPPLEMENT PANEL SEQUENCE: 15// ??
 Choose from:
   10
   15

     You may enter a new SUPPLEMENT PANEL, if you wish
     Type a Number between 1 and 999, 0 Decimal Digits
Select SUPPLEMENT PANEL SEQUENCE: 15// 10
  SUPPLEMENT PANEL SEQUENCE: 10//
  SUPPLEMENT PANEL TYPE: DIABETIC CARE SUMMARY//
Select SUPPLEMENT PANEL SEQUENCE: 15
  SUPPLEMENT PANEL SEQUENCE: 15//
  SUPPLEMENT PANEL TYPE: WOMEN'S HEALTH PROFILE//
```
Figure 2-20: Attaching a supplement to the health summary (steps 10-11)

> **Note**: If no number is displayed at the "Select Supplement Panel Sequence" prompt, no supplements have been added yet to your site's health summaries.

12. To add the asthma supplement, type a number at the "Select Supplement Panel Sequence:" prompt. The number specifies the relative order in which the related supplement will appear within the supplements. The values for this field do not need to be either sequential or entered in sequence.

    In Figure 2-21, by typing 20, the asthma supplement will appear third after the Diabetes supplement (10) and the Women's Health supplement (15).

13. Continue to press the Enter key until you have exited from the Health Summary and PCC menus and return to the main RPMS menu.

```
Select SUPPLEMENT PANEL SEQUENCE: 20
  Are you adding '20' as a new SUPPLEMENT PANEL SEQUENCE (the 3RD for this
HEALTH SUMMARY TYPE)? No// Y  (Yes)
  SUPPLEMENT PANEL TYPE: ASTHMA

Select SUPPLEMENT PANEL SEQUENCE:

Select HEALTH SUMMARY TYPE NAME:
```
Figure 2-21: Attaching a supplement to the health summary (steps 12-13)

The Asthma Supplement will now print for all patients with an asthma diagnosis on the Problem List or Purpose of Visit (POV) or if they have had the asthma data elements ever captured in PCC. For the health summary displayed in this example, the Asthma Supplement will print after the Diabetes and Women's Health Supplements if they are appropriate for the patient (e.g., if the patient is a female diabetic with an asthma diagnosis).

2.3.3   Health Maintenance Reminders

There are five-health maintenance reminders that can be added to the health summary for asthma.

Asthma - Add/Increase Inhaled Steroids

Asthma - Management plan

Asthma Patient - Flu Shot

Asthma - Severity Classification

Asthma - Primary Care Provider

The logic for these five reminders is described in detail below.

Asthma Reminder	Criteria	Reminder Text

#1: Add/ increase inhaled corticosteroids	**Any patient who meets ANY of the following three criteria.**
	
	1. Any patient with persistent asthma (previously identified as severity 2, 3 or 4 in the registry) who is not on inhaled steroids (using BAT ASTHMA INHALED STEROIDS taxonomy)
	
	  OR
	
	2. Any patient meeting with an index greater than .33, as defined below
	
	    ▪ Find any patients with four or more prescriptions in the past 12 months for ANY asthma medication (including anti-inflammatory medications and beta2-agonists/bronchodilators) (using all three BAT medication taxonomies)
	
	    ▪ For these patients, find any whose asthma meds include a medication defined as a bronchodilator (using BAT ASTHMA RELIEVER MEDS taxonomy)
	
	    ▪ For this further subset of patients, count the number of bronchodilators (using BAT ASTHMA RELIEVER MEDS taxonomy) and count the number of anti-inflammatories (using BAT ASTHMA INHALED STEROIDS and BAT ASTHMA CONTROLLER MEDS taxonomies) to define an index
	
	    ▪ If the index is greater than .33, then trigger the reminder (The index is defined as [# of bronch] divided by the total of [# of bronch] and [# of anti-infl.] $x/(x+y)$ (E.g., 1 bronchodilator and 2 anti-inflammatories gives you an index of .33)
	
	  OR
	
	3. Any patient with 3 or more visits (POV) for asthma (ICD-9 code 493.00-493.99) over the last 6 months
		"If this patient has asthma, consider adding or increasing this patient's inhaled corticosteroids."

#2: Asthma management plan	**Any patient without an asthma plan made or reviewed in the past calendar year, as defined below.**
	
	1. With persistent asthma (as identified in the registry by prior classifications, see Criteria #1 above).
	
	  OR
	
	2. Is on inhaled steroids (using the BAT Asthma Inhaled Steroids taxonomy)
	
	  OR
	
	3. Has an index greater than .33 (see definition in Criteria #2 above).
	
	  OR
	
	4. Any patient with 3 or more visits for asthma (ICD-9 code 493.00-493.99) over the last 6 months (Criteria #3 above)
		"If this patient has asthma, consider making or reviewing this patient's asthma management plan"

#3: Flu shots	**Between the months of September to March, patients who meet ANY of the following four criteria**. Same as all four criteria for Reminder #2 Asthma Management plan above.	"If this patient has asthma consider giving this patient a flu shot per protocol during the season"

Asthma Reminder	Criteria	Reminder Text
#4: Asthma severity classification	**Identify registry patients who should have their asthma severity classified.** 1. For any patient in the registry who does not have asthma severity classified, AND 2. Has ANY of the three criteria from Reminder #1 above.	"If this patient has asthma, consider classifying the severity of this patient's asthma. Classifications are mild intermittent, mild persistent, moderate persistent, severe persistent."
#5: Primary care provider (PCP)	**Any patient with three or more asthma-related visits in past 6 months without an assigned primary care provider.** This function can be turned on/ off at sites	"Please assign this patient to a primary care provider."

Please see the health summary user manual for instructions on adding these reminders to your health summary type. You should use Create/Modify Health Summary Type option and update the Surveillance Item Sequence multiple.

2.4 PCC Data Entry for Asthma Elements

The Asthma Register System (ARS) provides the capability to capture asthma-related data in the Patient Care Component (PCC). A new mnemonic has been added to the PCC Data Entry system. PCC forms will need to be adapted to capture these elements most efficiently. Sites using the PCC+ Customizable Encounter Form application should consider using the PCC+ Asthma form, which can be downloaded from the PCC+ web site, www.ihs.gov/CIO/PCCPlus.

2.4.1 Adapting PCC Forms for Asthma Data

Providers must document the asthma-related data items on the PCC form. There are various ways to adapt the PCC form.

- Pre-print forms using an overlay with the standard PCC form (see Appendix B);

- Use a PCC+ form that displays these data elements; or

- Manually type or stamp the required elements onto a PCC form.

The data elements that must be captured are shown in Figure 2-22. Prefacing the list of elements with the term *AST* is a visual clue to the data entry operator to use the AST mnemonic to capture these data elements.

```
┌─────────────────────────────────────────────┐
│                    "AST"                      │
│  Severity                                     │
│  Mild Intermittent                □   1       │
│  Mild Persistent                  □   2       │
│  Moderate Persistent              □   3       │
│  Severe Persistent                □   4       │
│                                               │
│  Lung Function                                │
│  FEV₁ _____% predicted              │
│  FEF ₂₅₋₇₅ _____% predicted             │
│  PEF/Best PF  _____ liters/minute         │
│                                               │
│  Triggers                         Y   N       │
│  ETS (Environmental Tobacco       □   □       │
│     Smoke)                                    │
│  Particulate matter               □   □       │
│  Dust mite                        □   □       │
│                                               │
│  Asthma Plan                      Y   N       │
│  Made or Reviewed                 □   □       │
└─────────────────────────────────────────────┘
```

Figure 2-22: Required data elements

A sample form is shown on the next page. Notice the asthma-related data items on the right hand side of the Subjective/Objective section.

Figure 2-23: Asthma form

2.4.2   PCC Data Entry Process

To capture asthma related data, a new mnemonic has been developed and added to the PCC Data Entry system.

> **Note**: The information contained in this chapter should be shared with the appropriate PCC Data Entry staff members.

The mnemonic to capture asthma-related data is called AST. It should be used anytime the PCC form being processed has the asthma data overlay information printed or written on the form. See Figure 2-23 above for an example of asthma data overlay.

1. From the PCC Data Entry menu, type AST at the "Mnemonic:" prompt.

2. Type the appropriate value at the "Severity?" prompt.

3. Continue typing values indicated on the PCC form. Only enter the values that were documented by the provider. If the data item was left blank, press the Enter key to bypass that data item. Type ? to get the available responses.

```
MNEMONIC: AST            ASTHMA      ALLOWED    VISIT RELATED ONLY
  SEVERITY: ?
    Choose from:
      1          MILD INTERMITTENT
      2          MILD PERSISTENT
      3          MODERATE PERSISTENT
      4          SEVERE PERSISTENT
  SEVERITY: 2  MILD PERSISTENT
  FEV 1: 100
  FEF 25-75: 100
  PEF/BEST PF: 300
  ETS: Y  YES
  PARTICULATE MATTER: Y  YES
  DUST MITE: N  NO
  ASTHMA MANAGEMENT PLAN: Y  YES

MNEMONIC:
```

Figure 2-24: Using PCC data entry

2.4.3   Historical Asthma Data

There are two ways to capture historical asthma data in PCC when documented by a provider.

1. Use the HAST (Historical Asthma) mnemonic.

2. Use Enter mode and select a service category of E (Event) for the service category. Then use the AST mnemonic while in Enter mode. If this mode is used, the date of the visit should be entered as the date the asthma information was gathered or the date of the last asthma visit.

3.0   Register Management (REG)

The Register Management section of the Asthma Register System contains options to assist you in maintaining the various functions of a Register:

- Adding patients manually

- Reviewing and updating the status or other register information about a patient

- Running reports on register patients (section 3.3)

- Generating reminder letters for register patients (section 3.5)

Tools for individual patient management, such as summaries and action plans, are described in Section 4.0 Patient Management.

- Type REG at the main ARS menu. The Register Management menu will display (Figure 3-1).

```
                   *************************
                   **   Asthma Register    **
                   ** Register Management  **
                   *************************
                           Version 1.0

                             DEMO HOSP


   UP      Update or Add a Patient to the Register
   AI      Activate/Inactivate a Patient on Register
   RPT     Asthma Reports Menu ...
   LTR     Asthma Letters ...

Select Register Management Option:
```

Figure 3-1:Accessing the Register Management screen

3.1   Update or Add a Patient to the Register (UP)

3.1.1   Add a Patient

You can manually add a patient to the Register by using the Update or Add a Patient menu option (UP) on the Register Management screen.

1. Type UP at the "Select Register Management Option:" prompt.

2. Type the patient's name (last name, first) or chart number at the "Select Asthma Register Patient:" prompt. If there are multiple patients available, a list will display. Type the number corresponding to the correct patient.

3. Type A at the "Status:" prompt to indicate the patient is Active. The default is U Unreviewed. Type ? to see a list of other options.

4. Press the Enter key to accept the default date, if there is one, or to leave the date blank. You can type the date of this patient's last asthma visit at the "Date of Last Asthma Visit:" prompt.

    This field will be filled in automatically by ARS whenever a patient has asthma-specific data entered into PCC via the AST mnemonic from the pre-printed PCC forms (section 2.4).

5. At the "Calculated Date Due:" prompt. Press the Enter key to accept the default due date for the next asthma visit or type in a different date to override the default.

    The default value is automatically calculated as six months after the date of the patient's last asthma visit (see Step 4).

6. Type the date of the next scheduled appointment, if known, at the "Next Scheduled Appt:" prompt or press the Enter key to pass through the field.

7. Type the name or code of the Case Manager, if there is one, at the "Case Manager:" prompt or press the Enter key to pass through the field.

8. Type in any notes or comments you may have about this patient at the "Edit:" prompt.

9. Type Y or N at the "Do you want to update/add another patient?" prompt. If you type Yes, you will return to Step 2. If you type NO, you will return to the Register Management menu.

```
                    **************************
                    **   Asthma Register    **
                    ** Register Management   **
                    **************************
                           Version 1.0

                            DEMO HOSP


   UP     Update or Add a Patient to the Register
   AI     Activate/Inactivate a Patient on Register
   RPT    Asthma Reports Menu ...
   LTR    Asthma Letters ...

Select Asthma Register Option: UP  Update or Add a Patient to the Register

                      Update Asthma Register Data

This option is used to either Add a new patient to the Asthma register or to
update an existing patient.

Select ASTHMA REGISTER PATIENT:    VON BRAUN,GLADYS

STATUS: UNREVIEWED// ?

