



RESOURCE AND PATIENT MANAGEMENT SYSTEM

PCC+ Encounter Form & Health Summary Well-Child Module (VEN)

User Manual

Version 2.6
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April 2007	Entire document	Added information for the Well-Child Module (WCM).
July 2007	Section 3	Added RPMS Specific Rules of Behavior as required by SAC
	Section 4	Added to Glossary
April 2008	Entire document	Changed date

PREFACE

This manual provides instructions for using the PCC+ Encounter Form and Health Summary (Well Child Module) version 2.6.

SECURITY

The reports generated by this package contain confidential patient information.

This package does not impose any additional legal requirements on the user, nor does it relieve the use of any legal requirements.

This package requires access and verification codes to access the system. These can be obtained from your supervisor or site manager. In addition, security keys are assigned with your access codes. They are required to perform certain options in the CPHAD application. Some options within the application are *locked*, that is, the user is unable to access the option without the appropriate security key.

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1.0 Background

From an information systems perspective, well-child care is one of the most common yet complex clinical services. Typically, the well-child record is captured on a series of special encounter forms—each form corresponding to a specific age from birth through adolescence. For example, several commonly-used record sets contain forms for 2 weeks, 2 months, 4 months, 6 months, 12 months, and so on. Each form in the set contains the age-specific guidelines for developmental screening, anticipatory guidance, examinations, immunizations, and nutritional counseling. Ideally, children are scheduled for appointments that correspond to the ages on the encounter forms. As a result, the guidelines and reminders on the form precisely match the age of the child. Experience tells us that this precision is rarely, if ever, achieved. When synchronization is lost, it becomes more difficult to maintain standardized care. What do we do with the child who comes in for 6 month check up at age 8 months? What about the infant who shows up on time for a 6 month check up, but received incomplete care on the 4 month visit. How do illness and unusual social circumstances affect the guidelines?

The objective of the Well-Child Module (WCM) is to use information technology to standardize well-child care throughout Indian Country. To the greatest extent possible the information system encourages compliance with a set of national guidelines and standards. Current guidelines are provided by a group of senior pediatricians who serve Indian communities. In general, the guidelines are taken from nationally-recognized sources of child-care standards including: Bright Futures, the American Academy of Pediatrics, the Ages and Stages Child Monitoring Program, and the Indian Health Service (IHS) Patient Education Advisory Group.

The WCM leverages the power of information technology and automated decision support in two specific ways to:

- Capture and encapsulate a complex data set that is collected piecemeal over an extended period of time
- Customize the data collection instrument precisely for each specific well-child visit.

The WCM is intended to span the entire spectrum of RPMS technology including traditional PCC, PCC+, and the Electronic Health Record (EHR). In the near future, WCM components will be released for the EHR. These components will provide the same functionality as the PCC/PCC+ components described in this document. In addition, hybrid components will be available that enable providers to enter well-child information directly into the RPMS through a simple desktop application—without installing the EHR. The infrastructure to support these Graphical User Interface (GUI) components is already present in the WCM.

The WCM is part of a long continuum of RPMS innovations related to the informatics of well-child care. This includes the first automated immunization reminders (IHS, 1970), the first comprehensive immunization forecasting system (RPMS, 1995), and the first “intelligent,” computer-generated well-child-care forms (PCC+, 2000).

Note: PCC+ Version 2.6 (aka the WCM) is an “add-on” module designed to run on top of a fully patched implementation of PCC+ 2.5. *If your site does **not** do well- child care, it is not necessary to install PCC+ Version 2.6.*

2.0 New Features in PCC+ Version 2.6

PCC+ version 2.6 contains multiple sets of components to support well-child care from birth to age 21. Each set is designed to support a specific RPMS modality:

- Traditional Patient Care Component (PCC) (Health Summary)
- Encounter Form and Health Summary (PCC+)
- Electronic Health Record (EHR)
- Freestanding (non-EHR) clinical workstation.

Most EHR components will be released separately and are not covered in this document. The other sets of components are described below.

2.1 An Overview of Features

The WCM provides a standard set of features to all modalities: a Well-Child Knowledgebase, Ages and Stages Questionnaire (ASQ) Screening Instruments, Intervention Guidelines, Anticipatory Guidance Reminders, and a Data Entry Mnemonic.