DATE OF LAST ASTHMA VISIT: DEC 29,00// [ENT]

CALCULATED DATE DUE: JUN 27,2001//  [ENT]

NEXT SCHEDULED APPT: [ENT]
CASE MANAGER:  [ENT]

NOTES/COMMENTS:
  No existing text
  Edit? NO//  [ENT]

Do you want to update/add another patient? Y//[ENT]
```

Figure 3-2: Adding a patient

3.1.2   Update a Patient

Updating patient data is performed by using the UP option as described in section
3.1.1 Adding a Patient.

Unreviewed Patients
All patients added automatically to the Register are unreviewed until activated by a
manager. This allows the manager to review whether the patient meets the criteria to
be included on the Register.

To review the Unreviewed Patients list, run a Master List report of unreviewed
patients (section 3.3.1)

3.2   Activate/Inactivate a Patient on Register (AI)

To quickly change only the status of a patient, use the AI menu option, which allows you to change the Status field only.

You may perform this function for one patient (e.g., changing from Active to Deceased) or for groups of patients after reviewing a list of patients.

For example, you may choose to inactivate a child who, on further chart review, you feel had bronchiolitis and should not yet be labeled as asthmatic, or perhaps they had exercise-induced asthma. Other reasons to inactivate a patient from the register may be that they have outgrown their asthma and have not had exacerbations or medicines for more than a year or that they have moved out of your service area.

Any patient added automatically to the Register through the Site Update Parameters function (see section 2.2.4) will have an unreviewed status; it is recommended that providers use the Update option (UP) to review and edit all data for unreviewed patients, rather than just the Status through the Activate/Inactivate option (AI).

You may want to run a list of all patients in the various Status categories. See section 3.3.1 Master Lists for instructions.

1. Type AI at the "Select Register Management Option:" prompt

2. Type the patient's name (last name, first) or chart number at the "Select Astham Register Patient:" prompt.

3. Type A at the "Status" prompt to indicate the patient is active. The default is U Unreviewed. Type ? to see a list of other options.

```
Select Asthma Register Option:AI  Activate/Inactivate a Patient on Register

                       Update Asthma Register Data

This option is used to update the STATUS field of a patient in the register

Select ASTHMA REGISTER PATIENT:    VON BRAUN,GLADYS

STATUS: UNREVIEWED// A  ACTIVE
```
Figure 3-3: Activating a patient

3.3   Reports (RPT)

The Reports menu provides many options for producing a wide variety of predefined reports. These reports are deigned to assist with managing the Asthma patient population and providing quality patient care to those patients.

1. Type REG at the "Select Asthma Register Option:" on the ARS main menu. The Register Management menu will display (Figure 3-4).

2. Type RPT at the "Select Register Management option" prompt. The Reports menu will display.

```
                        *************************
                        **    Asthma Register     **
                        **     Reports Menu       **
                        *************************
                             Version 1.0

                             DEMO HOSPITAL


   ML      Master List of Asthma Register Patients
   OV      Patients Due or Overdue for Followup
   NM      Persistent Patients w/o Management Plan in past Yr
   CM      Persistent Pats w < N Refills of Controller Meds
   RF      Patients w/4 or more Relievers Fills in 150 Days
   NP      Patients w/o Peak Flow Documented in Past 2 Yrs
   NF      Persistent Patients w/o Spirometry [FEV 25-75]
   NS      Asthma Register Patients w/o Severity Documented
   QI      Quality Improvement Reports ...

Select Asthma Reports Menu Option:
```
Figure 3-4: Accessing the Report menu

3.3.1   Master List of Asthma Register Patients (ML)

This report will produce a list of all patients on the register. You will select which patients (based on status and age) to display or print.

1. Type ML at the "Select Asthma Reports Menu Option:" prompt

2. Type the letter representing the Status of the patient list you want to print at the "List Patients with which Status:" prompt. The default is A Active. Type ? to see the list of options.

3. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing NO will give you all patients. Typing YES will allow you to restrict the list by age. If you select Yes, type in an age range, e.g., 2-18.

4. A list of options to sort your list will be displayed. Type the appropriate letter at the "Sort List By:" prompt.

5. Type P for Print or B for Browse at the "Do you wish to:" prompt. If you select Print, type the printer name at the "Device" prompt.

```
This report will produce a list of all patients on the register.
You will select which patients (based on status) to display.

List Patients with which Status: A// ?

Choose from:
A        ACTIVE
I        INACTIVE
D        DECEASED
T        TRANSIENT
U        UNREVIEWED

List Patients with which Status: A// ACTIVE  (choose with register patients
you want to list by status)

Would you like to restrict the report by Patient age range? YES// NO

     Select one of the following:

          N          Patient Name
          D          Patient AGE
          V          Patient's Next Asthma Visit Due Date
          A          Last Asthma Severity
          L          Last Asthma Visit

Sort List by: N// D  Patient AGE (select the sort order for the report)

     Select one of the following:

          P          PRINT Output
          B          BROWSE Output on Screen

Do you wish to: P// [ENT] PRINT Output
DEVICE: HOME
```

Figure 3-5: Printing the Master list

```
LAB                          Apr 24, 2001                    Page 1
                        DEMO HOSPITAL/CLINIC

                  ***  ASTHMA REGISTER MASTER LIST  ***
                       Register Status: ACTIVE

PATIENT NAME             HRN    AGE   LAST SEVERITY    LAST VISIT   NEXT DUE
--------------------------------------------------------------------------
DOE,JANE MARY            111111 19 MOS
DOE,MARCY ANN            222222 35 MOS
JONES,LINDA MAE          666666 3 YRS
EDWARDS,RAYMOND JAMES     333333 5 YRS
MILLER,JOHN EDWARD       444444 7 YRS  3-MODERATE PERSIS Feb 26, 2001 Aug 25, 2001
SMITH,CHRISTINE MARIE    555555 8 YRS  3-MODERATE PERSIS Nov 30, 2000 May 29, 2001
JOHNSON,MARK GILBERT     777777 8 YRS  4-SEVERE PERSISTE Jun 02, 2000 Nov 29, 2000
CARTER,RONALD JAMES      888888 9 YRS
JOHNSON,ALEXANDER        999999 10 YRS 3-MODERATE PERSIS Feb 08, 2001 Aug 07, 2001
WASHINGTON,ADAM JAMES    11111 10 YRS
LINCOLN,GARY L           22222 10 YRS
CHRISTIANSEN,MILLIE      33333 11 YRS 3-MODERATE PERSIS Jan 08, 2001 Jul 07, 2001
LANCASTER,MIRANDA MA     44444 12 YRS 3-MODERATE PERSIS Sep 06, 2000 Mar 05, 2001
```

Figure 3-6: Listing active patients age

3.3.2   Register Patients Due or Overdue for Follow-up (OV)

This report is used to identify register patients either due or overdue for follow-up and enable clinic staff to take appropriate action, i.e. call or send a letter encouraging them to make an appointment.

You can limit the list by age ranges and the date range for which the patient is due.

1. Type OV at the "Select Asthma Reports Menu Option:" prompt.

2. Type the letter representing the Status of the patient list you want to print at the "List Patients with which Status:" prompt. The default is A Active. Type ? to see the list of options.

3. Type the date for the beginning of date range at the "Enter Beginning Due Date:" prompt.

4. Type the end date at the "Enter Ending Due Date:" prompt. If you only want overdue patients, type T or today's date as the end date.

5. Type Y or N at the "Would you like to restrict the report by Patient age range?" If Yes, type in an age range, e.g., 2-21.

6. Type the appropriate letter to indicate how you want the list sorted at the "Sort List by:" prompt.

7. Type P (Print) or B (Browse) at the "Do you wish to:" prompt. The Browse option will display the patient list on the screen.

8. If you select Print, press the Enter key to select default printer or type in the name of your printer. You may need to ask your Site Manager for this information.

```
                    PATIENTS DUE OR OVERDUE FOR FOLLOWUP

This report will produce a list of all patients on the register
who are due for followup.  You will select the age range of
interest and the date range for which the patient is due.

List Patients with which Register Status: A// ACTIVE

Enter Beginning Due Date:  010100  (JAN 01, 2000) (pick a very early date, go
way back)
Enter Ending Due Date:  090101  (SEP 01, 2001) (enter a date that is a month
or to from the present)

Would you like to restrict the report by Patient age range? YES// NO

      Select one of the following:

           N          Patient Name
           D          Patient AGE
           V          Patient's Next Asthma Visit Due Date
           A          Last Asthma Severity
           L          Last Asthma Visit

Sort List by: N//   Patient Name

      Select one of the following:

           P          PRINT Output
           B          BROWSE Output on Screen

Do you wish to: P// RINT Output
DEVICE: HOME//     Right Margin: 80//
```

Figure 3-7: Listing the Register Patients Due or Overdue for Follow-up report

```
LAB                            Apr 24, 2001                    Page 1
                         DEMO HOSPITAL/CLINIC


      ***  ASTHMA REGISTER PATIENTS DUE OR OVERDUE FOR FOLLOWUP  ***
               Due Dates: Jan 01, 2000 to Sep 01, 2001
                      Register Status: ACTIVE


PATIENT NAME            HRN    AGE   LAST SEVERITY     LAST VISIT   NEXT DUE
-----------------------------------------------------------------------------
JOHNSON,ALEX           111111 10 YRS 3-MODERATE PERSIS Feb 08, 2001 Aug 07, 2001
MILLER,LORI W          222222 11 YRS 3-MODERATE PERSIS Jan 08, 2001 Jul 07, 2001
WASHINGTON,JOHN ROBERT 333333 8 YRS  4-SEVERE PERSISTE Jun 02, 2000 Nov 29, 2000
HARRISON,MICHAEL ROY   444444 13 YRS 3-MODERATE PERSIS Aug 01, 2000 Jan 28, 2001
MICHAELSON,JEFFREY,JR  555555 12 YRS 3-MODERATE PERSIS Sep 06, 2000 Mar 05, 2001
HEILMAN,DAVID EDWARD   666666 7 YRS  3-MODERATE PERSIS Feb 26, 2001 Aug 25, 2001
REAGAN,RONALD A        777777 13 YRS 3-MODERATE PERSIS Feb 01, 2000 Jul 30, 2000
SMITH,NATALIE J        488888 14 YRS                   Feb 02, 2001 Aug 01, 2001
ANNISTON,JENNIFER MAE  999999 12 YRS 3-MODERATE PERSIS Feb 08, 2000 Aug 06, 2000
TURLINGTON,CHRISTY ANN 499999 8 YRS  3-MODERATE PERSIS Nov 30, 2000 May 29, 2001
```

Figure 3-8: Sample List of Overdue Patients

3.3.3   Persistent Patients w/o Management Plan (NM)

This report is used to identify register patients with persistent asthma (severity 2, 3 or 4) whose management plans are out of date, i.e., who have not had a management plan established in the past year. Running this list will enable clinic staff to take appropriate action, i.e. call or send a letter encouraging them to make an appointment.

This report should be used only if you are using asthma-specific pre-printed PCC forms and recording the "Asthma Plan Made or Reviewed" data.

1. Type NM at the "Select Asthma Register Menu option:" prompt

2. Type the letter representing the Status of the patient list you want to print at the "List Patients with which Status:" prompt. The default is A Active. Type ? to see the list of options.

3. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age. Type an age range (#-#) at the "Enter an Age Range" prompt.

4. A list of options to sort your list will be displayed. Type the appropriate letter.

5. Type P for Print or B for Browse at the "Do you wish to:" prompt.

```
List Patients with which Register Status: A// [ENT] ACTIVE

Would you like to restrict the report by Patient age range? YES// NO

     Select one of the following:

          N          Patient Name
          D          Patient AGE
          V          Patient's Next Asthma Visit Due Date
          A          Last Asthma Severity
          L          Last Asthma Visit

Sort List by: N// [ENT]   Patient Name

     Select one of the following:

          P          PRINT Output
          B          BROWSE Output on Screen

Do you wish to: P// [ENT] PRINT Output
DEVICE: HOME//    Right Margin: 80//
```
Figure 3-9: Listing the Persistent Patients w/o Management Plan report

```
LAB                              Apr 24, 2001                    Page 1
                              DEMO HOSPITAL/CLINIC

          ***  ASTHMA REGISTER PATIENTS WITHOUT MANAGEMENT PLAN  ***
                        Register Status: ACTIVE

PATIENT NAME             HRN    AGE   LAST SEVERITY    LAST VISIT   NEXT DUE
------------------------------------------------------------------------
WSAHINGTON,SARA        111111 13 YRS 3-MODERATE PERSIS Feb 01, 2000 Jul 30, 2000
     Last Management Plan: Feb 01, 2000
LINCOLN,ABRAHAM LEE    222222 12 YRS 3-MODERATE PERSIS Feb 08, 2000 Aug 06, 2000
     Last Management Plan: Feb 08, 2000
End of report.  Press ENTER:
```

Figure 3-10: List of Register patients without a management plan

3.3.4   Persistent Register Patients Underutilizing Controller Medications (CM)

This report is used to identify patients in the Register with persistent asthma (severity 2, 3 or 4) who might be underutilizing their medications (using BAT ASTHMA INHALED STEROIDS and BAT ASTHMA CONTROLLER MEDS taxonomies). This list can be used by clinic staff to take appropriate action, i.e. call or send a letter encouraging them to make an appointment.

This report will list all persistent patients who have had less than a user-defined number of refills of controller medication in a user defined date range. For example, you might assume that a consistent user of your most common inhaled steroid will need to refill every two months or so.

1. Type CM at the "Select Asthma Register menu option:" prompt.

2. Type the letter representing the Status of the patient list you want to print at the "List Patients with which Status:" prompt. The default is A Active. Type ? to see the list of options.

3. Type the beginning date of the date range at the "Enter Beginning Date to Search for Controller Meds:" prompt.

4. Type the end date at the "Enter Ending Date to search for Controller Meds:" prompt.

5. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age. Type an age range (#-#) at the "Enter an Age Range" prompt.

6. A list of options to sort your list will be displayed. Type the appropriate letter at the "Select one of the following:" prompt.

7. Type P for Print or B for Browse at the "Do you wish to:" prompt.

```
Review Patients with which Register Status: A// UNREVIEWED

Enter Beginning Date to Search for Controller Meds:  0101  (JAN 01, 2001)
Enter Ending Date to search for Controller Meds:  T  (APR 24, 2001)
How many refills:  (0-99): 2

Would you like to restrict the report by Patient age range? YES// NO

     Select one of the following:

          N          Patient Name
          D          Patient AGE
          V          Patient's Next Asthma Visit Due Date
          A          Last Asthma Severity
          L          Last Asthma Visit

Sort List by: N//    Patient Name

     Select one of the following:

          P          PRINT Output
          B          BROWSE Output on Screen

Do you wish to: P// RINT Output
DEVICE: HOME//     Right Margin: 80//
```

Figure 3-11: Listing the Persistent Register Patients Underutilizing Controller Medications report

```
LAB                             Apr 24, 2001                          Page 1
                             DEMO HOSPITAL/CLINIC

              ***  ASTHMA REGISTER PERSISTENT PATIENTS  ***
             *** WITH LESS THAN 2 REFILLS OF CONTROLLER MEDS ***
                  Due Dates: Jan 01, 2001 to Apr 24, 2001
                      Register Status: UNREVIEWED

PATIENT NAME            HRN    AGE   LAST SEVERITY    LAST VISIT   NEXT DUE
---------------------------------------------------------------------------
BUTCHER,ROSE           111111 10 YRS 3-MODERATE PERSIS Feb 08, 2001 Aug 07, 2001
    Number of Controller Refills: 0
LINCOLN,JENNIFER M     222222 18 YRS 3-MODERATE PERSIS May 16, 2000 Nov 12, 2000
    Number of Controller Refills: 1
DEMPSEY,MARY           333333 11 YRS 3-MODERATE PERSIS Jan 08, 2001 Jul 07, 2001
    Number of Controller Refills: 0
GRAYSON,JAMES ERIC     444444 8 YRS  4-SEVERE PERSISTE Jun 02, 2000 Nov 29, 2000
    Number of Controller Refills: 1
```

Figure 3-12: Persistent Register Patients Underutilizing Controller Medications report

3.3.5   All Patients Overusing Reliever Medications (RF)

This report is used to identify any patient (not just in the Register) who might be overusing their reliever medications, based on the BAT ASTHMA RELIEVER MEDS taxonomy. This is defined as four (4) or more refills in a five-month period (150 days), as an indicator for poor control.

The report will indicate whether the patient is on the Register or not.

The list enables staff to take appropriate action, i.e. call or send a letter encouraging them to make an appointment.

> **Note**: This query reviews the entire RPMS database and is likely to take a long time to run. You are advised to run this report in the evening.

1. Type RF at the "Select Asthma Report menu option:" prompt. The system describes that the report may take several hours to run.

2. Press the Enter key to accept the Yes default or type N to stop.

3. Type T for today or another date at the "Enter the Ending Date of the 150 day period:" prompt.

4. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age. Type an age range (#-#) at the "Enter an Age Range" prompt.

5. A list of options to sort your list will be displayed. Type the appropriate letter at the "Sort List by:" prompt.

6. Type P for Print or B for Browse at the "Do you wish to:" prompt.

```
                  PATIENTS WITH 4 OR MORE RELIEVER REFILLS IN 150 DAYS

This report will list all patients who have had 4 or more refills of
reliever medication in a user defined 150 day period.
All patients will be reviewed, not just those on the Asthma Register.

This report will review the entire patient file and may take several hours to
run depending on the size of the patient database.

Do you want to continue? Y// [ENT]

Enter the Ending Date of the 150 day period:  T  (DEC 09, 2002)

Would you like to restrict the report by Patient age range? YES// NO

     Select one of the following:

          N         Patient Name
          D         Patient AGE
          V         Patient's Next Asthma Visit Due Date
          A         Last Asthma Severity
          L         Last Asthma Visit

Sort List by: N// [ENT]

     Select one of the following:

          P         PRINT Output
          B         BROWSE Output on Screen

Do you wish to: P// [ENT] PRINT Output
DEVICE: HOME//
```

Figure 3-13:Listing the All Patients Overusing Reliever Medications report

```
LAB                              Apr 24, 2001                        Page 1
                           DEMO HOSPITAL/CLINIC

      ***  PATIENTS WITH 4 OR MORE RELIEVER MED REFILLS IN 150 DAYS  ***
                  Time Period: Nov 25, 2000 to Apr 24, 2001

PATIENT NAME            HRN    AGE   LAST SEVERITY     LAST VISIT   NEXT DUE
----------------------------------------------------------------------------
CLINTON,WILLIAM J     111112 57 YRS 3-MODERATE PERSIS Feb 08, 2001 Aug 07, 2001
        Number of Reliever Refills: 5
BUSH,GEORGE JR        111122 28 YRS
     Patient NOT on Asthma Register
   Number of Reliever Refills: 5
SMITH,MARY ANN        223322 43 YRS 3-MODERATE PERSIS Feb 08, 2001 Aug 07, 2001
        Number of Reliever Refills: 7
```

Figure 3-14:Sample screen of the All Patients Overusing Reliever Medications report

3.3.6   Patients w/o Peak Flow Documented in Past 2 Yrs (NP)

This report is used to identify patients in need of lung function assessment. This is
defined as all persistent patients (severity 2, 3, or 4) who have not had a peak flow
documented in the past two (2) years. The rationale is that all persistent asthmatics

should be periodically assessed by some objective measure. Peak Flow monitors are inexpensive and should be available in all clinics.

This report should be used only if you are using the asthma-specific pre-printed PCC form and recording the Lung Function elements.

This list will enable staff to take appropriate action, i.e. call or send a letter encouraging patients to make an appointment.

1. Type NP at the "Asthma Report menu option:" prompt.

2. Type the letter representing the Status of the patient list you want to print at the "List Patients with which Status:" prompt. The default is A Active. Type ? to see the list of options.

3. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age. Type an age range (#-#) at the "Enter an Age Range:" prompt. For example, 0-21.

4. A list of options to sort your list will be displayed. Type the appropriate letter at the "Sort List by:" prompt.
    N   Patient Name
    D   Patient Age
    V   Patient's Next Asthma Visit Due Date
    A   Last Asthma Severity
    L   Last Asthma Visit

5. Type P for Print or B for Browse at the "Do you wish to:" prompt.

```
List Patients with which Register Status: A// [ENT] ACTIVE

Would you like to restrict the report by Patient age range? YES//[ENT]
Enter an Age Range (e.g. 6-19,6-99): 0-21

     Select one of the following:

          N          Patient Name
          D          Patient AGE
          V          Patient's Next Asthma Visit Due Date
          A          Last Asthma Severity
          L          Last Asthma Visit

Sort List by: N// [ENT]    Patient Name

     Select one of the following:

          P          PRINT Output
          B          BROWSE Output on Screen

Do you wish to: P// [ENT] PRINT Output
DEVICE: HOME//      Right Margin: 80//
```

Figure 3-15: Listing the Patients w/o Peak Flow Documented in Past 2 Yrs report

```
LAB                            Apr 24, 2001                    Page 1
                           DEMO HOSPITAL/CLINIC

     ***   PERSISTENT PATIENTS WITHOUT PEAK FLOW DOCUMENTED IN PAST 2 YEARS
                          Register Status: ACTIVE
                                Ages: 0-21

PATIENT NAME             HRN    AGE    LAST SEVERITY    LAST VISIT   NEXT DUE
--------------------------------------------------------------------------
PHILBIN,HARRY            111111 10 YRS 3-MODERATE PERSIS Feb 08, 2001 Aug 07, 2001
    Last Peak Flow:  Jan 22, 1999
LOPEZ,DIANA CHRISTINE  422222 13 YRS 3-MODERATE PERSIS Aug 01, 2000 Jan 28, 2001
    Last Peak Flow:
RUSSELL,JANE DIANE      333333 12 YRS 3-MODERATE PERSIS Sep 06, 2000 Mar 05, 2001
    Last Peak Flow:
End of report.  Press ENTER:
```

Figure 3-16: Sample screen of the Patients w/o Peak Flow Documented in Past 2 Yrs report

3.3.7   Persistent Patients without Spirometry [FEF$_{25-75}$] (NF)

This report is used to identify patients with persistent asthma who are in need of spirometry. This is defined as patients with severity of 3 Moderate Persistent or 4 Severe who have not had a spirometry [FEF$_{25-75}$] documented in the past year. Spirometry is the best way to objectively measure a patient's lung capacity. The FEF$_{25-75}$ reflects small airway compliance and is probably the best test for detecting asthma. Since it is hard to perform spirometry in those under 5-6 years old, you may want to restrict your query to an older group, e.g. 6-18 years old.

1. Type NF at the "Select Asthma Report menu option:" prompt

2. Type the letter representing the Status of the patient list you want to print at the "List Patients with which Status:" prompt. The default is A Active. Type ? to see the list of options.

3. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age. Type an age range (#-#) at the "Enter an Age Range" prompt. For example, 0-21.

4. A list of options to sort your list will be displayed. Type the appropriate letter at the "Sort List by:" prompt:

5. Type P for Print or B for Browse at the "Do you wish to:" prompt.

```
List Patients with which Register Status: A// ACTIVE

Would you like to restrict the report by Patient age range? YES//

Enter an Age Range (e.g. 6-19,6-99): 0-20

     Select one of the following:

         N          Patient Name
         D          Patient AGE
         V          Patient's Next Asthma Visit Due Date
         A          Last Asthma Severity
         L          Last Asthma Visit

Sort List by: N//   Patient Name

     Select one of the following:

         P           PRINT Output
         B           BROWSE Output on Screen

Do you wish to: P// RINT Output
DEVICE: HOME//     Right Margin: 80//
```
Figure 3-17: Listing of the Persistent Patients without Spirometry [FEF$_{25-75}$] report

```
LAB                            Apr 24, 2001                  Page 1
                         DEMO HOSPITAL/CLINIC

***  PERSISTENT PATIENTS WITHOUT SPIROMETRY [FEF 25-75] DOCUMENTED IN PAST YEAR
                     Register Status: ACTIVE
                           Ages: 0-20

PATIENT NAME           HRN    AGE   LAST SEVERITY    LAST VISIT   NEXT DUE
---------------------------------------------------------------------------
JACKSON,MILDRED         111111 13 YRS 3-MODERATE PERSIS Feb 01, 2000 Jul 30, 2000
     Last Spirometry [FEF 25-75]: 80 documented on Feb 01, 2000
SMITH,JOHNATHON MICHA  222222 12 YRS 3-MODERATE PERSIS Feb 08, 2000 Aug 06, 2000
     Last Spirometry [FEF 25-75]: 82 documented on Feb 08, 2000
End of report.  Press ENTER:
```
Figure 3-18: Excerpt of the Persistent Patients without Spirometry [FEF$_{25-75}$] report

3.3.8   Register Patients with Undocumented Severity (NS)

This report identifies patients on the Register who need severity assessment and classification, i.e., who do not have severity documented. Users can restrict the list by status (e.g., Active) and by age range.

Since it is difficult to assign severity to patients under two years of age, you may wish to restrict your query to those two years and older.

1. Type NS at the "Select Asthma Report menu option:" prompt

2. Type the letter representing the Status of the patient list you want to print at the "List Patients with which Status:" prompt. The default is A Active. Type ? to see the list of options.

3. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age. Type an age range (#-#) at the "Enter an Age Range" prompt. For example, 0-21.

4. A list of options to sort your list will be displayed. Type the appropriate letter at the "Sort List by:" prompt.

5. Type P for Print or B for Browse at the "Do you wish to:" prompt.