2.1.1 Knowledgebase

From the moment a child is born until its 21st birthday, there are thousands of age-specific guidelines and reminders that apply to well-child care. To make matters even more complicated, the recommended guidelines are constantly updated by pediatric advisory groups and other domain experts. Since very few of us are capable of holding all this information in our heads, the WCM does it for us. All current guidelines and reminders are stored in a master list called the WCM Knowledgebase. The knowledgebase is the heart, soul, and brain of the WCM. The WCM also includes a powerful tool called the Knowledgebase Editor. This GUI tool resembles an Excel spreadsheet. It enables pediatric experts at each site to edit the knowledgebase and thereby determine exactly which age-specific guidelines from the master list will be presented on each visit. The Knowledgebase Editor is a secured component, and only designated users who hold the proper key are allowed access.

2.1.2 ASQ Screening

The ASQ is a validated, commercial instrument for monitoring childhood development. The ASQ contains a set of 19 age-specific questionnaires. The child's mother answers the questions on the ASQ form and the results are scored by

pediatric personnel. The WCM includes a GUI desktop component for generating the appropriate ASQ form on a local laser printer. The same component enables the clinic staff to enter the results directly into RPMS at the point of care.

ASQ results are stored as “measurements” and are displayed in a new ASQ measurement panel on the Health Summary, PCC+ form, and EHR. If the child’s score is abnormal, you can print specific intervention guidelines for yourself and the parents. In Figure 2-1, the 22-month questionnaire was used. The scores for all five ASQ dimensions are displayed with the passing threshold scores shown in parentheses.

	ASQ	COMMUNICATION	GROSS MOTOR	FINE MOTOR	PROB SOLV	PERS-SOCIAL
08/01/06	22	25 (35)	30 (40)	35 (36.5)	40 (36.5)	45 (39.5)

Figure 2-1: ASQ measurement example showing actual and passing threshold scores

To use the ASQ feature of the WCM, **each site must purchase an ASQ license for each location** (building) where the ASQ is to be used. Each license includes one CD-ROM that contains all ASQ materials and the right to make unlimited, printed copies of those materials within that building. A copy of the CD-ROM must reside on the local server to enable this feature (see the PCC+ Encounter Form & Health Summary Installation Guide and Release Notes manual). The cost of a license is approximately \$175. This is a one-time fee. You can order the CD-ROM on line at:

<http://www.brookespublishing.com/store/books/bricker-asq/index.htm>.

Other validated, development-screening tools exist—including the PEDS[®] instruments used by Arizona pediatricians. New autism screening tools (such as the SARRC Autistic Disorder Screening Kit) are also becoming available. We intend to add more options to future versions of the WCM.

2.1.3 Informal Development Screening

Some sites may not be able to conduct ASQ screening on every well-child visit. As a stopgap measure, the WCM can print representative milestones from the Denver Developmental Screening Test (DDST). The child’s age determines exactly which milestones are presented, as well as the percentage of children at that age who are expected to pass a particular milestone. Percentages are shown in parentheses. Figure 2-2 is provided as an example.

Male 24 months FINE MOTOR (% at this age) ☐ Tower of 2 Cubes (100) ☐ Tower of 4 Cubes (90) ☐ Tower of 6 Cubes (75) ☐ Tower of 8 Cubes (25) GROSS MOTOR (% at this age) ☐ Kick Ball Forward (100) ☐ Throw Ball Overhand (75) ☐ Jump Up (50) LANGUAGE (% at this age) ☐ Body Parts - 6 (80) ☐ Speech 1/2 Understand (70) ☐ Speech All Understand (30) SOCIAL (% at this age) ☐ Remove Garment (90) ☐ Wash & Dry Hands (60)

Figure 2-2: Informal Developmental Screening example

2.1.4 Intervention Reminders

Special exams and interventions are due throughout childhood. The WCM provides the following age-specific reminders:

- Special risk exams; such as TB screening
- Age-specific exams; such as strabismus, scoliosis
- General screening exams; such as lead levels
- Autism screening questions
- Immunizations (Both history and forecast lists are automatically generated by the computer.)

2.1.5 Anticipatory Guidance Suggestions

Anticipatory guidance is a cornerstone of well-child care. Thousands of age-specific, general-patient-education topics and nutritional-counseling topics are available for display. All topics follow IHS national coding standards. If a topic is selected, the appropriate code is automatically applied. The WCM provides much more detail about patient education activities than any previous RPMS application, including:

- Anticipatory-Guidance Topics (20 subcategories such as injury prevention); for example: “Car seat...”
- Nutrition-Counseling Topics; such as “Limit sugar...”

2.1.6 PCC+ Growth Grids

PCC+ growth grids have been available to PCC+ users for over a year. Now these same grids are available to traditional PCC users using the new desktop component for the clinical workstation. Both growth grids and immunization lists can be printed as patient handouts.