```
List Patients with which Status: A// ACTIVE

Would you like to restrict the report by Patient age range? YES// [ENT]

Enter an Age Range (e.g. 5-12,1-1): 0-21

     Select one of the following:

         N          Patient Name
         D          Patient AGE
         V          Patient's Next Asthma Visit Due Date
         A          Last Asthma Severity
         L          Last Asthma Visit

Sort List by: N//    Patient Name

     Select one of the following:

         P          PRINT Output
         B          BROWSE Output on Screen

Do you wish to: P// PRINT Output
DEVICE: HOME// [ENT]    Right Margin: 80//[ENT]
```

Figure 3-19: Listing the Register Patients with Undocumented Severity report

```
LAB                               Apr 24, 2001                     Page 1
                               DEMO HOSPITAL/CLINIC


       ***   ASTHMA REGISTER PATIENTS WITHOUT SEVERITY DOCUMENTED   ***
                          Register Status: ACTIVE
                                Ages: 0-21


PATIENT NAME                 HRN    AGE   LAST SEVERITY    LAST VISIT   NEXT DUE
--------------------------------------------------------------------------------
MILLER,SARAH A               222222 15 YRS
BUTCHER,ANNA MARIE           333333 29 MOS
JONES,ROBERT MARK            444444 19 MOS
JUDD,ASHLEY MARY             555555 13 YRS
DOE,JOHN MICHAEL             666666 10 YRS
POLK,JOANNE ELLEN            777777 27 MOS
CARTER,SUSAN MARIE           888888 35 MOS
CLINTON,MICHAEL JOSEPH 999999 19 YRS
```

Figure 3-20: Excerpt of the Register Patients with Undocumented Severity report

3.4 Quality Improvement Reports (QI)

There are four QI reports that can be generated by managers and/or clinics to assess how they are meeting their goals over time.

AM   % of Patients with Asthma Management plan

SV   % of Patients with Scheduled Asthma Visit

CM   % Patients using Controller/Inhaled Steroids

SP   % of Patients 6 and older with Spirometry

1. At the main ARS menu, type REG at the "Select Asthma Register option:" prompt.

2. Type RPT at the "Register Management option:" prompt to open to Reports menu.

3. Type QI at the "Asthma Reports Menu option:" prompt. The QI Reports menu will be displayed.

```
                          **************************
                          **    Asthma Register    **
                          **    QI Reports Menu     **
                          **************************
                                Version 1.0

                                DEMO HOSPITAL


   AM      % of Patients with Asthma Management Plan
   SV      % of Patients with Scheduled Asthma Visit
   CM      % Patients using Controller/Inhaled Steroids
   SP      % of Patients 6 and older with Spirometry

Select Quality Improvement Reports Option:
```

Figure 3-21: Accessing the QI reports menu

3.4.1 % of Register Patients with Asthma Management Plan (AM)

All patients with persistent asthma should have a current asthma management plan. This report enables clinicians to track the percentage of patients with an asthma management plan over time and note any progress or need for improvement.

This report displays the total number of patients reviewed during a user-defined date range, the number with their asthma management plan updated, and the percentage.

1. Type AM at the "Select Quality Improvement Reports option:" prompt.

2. Type the letter representing the Status of the patient list you want to review at the "List Patients with which Status" prompt. The default is A Active.

3. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age. Type an age range (#-#) at the "Enter an Age Range" prompt. For example, 0-21.

4. Type the date for the beginning of date range at the "Enter Beginning Date of Date Range:" prompt.

5. Type date for the end of the date range at the "Enter Ending Date of Date Range:" prompt.

6. Type P for Print or B for Browse at the "Do you wish to:" prompt.

```
List Patients with which Register Status: A// [ENT] ACTIVE

Would you like to restrict the report by Patient age range? YES// NO

Enter Beginning Date of Date Range:  T-365  (NOV 24, 2001)

Enter Ending Date of Date Range:  T  (NOV 24, 2002)

     Select one of the following:

         P          PRINT Output
         B          BROWSE Output on Screen

Do you wish to: P// [ENT] PRINT Output
DEVICE: HOME//     Right Margin: 80//
```

Figure 3-22: Listing the % of Register Patients with Asthma Management Plan report

```
LAB                          Apr 24, 2001                         Page 1
                          DEMO HOSPITAL/CLINIC

       ***  % OF PERSISTENT PATIENTS WITH MANAGEMENT PLAN UPDATED  ***
                        Register Status: ACTIVE
                  Date Range: Nov 24, 2001 - Nov 24, 2002


------------------------------------------------------------------------
             Total Number of Patients:      11
 Total Number with Asthma Plan Updated:      9
                                          81.8%


End of report.  Press ENTER:
```

Figure 3-23: Excerpt from a % of Register Patients with Asthma Management Plan report

3.4.2   % of Register Patients with Scheduled Asthma Visit (SV)

All patients with persistent asthma should have scheduled asthma visits at least annually, rather than acute visits. An asthma visit is defined when a modified asthma PCC form is used to capture asthma-related data elements. This report displays the total number of patients reviewed during a user-defined date range, the number with a scheduled asthma visit, and the percentage.

This report enables providers to track the percentage of patients with scheduled asthma visits, and note any progress over time or particular need for improvement.

1. Type SV at the "Select Quality Improvement Reports option:" prompt

2. Type the letter representing the Status of the patient list you want to review at the "List Patients with which Status:" prompt. The default is A Active.

3. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age.

Type an age range (#-#) at the "Enter an Age Range" prompt. For example, 2-18.

4. Type a beginning date at the "Enter Beginning Date of Date Range:" prompt.

5. Type an ending date for the end of the date range at the "Enter Ending Date of Date Range:" prompt.

6. Type **P** for Print or **B** for Browse at the "Do you wish to:" prompt.

```
List Patients with which Register Status: A// [ENT] ACTIVE

Would you like to restrict the report by Patient age range? YES// NO

Enter Beginning Date of Date Range:  T-365  (APR 24, 2000)

Enter Ending Date of Date Range:  T  (APR 24, 2001)

     Select one of the following:

        P          PRINT Output
        B          BROWSE Output on Screen

Do you wish to: P// [ENT] PRINT Output
DEVICE: HOME//     Right Margin: 80//
```
Figure 3-24:Listing the % of Register Patients with Scheduled Asthma Visit report

```
LAB                              Apr 24, 2001                      Page 1
                              DEMO HOSPITAL/CLINIC

     ***  % OF PERSISTENT PATIENTS SEEN FOR SCHEDULED ASTHMA VISIT  ***
                         Register Status: ACTIVE
                 Date Range: Apr 24, 2000 - Apr 24, 2001

-------------------------------------------------------------------------------
          Total Number of Patients:     11
     Total Number with Asthma Visit:      9
                                       81.8%

End of report.  Press ENTER:
```
Figure 3-25: Excerpt of the % of Register Patients with Scheduled Asthma Visit report

3.4.3   % Patients using Controller/Inhaled Steroids (CM)

According to NBLI guidelines, patients with persistent asthma need to be on controller medication, and those with moderate or severe persistent asthma (severity 2, 3 or 4) need to be on inhaled steroids and/or controllers, based on the BAT ASTHMA INHALED STEROIDS or BAT ASTHMA CONTROLLER MEDS taxonomies. This report enables providers to track their percentage of patients using these appropriate controller medications and/or inhaled steroids in order to note any progress over time or particular need for improvement.

This report reviews the register for:

- persistent patients (severity 2, 3 or 4) who have had at least one fill of controller medications (BAT ASTHMA CONTROLLER MEDS taxonomy);

  OR

- persistent patients (severity 3 or 4) who have had at least one fill of inhaled steroids (BAT ASTHMA INHALED STEROIDS taxonomy) during a user defined time range.

For example, if you use Vanceril with 200 actuations and the patient is using 4-10 puffs per day, they should be going through 1-3 inhalers in a three-month period. You can modify the time period to make the search lenient (1 refill per year) to tight (1 refill per 2 months).

This report displays two sets of statistics:

- the total number of patients with severity 2, 3, or 4 reviewed during a user-defined date range, the number with any controller medications filled, and the percentage; and

- the total number of patients with severity 3 or 4 reviewed during a user-defined date range, the number with any inhaled steroid medications filled, and the percentage.

To run the % Patients using controller/inhaled steroids report:

1. Type CM at the "Select Quality Improvement Reports option:" prompt

2. Type the letter representing the Status of the patient list you want to review at the "List Patients with which Status:" prompt. The default is A Active.

3. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age.

4. Type an age range (#-#) at the "Enter an Age Range:" prompt. For example, 2-18.

5. Type date for the beginning of the date range you want to review at the "Enter Beginning Date of Date Range:" prompt.

6. Type date for the end of the date range at the "Enter Ending Date of Date Range:" prompt.

7. Type P for Print or B for Browse at the "Do you wish to:" prompt.

```
List Patients with which Register Status: A// ACTIVE

Would you like to restrict the report by Patient age range? YES// NO

Enter Beginning Date of Date Range:  T-365  (APR 24, 2000)

Enter Ending Date of Date Range:  T  (APR 24, 2001)

     Select one of the following:

        P          PRINT Output
        B          BROWSE Output on Screen

Do you wish to: P// [ENT] RINT Output
DEVICE: HOME// [ENT]    Right Margin: 80//
```
Figure 3-26: Listing of the %, Patients using Controller/Inhaled Steroids report

```
LAB                              Apr 24, 2001                       Page 1
                                 DEMO HOSPITAL/CLINIC


    ***  % OF PERSISTENT PATIENTS AND CONTROLLER/INHALED STEROID USE  ***
                          Register Status: ACTIVE
                 Date Range: Apr 24, 2000 - Apr 24, 2001
--------------------------------------------------------------------------


Controller Med Use
  Total Number of Patients (sev 2,3,4):      11
 Total Number with Controller Med Fill:       2
                                            18.2%


Inhaled Steroid Med Use
Total Number of Patients (severity 3,4):     10
 Total Number with Inhaled Steroid Fill:      9
                                            90.0%


End of report.  Press ENTER:
```
Figure 3-27: Excerpt of the % Patients using Controller/Inhaled Steroids report

3.4.4   % of Patients 6 and older with Spirometry (SP)

This report enables providers to track their percentage of patients aged six years and older in order to note any progress over time or particular need for improvement. Patients less than 6 years old cannot reliably perform spirometry.

This report displays the total number of patients reviewed during a user defined date range, the number with spirometry documented, and the percentage. The patients are broken down into three age ranges: 6-8, 9-18, and over 18. The patient must be 6 years old at the beginning of the date range.

1. Type SP at the "Select Quality Improvement Reports option:" prompt

2. Type the letter representing the Status of the patient list you want to review at the "List Patients with which Status:" prompt. The default is A Active.

3. Type Y or N at the "Would you like to restrict the report by Patient age range?" prompt. Typing Y for Yes will allow you to restrict the list by age. Type an age range (#-#) at the "Enter an Age Range" prompt. For example, 2-18.

4. Type date for the beginning of the date range you want to review at the "Enter Beginning Date of Date Range:" prompt.

5. Type date for the end of the date range at the "Enter Ending Date of Date Range:" prompt.

6. Type P for Print or B for Browse at the "Do you wish to:" prompt.

```
List Patients with which Register Status: A// A ACTIVE

Enter Beginning Date of Date Range:  T-365  (APR 24, 2000)

Enter Ending Date of Date Range:  T  (APR 24, 2001)

     Select one of the following:

        P          PRINT Output
        B          BROWSE Output on Screen

Do you wish to: P// [ENT] P PRINT Output
DEVICE: HOME//     Right Margin: 80//
```

Figure 3-28: Listing the % of Patients 6 and older with Spirometry report

```
LAB                              Apr 24, 2001                        Page 1
                             DEMO HOSPITAL/CLINIC


      ***  % OF PERSISTENT PATIENTS > 6 YEARS OLD WITH SPIROMETRY  ***
                           Register Status: ACTIVE
                  Date Range: Apr 24, 2000 - Apr 24, 2001


-------------------------------------------------------------------------------
                                  6-8 YRS      9-18 YRS     OVER 18 YRS

Number of Patients                   3            8             0
Number with Spirometry               3            6             0
                                  100.0%        75.0%

End of report.
```

Figure 3-29: Excerpt of the % of Patients 6 and older with Spirometry report

3.5   Asthma Letters Menu (LTR)

One asthma visit reminder letter is included with the Asthma Register System. This letter can be printed for one patient or for a selected set of patients.   Individual patients do not have to be on the Register in order to produce a letter.

```
                                                 Date: Nov 06, 2002

]
WHEELWRIGHT,LEON
P.O. BOX 3355
SAFFORD, ARIZONA  88776




Dear LEON WHEELWRIGHT,


According to our records your last visit to the clinic for your asthma was
on Nov 06, 2002.

As part of our caring for you and your asthma, we feel it is important to
see you at least twice per year.  Our records show that we haven't seen you
for at least six months, and we would like to invite you to make an
appointment in the next few months.

We will review how you are doing in general and perhaps test your lungs
with the spirometer.  If you have been using your peak flow meter, please
bring in some of those recent values.


Thank you very much and we look forward to seeing you.






Please call DEMO HOSP at 555-111-2200 to schedule
your appointment.
```

Figure 3-30: Sample asthma letter

1. At the main ARS menu, type REG at the "Select Asthma Register option:" prompt

2. Type LTR at the "Register Management option:" prompt to open to Letters menu. The Letters menu will be displayed.

```
                        *************************
                        **   Asthma Register    **
                        ** Register Management   **
                        *************************
                               Version 1.0

                               DEMO HOSP


   UP      Update or Add a Patient to the Register
   AI      Activate/Inactivate a Patient on Register
   RPT     Asthma Reports Menu ...
   LTR     Asthma Letters ...

Select Register Management Option: LTR
```
Figure 3-31: Accessing the Asthma Letters option

3.5.1   Printing a Letter for One Patient (OP)

You can produce a letter for one patient only by using the OP menu option. The patient does not have to be on the Register.

1. Type OP at the "Select Asthma Letters Option:" prompt.

```
                        *************************
                        **   Asthma Register    **
                        **    Letters Menu      **
                        *************************
                               Version 1.0

                               DEMO HOSP


   OP      Print Asthma Visit Reminder Letter for One Patient
   AP      Print Asthma Reminder Letter for Register Patients
   EL      Edit Text of Letter

Select Asthma Letters Option: OP
```
Figure 3-32: Printing a letter for one patient (step 1)

2. Type in the patient's name or chart number at the "Select Patient Name:" prompt. The name, gender, birth date and chart number will display on the screen. If there are multiple patients who match the name you typed, a list of patients will be displayed. Type the corresponding number at the "Choose" prompt. The date of the patient's last visit with an asthma diagnosis will be displayed.

3. Type Y or N at the "Do you still want to print a visit reminder letter?" prompt.

4. Type P (Print) or B (Browse). The Browse option will display the patient list on the screen.

```
                *** Print ASTHMA REMINDER LETTER for ONE PATIENT ***

This option will produce an Asthma Visit Reminder Letter that
can be sent to the patient.


Select PATIENT NAME: Duck, D
   1    DUCK,DAFFY                      M 01-10-1995 111111111    CR 33333
   2    DUCK,DAISY ANNE                 F 04-15-1974 222222222    CR 44444
CHOOSE 1-2: 1
  DUCK, DAFFY                           M 01-10-1995 111111111    CR 33333

DUCK,DAFFY's last visit with an Asthma diagnosis was
on Dec 27, 1995.

Do you still want to print a visit reminder letter? Y// [ENT] YES

     Select one of the following:

          P          PRINT Output
          B          BROWSE Output on Screen

Do you wish to: P// [ENT] PRINT Output
DEVICE: HOME//
```

Figure 3-33: Printing a letter for one patient (steps 2-4)

3.5.2   Printing a Letter for Selected Register Patients (AP)

By selecting this option, you will be presented with a list of all patients who are on
the asthma register with a status of either Active or Unreviewed whose last asthma-
related visit was six months or greater than today's date. An asthma visit is defined
when a modified asthma PCC form is used to capture and record asthma-related data
elements in PCC. You can select all patients on the list or multiple patients to send a
letter to.

1. Type AP at the "Select Asthma Letters option:" prompt. A description of the
   search is displayed on the screen.

```
                    *************************
                    **   Asthma Register    **
                    **     Letters Menu      **
                    *************************
                           Version 1.0

                            DEMO HOSP


   OP     Print Asthma Visit Reminder Letter for One Patient
   AP     Print Asthma Reminder Letter for Register Patients
   EL     Edit Text of Letter

Select Asthma Letters Option: AP
```

Figure 3-34: Printing the Asthma Reminder letter for Register Patients (step 1)

2. Type Y or N at the "Do you wish to continue:" prompt.

```
   *** Print ASTHMA REMINDER LETTER for Patients on the Asthma Register ***

This option will produce an Asthma Visit Reminder Letter for patients on the
asthma register.

You will be presented with a list of all patients on the register with an
active or unreviewed status whose last asthma visit (visit on which
asthma data elements were entered) was over 6 months ago.

You can then choose to print a letter for all of these patients or choose
selected patients for whom a letter should be printed.


Do you wish to continue? Y//
```
Figure 3-35: Printing the Asthma Reminder letter for Register Patients (step 2)

A list of all patients on the register who have not been seen in 180 days will be displayed (Figure 3-37), with the date of their last visit. Each patient will have a selection number at the left side of the screen.

3. To select all patients, type AP at the "Select Action:" prompt.

    To select one or more patients, type SP. Type the number(s) corresponding to the patients you want to select at the "Which Patients?:" prompt.

    You can type ranges (e.g., 1-4) or a series of numbers (e.g., 1, 4, 5, 10) or a combination of numbers and ranges (e.g., 1-4, 10, 12, 15). After pressing the Enter key, the names you selected will have an asterisk at the left side.

    To deselect any patient, type DS at the "Select Action:" prompt. Then type the number corresponding to the patient at the "Which Patients?:" prompt.

```
    PATIENT NAME                         HRN     DOB              LAST ASTHMA
VISIT
_____
*1)   JAGGER,MICK                        22222    Jan 01, 1935    Apr 23, 2001
2)    JACKSON,JANET                       33333   Feb 08, 1919
```
Figure 3-36: Printing the Asthma Reminder letter for Register Patients (step 3)

4. After you have selected the patients, type Q at the "Select Action" prompt.

5. Type P (Print) or B(Browse) at the "Do you wish to" prompt. If you select Print, you will be prompted to enter the device to print to.

```
Asthma Reminder Letter      Nov 06, 2002 10:33:29        Page:    1 of    9
Patient List for Reminder Letter
* indicates the patient has been selected

    PATIENT NAME                       HRN     DOB              LAST ASTHMA VISIT
_____
*1)   JONES,JENNY                      22222   Jan 01, 1935   Apr 23, 2001
2)   REAGAN,RONALD                     33333   Feb 08, 1919
3)   RIVETER,ROSETTA                   55555   Jan 25, 1951   Nov 06, 1996
*4)   SQUIRREL,ROCKET J                44444   Mar 21, 1931
*5)   GRANT,HUGH                       66666   Jan 01, 1940
6)   DOE,JANE ANNE                     77777   Feb 27, 1937   Nov 15, 1996
7)   CARTER,JIMMY BOB                  88888   May 13, 1957
8)   KENNEDY,ROBERTA                   99908   Dec 24, 1929
9)   GREENJEANS,ALEXANDER              101010  Jun 04, 1922   Apr 07, 1996
*10)  KETCHUP,PENNY                    111111  Mar 21, 1955   Nov 27, 1996
11)   FLINTSTONE,WILMA                 121212  Feb 14, 1955   Jan 06, 1997
12)   LINCOLN,LANDO                    131313  Jan 01, 1930
13)   STARLING,CLARICE                 444444  Dec 15, 1964
14)   GRAFTON,SUSAN                    434343  May 10, 1952   Jan 10, 1994
_____
+          Enter ?? for more actions
_____
SP   Select Patient(s)               DS   De Select Patient
AP   Select All Patients             Q    Quit
Select Action:+//Q

      Select one of the following:

         P          PRINT Output
         B          BROWSE Output on Screen

Do you wish to: P//
```

Figure 3-37: Printing the Asthma Reminder letter for Register Patients (steps 4-5)

3.5.3   Editing the Text of the Letter (EL)

The Asthma Register System provides the ability to edit the main text of the letter by selecting the Edit Text of Letter (EL) option. EL uses the RPMS word processor. Instructions on how use this word processor to edit the text of the letter can be obtained from your information systems staff, or see section 9.0 Appendix D for a list of word processing commands.

Edits made to the letter will be permanent, until another user makes additional changes.

1. Type EL at the "Select Asthma Letters option:" prompt.

```
                    *************************
                    **   Asthma Register    **
                    **    Letters Menu      **
                    *************************
                           Version 1.0

                            DEMO HOSP

  OP     Print Asthma Visit Reminder Letter for One Patient
  AP     Print Asthma Reminder Letter for Register Patients
  EL     Edit Text of Letter

Select Asthma Letters Option: El  Edit Text of Letter
```

Figure 3-38: Editing the text of the letter(step 1)

2. Type Asthma Visit Reminder at the "Select Asthma Letters:" prompt, or type ? to see your options.

> **Note**: Currently there is only one reminder letter. Additional letters may be added in the future at user request.

The text that will be available for editing is displayed.

3. Type Y or N at the "Edit?" prompt.

To see the various RPMS word processing commands, press the F1 key then H. See Appendix D for a list of word processing commands.

4. Press the F1 key then E to exit from word processing.

> **Note**: Edits to the letter are permanent, not just for this session.

5. Press the Enter key at the "Select Asthma Letters:" prompt to return to the Letters menu.

```
Select ASTHMA LETTERS:    ASTHMA VISIT REMINDER
LETTER TEXT:. . .
       . . .
for at least six months, and we would like to invite you to make an
appointment in the next few months.

We will review how you are doing in general and perhaps test your lungs
with the spirometer.  If you have been using your peak flow meter, please
bring in some of those recent values.

Thank you very much and we look forward to seeing you.

  Edit? NO// Y  YES

=[ WRAP ]==[ INSERT ]===========< LETTER TEXT >===========[ <PF1>H=Help ]====
As part of our caring for you and your asthma, we feel it is important to
you at least twice per year.  Our records show that we haven't seen you
for at least nine months, and we would like to invite you to make an
appointment as soon as possible.

We will review how you are doing in general and perhaps test your lungs
with the spirometer.  If you have been using your peak flow meter, please
bring in some of those recent values.


Thank you very much and we look forward to seeing you.

<======T=======T=======T======T======T=======T======T=======T=======T=>=====T

Select ASTHMA LETTERS: [Enter]
```

Figure 3-39: Editing the text of the letter (steps 2-5)

4.0   Patient Management (PAT)

In addition to providing tools for managing groups of patients, ARS also gives providers patient-specific health summaries and asthma management forms.

- Type PAT at the "Select Asthma Register Option:" prompt on the ARS main menu. The Patient Management menu will display.

```
                      *************************
                      **    Asthma Register    **
                      *************************
                             Version 1.0

                             DEMO HOSPITAL


  PAT     Patient Management ...
  REG     Asthma Register ...
  SET     Asthma System Setup ...

Select Asthma Register Option: PAT
```
Figure 4-1: Accessing the Patient Management option

```
                      *****************************
                      **      Asthma Register      **
                      **    Patient Management    **
                      *****************************
                             Version 1.0

                             DEMO HOSPITAL

  VS      Visit Summary
  AP      Action Plan Form
  SMP     Daily Self-Management Plan Form
  BHS     Browse Health Summary
  HS      Generate Health Summary

Select Patient Management Option:
```
Figure 4-2: Viewing the Patient Management menu

4.1   Visit Summary

A summary sheet of visit and medication history data for any patient on the Register can be printed or reviewed on the computer screen.

1. Type VS at the "Select Patient Management Option:" prompt.

2. Type the name of the patient in last name, first name format or the chart number at the "Select Asthma Register Patient:" prompt. Type ?? to see a list of available patients.

3. Select P (Print) or B (Browse). Print is the default.

If you select Print, you may need to check with your Site Manager or other technology staff to determine what needs to be typed at the "Device: Home//" prompt.

```
                        **************************
                        **   Asthma Register    **
                        **************************
                              Version 1.0

                                DEMO HOSP


   VS      Asthma Visit Summary for a Patient
   AP      Print Asthma Action Plan Form
   SMP     Print Asthma Daily Self-Management Plan Form
   BHS     Browse Health Summary
   HS      Generate Health Summary

Select Asthma Register Option: VS  Asthma Visit Summary for a Patient



             *** List Asthma Patients Asthma Visit History ***

This report will print the Asthma Visit History and Asthma Medication History
for a patient on the Asthma Register.

Select ASTHMA REGISTER PATIENT: DUCK, DAISY ANNE
                                     F 6-21-1993 1234567    CR 12121
     Select one of the following:


          P          PRINT Output
          B          BROWSE Output on Screen

Do you wish to: P//
DEVICE: HOME//(see your site manager for information on which printer to use)
```
Figure 4-3: Printing a Visit Summary

```
***** CONFIDENTIAL PATIENT INFORMATION -- Apr 24, 2001@06:45:49 [LAB ] ******

ASTHMA PATIENT CARE SUMMARY                      Report Date:  Apr 24, 2001

DUCK,DAISY ANNE                    HRN: 1234567
DOB: Jun 21, 1993  Age: 7  F       Asthma Register Status: ACTIVE
Problem List: SE4  ASTHMA,MOD PERSISTANT


Last Asthma Visit: Feb 26, 2001   Calculated Next Due: Aug 25, 2001


Personal Best Peak Flow   180 liters/minute on Feb 26, 2001


Peak Flow Zones     Green (80-100%)    144-180 liters/minute
                    Yellow (50-79%)     90-142 liters/minute
                    Red (< 50%)        <  90   liters/minute


Severity  3-MODERATE PERSISTENT  documented on Feb 26, 2001


Date of Last Asthma Management Plan:  Feb 26, 2001


Triggers (Last Documented Value)
      ETS                  NOT DOCMENTED, NEEDS TO BE REVIEWED
      PARTICULATE MATTER  NOT DOCMENTED, NEEDS TO BE REVIEWED
      DUST MITE           NO     Feb 26, 2001


Last 5 Asthma Visits - LUNG FUNCTION
  DATE             FEV 1                FEF 25-75        PEF/Best PF
----------------------------------------------------------------------
  Feb 26, 2001    97 % predicted    83 % predicted    180 liters/minute


Number of Reliever Fills in past 12 months:  5
  -------------ASTHMA MEDICATIONS (LAST 10 PRESCRIPTIONS FILLED)------------
2/26/01    FLUTICASONE 220MCG (FLOVENT) 13GM #16 (30 days) -- Ran out
           03/28/01
           INHALE 2 PUFF TWICE DAILY FOR 14 DAYS ~  11 refills left.
2/26/01    PREDNISONE 20MG #10 (5 days) -- Ran out 3/3/01
           TAKE 2 TABLETS DAILY FOR 5 DAYS FOR BREATHING  11 refills left.
2/7/01     ALBUTEROL INHALER  #34 (30 days) -- Ran out 3/9/01
           INHALE 2 PUFFS EVERY 2 TO 4 HOURS IF NEEDED FOR SHORT~  9 refills
           left.
11/8/00    ALBUTEROL INHALER  #34 (30 days) -- Ran out 12/8/00
           INHALE 2 PUFFS EVERY 2 TO 4 HOURS IF NEEDED FOR SHORT~  9 refills
           left.
8/29/00    ALBUTEROL INHALER  #34 (30 days) -- Ran out 9/28/00
           NHALE 2 PUFFS EVERY 2 TO 4 HOURS IF NEEDED FOR SHORT~  9 refills
           left.
8/25/00    BECLOMETHASONE INHALER (VANCERIL)  #34 (30 days) -- Ran out
           9/24/00
           INHALE 6 PUFFS 2 TIMES EACH DAY FOR BREATHING  8 refills left.
6/16/00    PREDNISONE 20MG #5 (5 days) -- Ran out 6/21/00
           TAKE 1 TABLET DAILY FOR 5 DAYS FOR BREATHING  11 refills left.
6/16/00    ALBUTEROL SOLUTION 5MG/ML FOR INHALATION #20 (30 days) -- Ran out
           7/16/00
           MIX 0.5 MLS WITH 2.5ML SODIUM CHLORIDE SOLUTION AND USE 4 TIMES A
           DAY PR~  11 refills left.
```

Figure 4-4: Excerpt of the Visit Summary output

4.2   Daily Self-Management Form

Two forms are provided in the Asthma Register System for providers to use with a patient's Asthma Management plan: the Daily Self-Management plan and the Action plan (see section 12.3).

1. Type SMP at the "Select Asthma Register Option" prompt.

2. The screen will display two form options: P to print a customized form with the patient's name or G a generic form.

3. Type P or G at the "Do you want to print the patient's name or a generic form:" prompt.

4. Type the patient's name in last name, first name format at the Select Patient Name:" prompt.

5. Type P (Print) or B (Browse) at the "Do you wish to:" prompt.

```
                         *************************
                         **   Asthma Register    **
                         *************************
                               Version 1.0

                                DEMO HOSP


   VS      Asthma Visit Summary for a Patient
   AP      Print Asthma Action Plan Form
   SMP     Print Asthma Daily Self-Management Plan Form
   BHS     Browse Health Summary
   HS      Generate Health Summary

Select Asthma Register Option: SMP  Print Asthma Daily Self-Management Plan
Form


             *** Print ASTHMA DAILY SELF MANAGEMENT PLAN FORM ***

This option will produce an Asthma Daily Self-Management Plan form that
can be given to the patient.

     Select one of the following:


          P          Print Patient's Name on Form (Customized)
          G          Generic Form

Do you want to print the patient's name or a generic form: P// rint Pati
ent's Name on Form

Select PATIENT NAME: JACKSON,JANET   F 02-11-1985 111111111  DEMO 101939

     Select one of the following:


          P          PRINT Output
          B          BROWSE Output on Screen

Do you wish to: P// RINT Output
DEVICE: HOME//
```

Figure 4-5: Printing the Daily Self- Management Form

```
                    ASTHMA DAILY SELF-MANAGEMENT PLAN

ASTHMA SELF-MANAGEMENT PLAN FOR JACKSON,JANET

YOUR TREATMENT GOALS
Be free from severe symptoms day and night, including sleeping through the
night
Have the best possible lung function
Be able to participate fully in any activities of your choice
Not miss work or school because of asthma symptoms
Not need emergency visits or hospitalizations for asthma
Use asthma medications to control asthma with as few side effects as
possible

Add personal goals here:

_____

_____



YOUR DAILY MEDICATIONS (Take these everyday, even if your feel fine):

Daily Medication        Now Much to Take        When to Take It

_____

_____

_____

_____


RECORD DAILY SELF-MONITORING ACTIONS (and bring to your doctor visit):

Peak Flow:  Bring these records to your next appointment with your doctor.

Symptoms:  Note if you had asthma symptoms (shortness of breath, wheezing,
chest tightness, or cough) and rate how severe they were during the day or
night: mild, moderate, severe.

Use of your quick-relief inhaler (bronchodilator):  Keep a record of the
numbers of puffs you needed to use each day or night to control your
symptoms.

Actual use of daily medications

Activity restriction
```

Figure 4-6: Sample Self Management plan

4.3 Action Plan Form

The Asthma Action plan form provides specific information and instructions from the provider to a patient.

1. Type **AP** at the "Select Asthma Register Option:" prompt.

2. The screen will display two form options: P to print a customized form with the patient's name or G a generic form. Type **P** or **G** at the "Do you want to print the patient's name or a generic form:" prompt.

3. Type the patient's name in last name, first name format at the "Select Patient Name:" prompt.

4. Type **P** (Print) or **B** (Browse) at the "Do you wish to:" prompt.

```
                *** Print ASTHMA ACTION PLAN FORM ***

This option will produce an Asthma Action Plan form that
can be given to the patient.

     Select one of the following:

          P          Print Patient's Name on Form
          G          Generic Form

Do you want to print the patient's name or a generic form: P// rint Pati
ent's Name on Form

Select PATIENT NAME: JACKSON,JANET      F 02-11-1985 111111111  DEMO 101939

     Select one of the following:

          P          PRINT Output
          B          BROWSE Output on Screen

Do you wish to: P// RINT Output
DEVICE: HOME//
```

Figure 4-7: Printing the action plan form

```
                          ASTHMA ACTION PLAN

NAME:   JACKSON,JANET                           DATE: Nov 03, 2002


a.  Your Goal Zone is _____ (80 to 100 percent of your personal best).
    Breathing is good with no cough, wheeze, or chest tightness during
    work, school, exercise, or play.
    Continue with your visual medicine, if peak flow is greater than
    _____.
----------------------------------------------------------------------------
b.  Your Zone is _____ (50 to less than 80 percent of your
    personal best).
    CAUTION!
    Asthma symptoms are present (cough, wheeze, and chest tightness).
    If your peak flow number drops below _____ or you notice any of the
    following:
                need to use your puffer more often
                more cough & wheeze when your waken up
                waken up at night with cough or wheezing
                shortness or breath
    Do this, if your peak flow  is lower than_____:
        Take _____ puffs of your puffer.
        Repeat _____ times
        Take _____ puffs of _____ (anti inflammatory)
         _____times/day.
    Start the pills that your doctor gave you: _____
        Take _____mg of _____ every a.m. _____ p.m._____
        Call your doctor (phone)_____ or go to the
         emergency room_____
----------------------------------------------------------------------------
c.  Your Worry Zone is_____ (50 percent or less of your personal
    best).
    DANGER!
    If your peak flow number drops below _____ or you continue to get
    worse after increasing treatment according to the directions above, do
    the following:
        Take _____ puffs of your puffer.
        Repeat _____ times.
        Start the pills that your doctor gave you:
        Call your doctor now (phone _____). If you cannot,
        go directly to the emergency room (phone:   _____).

     Call 911 if you can not get in touch with your doctor or you cannot
     go to the emergency room.
----------------------------------------------------------------------------
AT ANY TIME, CALL YOUR DOCTOR IF:
Asthma symptoms worsen while you are taking medicine.
Your peak flow number is or goes below _____ in spite of following above
plan.

Physician Signature _____ Date:_____


Patient's/Family Member's Signature:_____
                             Date:_____
```

Figure 4-8: Sample Action Plan form

4.4   Health Summaries

The routine PCC Health Summaries functions are included as menu options with the Asthma Register System for provider ease of use. The Health Summary provides a detailed review of a patient's history, not just related to asthma. A Health Summary can be produced for any patient, not just those in the Asthma Register.

4.4.1   Displaying the Health Summary on Screen (Browsing)

To display any patient's Health Summary on the computer screen for review, use the BHS Browse Health Summary menu option.

1. Type BHS at the "Select Patient Management option" prompt.

2. Type the name of the Health Summary you want to use at the "Select health summary type" prompt. The default is Adult Regular. If you do not know the different health summary types that are available at your site, type ?? for a list.

3. Type the name of the patient in last name, first name format at the "Select patient" prompt. If multiple patients meet the name you typed, a list will display. Type the number corresponding to the appropriate patient at the "Choose" prompt.

4. The screen will display the message …`Excuse me, Hold on`… while it creates the Health Summary and displays the first section on the screen. This may take a few seconds

5. To navigate through several screens of the Health Summary, use the following options.

+	Next Screen	**FS**	First Screen	**SL**	Search List
-	Previous Screen	**LS**	Last Screen	**ADPL**	Auto Display (On/Off)
UP	Up a Line	**GO**	Go to Page	**Q**	Quit
DN	Down a Line	**RD**	Re Display Screen		
>	Shift View to Right	**PS**	Print Screen		
<	Shift View to Left	**PL**	Print List		

6. Type Q to Quit and return to the Patient Management menu.

```
                        *****************************
                        **    Asthma Register     **
                        **   Patient Management    **
                        *****************************
                              Version 1.0

                              DEMO HOSPITAL


   VS      Asthma Visit Summary for a Patient
   AP      Print Asthma Action Plan Form
   SMP     Print Asthma Daily Self-Management Plan Form
   BHS     Browse Health Summary
   HS      Generate Health Summary


Select Patient Management Option: bhs  Browse Health Summary
Select health summary type: ADULT REGULAR// ??

Choose from:
   ADULT REGULAR
   ALCOHOL
   BMI
   CHR
   DENTAL
   DIABETES STANDARD
   IMMUNIZATION
   INPATIENT
   INSURANCE
   MEASUREMENT
   MEDICATION
   MEDSS
   MENTAL HEALTH/SOCIAL SERVICES
   OPTOMETRY
   OUPT
   PATIENT MERGE (COMPLETE)
   PEDIATRIC
   PODIATRY
   POV
   PROBLEM LIST
   SAMPLE
   SKINTEST
   SUBSTANCE ABUSE


Select health summary type: ADULT REGULAR//
Select patient: driftwood,c
   1    DRIFTWOOD,CARMEN M             F 12-20-1955 111111111   CR 99999
   2    DRIFTWOOD,LUCKY ANN            F 08-04-1972 333333333   CR 99009
   3    DRIFTWOOD,CHARLES              M 11-21-1963 555555555   CR 99461
   4    DRIFTWOOD,CLARA LEE            F 09-04-1988 444444444   CR 99227
   5    DRIFTWOOD,QUENTIN CARL         M 07-01-1946 888888888   CR 99639
ENTER '^' TO STOP, OR
CHOOSE 1-5: 1
  DRIFTWOOD,CARMEN M                   F 12-20-1935 111111111   CR 99999
Patient's chart number is 99999

...EXCUSE ME, HOLD ON...
```

*Figure 4-9: **Browsing** a patient's Health Summary*

4.4.2   Print Health Summary

To print the Health Summary, use the Generate Health Summary (HS) menu option.

1. Type **HS** at the "Select Patient Management option" prompt.

2. Type the health summary type. The default is Adult Regular.

3. Type the patient's name at the "Select Patient:" prompt.

4. Accept the print device default or enter your printer name. You may need to ask your Site Manager or other information technology staff for this information.

```
* * *   H E A L T H   S U M M A R Y   P R O G R A M   (2.0)   * * *


Select health summary type: ADULT REGULAR//
Select patient: driftwood, carmen

  DRIFTWOOD,CARMEN M                         F 12-20-1935 111111111    CR 99999
Patient's chart number is 99999

DEVICE: HOME//
```
Figure 4-10: Printing a health summary.

5.0   Appendix A: Medication List with NDCs

5.1   Asthma Reliever Medications

ALBUTEROL

0.83% INHALATION SOLUTION   RE102

GENERIC		PROVENTIL		VENTOLIN	
VA	N/C	VA	N/C	VA	N/C
00487950101	49502069703	00085180601	00085020901	00173041900	
49502069733	59930151701				
59930151702	00487950125				
49502069760					
00487950160					
00472083160					
00603100540					
00472083123					
00487950103					
00172640544					
00172640549					
00472083130					

INHALER RE102

GENERIC		PROVENTIL		VENTOLIN	
VA	N/C	VA	N/C	VA	N/C
00172439018	52555059417	00085061402		00173032188	
59930156001				00173032198	00173046300
62037079444					
00904507834					
50111080131					
59772617502					
49502033317					
59930156002					

4MG TABLETS RE102

GENERIC		PROVENTIL		VOLMAX	
VA	N/C	VA	N/C	VA	N/C
51079065820	00781167201		00085043104		00451039860
	00378057205		00085043102		
	00677136001		00085043103		
	59930153001				
	00378057201				

5MG/ML SOLUTION RE102

GENERIC		PROVENTIL	
VA	N/C	VA	N/C

2MG TABS RE103

GENERIC	
VA	N/C
51079065720	59930152001
	00677135901
	00378025501
	00378025505

2MG/5ML SYR RE103

GENERIC	
VA	N/C
00472082516	59930151005
00603100758	
00093066116	

8MG TABS RE103

VOLMAX	
VA	N/C
00451039950	

HFA INHALER RE102

00904765855	59930151504		00085020802
00603100643	59930164702		
00182601465	50383074120		
49502010501			
00487990130			
24208034720			
00472083220			

PROVENTIL		VENTOLIN	
VA	N/C	VA	N/C
00085113201		00173068200	

IPRATROPIUM RE105			
INHL 0.02% SOL			
GENERIC		ATROVENT	
VA	N/C	VA	N/C
00054840221		00597008062	
00054840211			
49502068503			
00597008062			
49502068533			
00487980101			
00472075160			
00172640744			
00172640749			
00472075123			
00472075130			
00487980130			
00487980160			
00054840213			
INHALER			
GENERIC		ATROVENT	
VA	N/C	VA	N/C
		00597008214	00597008218

METAPROTERENOL			
0.4% SOL RE102			
GENERIC		ALUPENT	
VA	N/C	VA	N/C
49502067803		00597007862	
0.6% SOL RE102			
VA	N/C	VA	N/C
49502067603		00597006962	
INHALER RE102			
GENERIC		ALUPENT	
VA	N/C	VA	N/C
		00597007017	
10MG/5ML SYRUP RE103			
GENERIC		ALUPENT	
VA	N/C	VA	N/C
00603142258	60505580209		
	60432065016		
5% INH SOL RE102			
GENERIC		ALUPENT	
VA	N/C	VA	N/C
60432067301	60432067630		
10MG TABLET RE103			
GENERIC		ALUPENT	
VA	N/C	VA	N/C
49884025801			
20MG TABLET RE103			
GENERIC		ALUPENT	
VA	N/C	VA	N/C
49884025901			

TERBUTALINE RE103			
5MG TABLETS			
GENERIC		BRETHINE	
VA	N/C	VA	N/C
	0015262201	00028010501	
		00028010510	
2.5MG TABLETS			
GENERIC		BRETHINE	
VA	N/C	VA	N/C
	00115261101	00028007210	
		00028007201	
1MG/ML AMPULE			

RE109

IPRATROPIUM/ALBUTEROL
COMBIVENT
INHALER

VA	N/C

GENERIC		BRETHINE		00597001314	
VA	N/C	VA	N/C		
00028750701					
00028750723					

LEVALBUTEROL RE102

XOPENEX	
0.31MG/3ML	
VA	N/C
	63402051124
0.63MG/3ML	
VA	N/C
63402051224	
1.25MG/3ML	
VA	N/C
63402051324	

PIRBUTEROL RE102

MAXAIR	
AUTOHALER	
VA	N/C
00089081521	
INH	
VA	N/C
	00089079021

BITOLTEROL RE102

TORNALATE	
INH 0.2% SOL	
VA	N/C
	51479001201
	51479001103
	51479001106

THEOPHYLLINE RE104

100MG TABLETS

GENERIC		THEO 24		THEOCRON	
VA	N/C	VA	N/C	VA	N/C
00258358401	00182158989	50474010001			00456431001
00258358405					
00603594421					
00904161061					
17236033501					
00904161060					
00603594428					
50111048301					
50111048302					

300MG CAP

GENERIC	
VA	N/C
00603595221	

200MG ER TABS

GENERIC	
VA	N/C
258358310	00677084601
00258358301	
00603594528	
00603594532	
00603594521	
00603595121	
17236032401	
00904161160	
50111048203	
00904161161	
00182159089	
17236032401	
50111048201	
50111048202	
00258358305	

200MG CAPSULES

GENERIC		THEO 24		SLO-BID GYROC	
VA	N/C	VA	N/C	VA	N/C
00258363401		50474020060		00075020000	
		50474020050			
		00904161180			
		50474020001			

250MG TABLET

THEOLAR	
VA	N/C
	00089034410

125MG CAPS

GENERIC	
VA	N/C
00603595021	

300MG TABS

GENERIC		THEO 24		QUIBRON T/SR		THEODUR	
VA	N/C	VA	N/C	VA	N/C	VA	N/C

00258358101		50474030050		61570001901		00085058401	
00258358110		50474030001					
00258358105		50474030060		THEOCRON		QUIBRON T	
00603594632				VA	N/C	VA	N/C
00603594628				00456433001		61570002001	
00258362501							
00603594621							
17236032501							
17236032510							
00904161260							
00904161240							
00904161280							
00904161261							
00182140089							
50111045903							
5011045902							

400MG TABLETS					450MG TAB	
THEO 24		UNIPHYL			GENERIC	
VA	N/C	VA	N/C		VA	N/C
5047404001		00034700480			50111051801	
		00034700470				

600MG TABLET			80MG/15ML			100MG/18ML SOL	
UNIPHYL			GENERIC			GENERIC	
VA	N/C		VA	N/C		VA	N/C
00034700680			00472144416			00054884816	

80MG ELX	
ELIXOPHYL	
VA	N/C
00456064416	

5.2   Inhaled Corticosteroids

BECLOMETHASONE RE101							
40MCG INH		42MCG INH				80MCG INH	
QVAR		VANCERIL		BECLOVENT		QVAR	
VA	N/C	VA	N/C	VA	N/C	VA	N/C
59310017540		00085073604		00173046900		59310017780	

FLUTICASONE/SALMETEROL RE109				FLUTICASONE RE101			
ADVAIR DISKUS				FLOVENT		FLOVENT ROTADISK	
100/50				44MCG		50 MCG	
VA	N/C			VA	N/C	VA	N/C

00173069500		
00173069502		
250/50		
VA		N/C
00173069600		
00173069602		
500/50		
VA		N/C
00173069702		
0173069700		

00173049700		00173051100	
00173049100		100 MCG	
1110MCG		VA	N/C
VA	N/C	00173050900	
00173049400		250MCG	
00173049800		VA	N/C
220MCG		00173050400	
VA	N/C		
00173049500			
00173049900			

FLUNISOLIDE RE101			
AEROBID		AEROBID M	
VA	N/C	VA	N/C
00456067299		00456067099	

BUDESONIDE RE101	
PULMICORT	
TURBIHALER	
VA	N/C
00186091542	
.50MG/2ML RESPULES	
VA	N/C
00186198904	
.25MG/2ML RESPULES	
VA	N/C
00186198804	

TRIAMCINOLONE RE101	
AZMACORT	
VA	N/C
00075006037	

5.3   Asthma Controller Medications

CROMOLYN RE109			
20MG/2ML SOL			
GENERIC		INTAL	
VA	N/C	VA	N/C
49502068902			
49502068912			
00472075060			
00471075021			
00172640649			
00172640659			
00054816721			
00054816723			
20MG/2ML AMPULE			
GENERIC		INTAL	
VA	N/C	VA	N/C
	00070999606	00585067303	
		00585067302	
INHALER 200 MTR SPY			
GENERIC		INTAL	

HYDROCORTISONE HS051			
5MG TABLET			
GENERIC		CORTEF	
VA	N/C	VA	N/C
		00009002101	
10MG TABLET			
GENERIC		CORTEF	
VA	N/C	VA	N/C
00006061968		00009003101	
20MG TABLET			
GENERIC		CORTEF	
VA	N/C	VA	N/C
		00009004401	20
10MG/5ML SOLN			
GENERIC		CORTEF	
VA	N/C	VA	N/C
		00009014201	
100MG INJECTION			
GENERIC		SOLU-CORTEF	

VA	N/C	VA	N/C
		00585067501	

INHALER 112 MTR SPY			
GENERIC		INTAL	

VA	N/C	VA	N/C
		00585067502	

SALMETEROL RE102			
SEREVENT		SEREVENT DISKUS	
VA	N/C	VA	N/C
00173046500		00173052000	
00173046700		00173052100	
00173046400			

ZAFIRLUKAST RE108	
ACCOLATE	
10MG INST TABS	
VA	N/C
	00310040139
10MG TABLETS	
VA	N/C
00310040160	
20MG TABLETS	
VA	N/C
00310040239	
00310040260	

MONTELUKAST RE108	
SINGULAIR	
4MG CHEW TABS	
VA	N/C
00006071128	
00006071154	
00006071131	
5MG CHEW TABS	
VA	N/C
00006027554	
00006027531	
5MG TABLETS	
VA	N/C
00006011728	
10MG TABLETS	
VA	N/C
00006027528	
00006011754	

VA	N/C	VA	N/C
		00009090020	
		00009090013	
		00009082501	

250MG INJECTION			
GENERIC		SOLU-CORTEF	
VA	N/C	VA	N/C
		00009090908	

500MG INJECTION			
GENERIC		SOLU-CORTEF	
VA	N/C	VA	N/C
		00009091205	

1000MG INJECTION			
GENERIC		SOLU-CORTEF	
VA	N/C	VA	N/C
		00009092003	

NEDOCROMIL RE109	
TILADE	
VA	N/C
00585068502	

PREDNISOLONE HS051					
15MG/5ML SYRUP					
GENERIC		PRELONE		ORAPRED	
VA	N/C	VA	N/C	VA	N/C
00093611887	59196001024	00451150008		59439045502	
00093611816	59196001048	00451150016			
	00472021216				
	00378342548				
	59196001224				
5MG/5ML SYRUP					
GENERIC		PRELONE			
VA	N/C	VA	N/C		
58177091203	65580025101	00451220104			
	60432008904				
6.7MG/5ML SYRUP					
GENERIC		PEDIAPRED			
VA	N/C	VA	N/C		
		53014025001			

00006011731		

5MG TABLETS					
GENERIC					
VA	N/C				
00591505910					
00364021701					
00591505901					
00591505910					

METHYLPREDNISOLONE HS051							
4MG TABLETS				2MG TABLETS		8MG TABLETS	
GENERIC		MEDROL		MEDROL		MEDROL	
VA	N/C	VA	N/C	VA	N/C	VA	N/C
00603459315	00677183113	00009005605		00009004902		00009002201	
00603459321	00591079021	00009005602					
00904217560	00591079001	00009005603					
00527129607	00591079001	00009005604					
51285030102	00677183101						
00555030102	59762332702						
00555030138	59762332701						
51285030121	62269035124						
	62269035121						
	00182105003						
	00677183101						
	00677183113						
	00591079021						

16MG TABLETS		24MG TABLETS		32MG TABLETS	
MEDROL		MEDROL		MEDROL	
VA	N/C	VA	N/C	VA	N/C
00009007301		00009015501		00009017601	

METHYLPREDNISOLONE HS051							
40MG/ML INJ						80MG/ML INJ	
DEPO MEDROL		SOLU MEDROL		A-METHAPRED		DEPO MEDROL	
VA	N/C	VA	N/C	VA	N/C	VA	N/C
00009028052		00009011312				00009347501	
00009307303		00009011319				00009347503	
00009028002						00009030602	
00009028051						00009030612	
00009307301						20MG/ML INJ	
00009028003						DEPO MEDROL	

125MG INJ				VA	N/C
SOLU MEDROL		A-METHAPRED		00009027401	
VA	N/C	VA	N/C	500MG INJ	
00009019009		00074568502		SOLU MEDROL	

00009019016				
1000MG INJ				
SOLU MEDROL		A-METHAPRED		
VA	N/C	VA	N/C	
00009338901		00074563108		
00009069801				

VA	N/C
00009075801	
00009076502	
2000MG INJ	
SOLU MEDROL	
VA	N/C
00009079601	

PREDNISONE HS051					

5MG TABLET

GENERIC		DELTASONE		STERAPRED	
VA	N/C	VA	N/C	VA	N/C
00603533232	00054472825	00009004516			00259039148
00591505201	00054872425	00009004502			00259039021
00591505210	51079003220				
51079003219	00143147501				
00143147510	00677011701				
00591505201	53489013801				
00364021802	53489013810				
00182020189					

10MG TABLET

GENERIC		DELTASONE		STERAPRED	
VA	N/C	VA	N/C	VA	N/C
00591544205	00054872525	00009019301			00259036421
00603533332	00677069801	00009019302			
00591544210	00054473025				
00143147301	00054473029				
00603533321	53489013910				
00591544201	53489013901				
00591544210					
00591544205					
00591544201					
00182133489					
00440816620					
00143147310					

1MG TABLET

GENERIC	
VA	N/C
00054474125	
00054873925	
00054474131	

5MG DSPK

GENERIC	
VA	N/C
00603533215	
00603533231	
00603533321	

10MG DSPK

GENERIC	
VA	N/C
00603533315	
00603533331	

5MG/5ML SOLN

GENERIC	
VA	N/C
00054372263	
00054872216	
00054372250	

PREDNISONE HS051							

2.5MG TABLETS

GENERIC		DELTASONE	
VA	N/C	VA	N/C
00054874025	00054474225	00009003201	

20MG TABLETS

GENERIC		DELTASONE	
VA	N/C	VA	N/C

50MG TABLETS

GENERIC		DELTASONE	
VA	N/C	VA	N/C
	00054473325	00009038801	

5MG/1ML SOLN

GENERIC	
VA	N/C

00591544305	00054472925	00009016502			00054372144	
00591544310	00054872625	00009016501				
00603533421	00143147710					
51079002219	53489014001					
00591544305	53489014010					
00591544301						
00591544310						
00591544301						
00182108689						
00603533432						

6.0   Appendix B: Setting Up the New Community Taxonomy Using QMan

The community taxonomy can be easily set up using QMan. Below is a sample of creating this taxonomy. If you do not have access to QMan, see your RPMS site manager.

1. Choose the QMan menu option from the main menu.

2. Type Living Patients at the "What is the subject of your search?" prompt.

3. Type Community at the "Attribute of Living Patients:" prompt and press the Enter key.

4. Type the name(s) of the community/communities of interest at the "Enter Community:" and "Enter Another Community:" prompt. When you are finished, press the Enter key at a blank "Enter Another Community:" prompt.

5. Type Y at the "Want to save this community group for future use?" prompt.

6. Type a name for the taxonomy at the "Group Name:" prompt.

7. Verify your group name and type Y or N at the "Are you adding [group name]' as a new Taxonomy (the ###TH)? No//" prompt.

8. Type a short description of the taxonomy (if desired) at the "Taxonomy Brief Description:" prompt.

9. Type Y or N at the "Edit?" prompt. Type Y if you wish to edit the extended description for the taxonomy.

10. You will be returned to the QMan main menu. To exit that menu, type 0 (zero) at the prompt.

```
What is the subject of your search?  LIVING PATIENTS //  LIVING PATIENTS

   Subject of search: PATIENTS
      ALIVE TODAY   [SER = .06]

Attribute of LIVING PATIENTS: COMMUNITY

Enter COMMUNITY: TUCSON              PIMA     ARIZONA     077      0410077
Enter ANOTHER COMMUNITY: SELLS           PIMA     ARIZONA     067      0410067
Enter ANOTHER COMMUNITY: SAN XAVIER        PIMA     ARIZONA     065      0410065
Enter ANOTHER COMMUNITY:

The following have been selected =>

     SAN XAVIER
     SELLS
     TUCSON

Want to save this COMMUNITY group for future use? No// Y  (Yes)
Group name: CMI GPRA REPORT COMMUNITIES
  Are you adding 'CMI GPRA REPORT COMMUNITIES' as
    a new TAXONOMY (the 718TH)? No// Y  (Yes)

   TAXONOMY BRIEF DESCRIPTION: [ENT]
EXTENDED DESCRIPTION:
  No existing text
  Edit? NO// No [ENT]
Computing Search Efficiency
Rating................................................
.........

   Subject of search: PATIENTS
      ALIVE TODAY   [SER = .06]
      CURRENT COMMUNITY (SAN XAVIER/SELLS...)   [SER = 3.55]
```

Figure 6-1: Setting Up Community Taxonomy through QMan

7.0   Appendix C: PCC Form Overlay

The following page can be used as an overlay to provide to your PCC form printer, if you want to have pre-printed PCC forms.

Make sure the form lines up with your PCC form before sending to your printer.

Asthma Visit Form

Data Entry

"AST"

<u>Severity</u>

Mild Intermittent	☐	1
Mild Persistent	☐	2
Moderate Persistent	☐	3
Severe Persistent	☐	4

<u>Lung Function</u>

FEV_1 _____% predicted

FEF_{25-75} _____% predicted

PEF/Best PF _____ L/m

<u>Triggers</u>	Y	N
ETS	☐	☐
Particulate matter	☐	☐
Dust mite	☐	☐

<u>Asthma Plan</u>	Y	N
Made or Reviewed	☐	☐

Current Smoker	☐
Cur Smoker & Smokeless	☐
Prev Smoker	☐
Smoker in Home	☐
Exposure to ETS	☐
Current Smokeless	☐
Prev Smokeless	☐
Non-Tobacco User	☐
Smoke Free Home	☐

8.0   Appendix D: Routing MailMan Messages to Your Email

```
INPUT TO WHAT FILE: MAIL BOX//
EDIT WHICH FIELD: ALL// FORD??
EDIT WHICH FIELD: ALL// FORWARDING ADDRESS
THEN EDIT FIELD: LOCAL DELIVERY   LOCAL DELIVERY FLAG
THEN EDIT FIELD:

Select MAIL BOX NAME: HUGGINS,GEORGE
 ...OK? Yes//    (Yes)

FORWARDING ADDRESS: ?
Enter a valid NETWORK address (Lname,Fname@Domain).
FORWARDING ADDRESS: ??
```

Figure 8-1: Routing MailMan messages to your email (screen 1)

If this field is specified, it names an additional address to which this message is to be routed.

```
See the LOCAL DELIVERY FLAG.  If you do not edit this field to 'ON', then
mail will only be delivered to your FORWARDING ADDRESS and not to your
 Mailbox.FORWARDING ADDRESS:
LOCAL DELIVERY FLAG: ?
```

Figure 8-2: Routing MailMan messages to your email (screen 2)

If this field is not set to ON and the Forwarding Address field is filled in, then messages will only be forwarded, not delivered locally.

```
 Choose from:
 0   NO LOCAL DELIVERY
 1   LOCAL DELIVERY ON
LOCAL DELIVERY FLAG: ??
```

Figure 8-3: Routing MailMan messages to your email (screen 3)

If the Forwarding Address field has a non-nil value, then

If the local delivery flag cannot be evaluated as a positive number then messages will not be delivered to this Mailbox, but will only be delivered to the forwarding address.

```
 Choose from:
 0   NO LOCAL DELIVERY
 1   LOCAL DELIVERY ON
LOCAL DELIVERY FLAG:
```

Figure 8-4 Routing MailMan messages to your email (screen 4)

9.0 Appendix E: RPMS Word Processing Commands

Summary of Key Sequences

9.1 Navigation

Command	Keys
Incremental movement	Press the Arrow keys
One word left and right	Press Ctrl-J
One word right	Press Ctrl-L
Next tab stop to the right	Press Tab
Jump left and right	Press PF1 and the left arrow key
Jump right	Press PF1 and the right arrow key
Beginning of line	Press PF1,PF1, and the left arrow key
End of line	Press PF1, PF1, and the right arrow key
Screen up	Press PF1 and the up arrow or Press the Previous Screen key and the Next Screen key
Screen down	Press PF1 And the down arrow or Press the Previous Screen key and Page Down key
Top of document	Press PF1 and T
Bottom of the document	Press PF1 and B
Go to a specific location	Press PF1 and G

9.2 Exiting/Saving

Command	Keys
Exit and save text	Press PF1 and E
Quit without saving	Press PF1 and Q
Exit, save, and switch editors	Press PF1and A
Save without exiting	Press PF1 and S

9.3 Deleting

Command	Keys
Character before cursor	Press the Backspace key
Character at cursor	Press PF4 or the Remove key or the Delete key
From cursor to end of word	Press Ctrl-W
From cursor to end of line	Press PF1 and PF2
Entire line	Press PF1 and D

9.4   Settings/Modes

Command	Keys
Wrap/no wrap mode toggle	Press PF2
Insert/replace mode toggle	Press PF3
Set/clear tab stop	Press PF1 and Tab
Set left margin	Press PF1 and ,
Set right margin	Press PF1 and .
Status line toggle	Press PF1 and ?

9.5   Formatting

Command	Keys
Join current line to next line	Press PF1 and J
Reformat paragraph	Press PF1 and R

9.6   Finding

Command	Keys
Find text	Press PF1 and F or the Find key
Find next occurrence of text	Press PF1 and N
Find/Replace text	Press PF1 and P

9.7   Cutting/Copying/Pasting

Command	Keys
Select (Mark) text	Press PF1and M at beginning and end of text
Unselect (Unmark) text	Press PF1, PF1, and M
Delete selected text	Press the Delete Key or the Backspace key on selected text
Cut and save to buffer	Press PF1and X on selected text
Copy and save to buffer	Press PF1 and C on selected text
Paste from buffer	Press PF1 and V
Move text to another location	Press PF1 and X at new location
Copy text to another location	Press PF1 and C at the new location

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11.0 Contact Information

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