2.1.7 Data Entry Mnemonics

Since the WCM captures new data elements, it increases the workload of data entry staff. To compensate, the module includes a new, “intelligent” mnemonic for well-child visits. The new mnemonic is highly efficient and is synchronized in real time to match the specific visit that is being entered.

2.1.8 WCM for “Traditional” PCC Sites

Traditional PCC sites (meaning those sites that do not run PCC+ or EHR) have one key document for each patient visit: the RPMS Health Summary. The WCM uses the Health Summary to provide age-specific reminders, guidelines, and results for well-child care. In addition, traditional PCC sites can use WCM tools that run on a freestanding (non-EHR), clinical workstation. New Health Summary components are described in the sections that follow. The desktop tools are described in the Knowledgebase Editor section on page 31.

2.1.9 The WELL-CHILD EXAM (NATL) Health Summary Type

A new health summary type called WELL CHILD EXAM (NATL) is included in the WCM. This new type arrives with only a minimal number of components: demographics, measurements (2 panels—PEDIATRIC STANDARD and ASQ DEVELOPMENT SCORES), and the new WELL CHILD EXAM component. Your site manager can add the Active Problem list, Immunizations, or other components.

2.1.10 The ASQ DEVELOPMENT SCORE Measurement Panel

This measurement panel contains the date of measurement, name of ASQ instrument (months), and five individual ASQ scores. By default, it displays up to the last five sets of ASQ results, as shown in Figure 2-3. You can edit the quantity and timeframe using the usual tools for Health Summary maintenance.

----- MEASUREMENT PANELS (max 5 visits or 2 years) -----								
	HT	%ile	WT	%ile	BP	HC	VU	VC
07/25/05	69.00	>97	155.00	>97	122/77			
07/19/05	67.00	>97	155.00	>97	120/80			
02/14/05	66.00	>97	144.00	>97	122/99	18.00		
02/07/05	65.00	>97	155.00	>97	122/66	18.00		
06/03/04			177.50	>97				
	ASQ	COMMUNICATION	GROSS MOTOR	FINE MOTOR	PROB SOLV	PERS-SOCIAL		
07/27/05	36	20 (25.2)	45 (30.0)	30 (20.6)	25 (20.4)	40 (25.0)		

Figure 2-3: ASQ DEVELOPMENT SCORE Measurement Panel

2.1.11 The WELL CHILD EXAM Health Summary Component

This section contains age-specific guidelines and reminders for well-child care. Figure 2-4 shows the Well-Child Exam form.

----- WELL CHILD EXAM ----- Male 24 months Mother: SWAYNEY,ZOEY CIERRA FINE MOTOR (% at this age) ☐ Tower of 2 Cubes (100) ☐ Tower of 4 Cubes (90) ☐ Tower of 6 Cubes (75) ☐ Tower of 8 Cubes (25) GROSS MOTOR (% at this age) ☐ Kick Ball Forward (100) ☐ Throw Ball Overhand (75) ☐ Jump Up (50) LANGUAGE (% at this age) ☐ Body Parts - 6 (80) ☐ Speech 1/2 Understand (70) ☐ Speech All Understand (30) SOCIAL (% at this age) ☐ Remove Garment (90) ☐ Wash & Dry Hands (60) AGE-SPECIFIC EXAMS ☐ 1. Early childhood caries or dental injuries ☐ 2. Signs of possible abuse/neglect, excessive bruising or injuries ☐ 3. Eyes - strabismus GENERAL HEALTH SCREEN ☐ 1. Lead ☐ 2. Autism SPECIAL RISK SCREEN ☐ 1. At risk for TB: PPD ☐ 2. Hearing (screen if indicated) ☐ 3. Vision (screen if indicated) ☐ 4. Family hx of lipid disorder, diabetes, acanthosis: Lipid screen
--

PT ED - FAMILY RELATIONSHIPS
☐ 1. Read books together 30 minutes a day
☐ 2. Do not expect child to share all toys
PT ED - HEALTHY HABITS
☐ 1. Avoid or limit TV viewing; watch programs together
☐ 2. Reinforce bedtime routines
☐ 3. Physical activity
PT ED - INJURY AND ILLNESS PRE
☐ 1. Car seat in rear seat, NEVER in front seat with air bag
☐ 2. Supervise near water; empty tub, water buckets, pools
☐ 3. Childproof home: hot liquids/pots, knives, poisons, medicines, guns
PT ED - ORAL HEALTH
☐ 1. Brush using fluoridated toothpaste
☐ 2. Schedule dental appointment
PT ED - SOCIAL COMPETENCE
☐ 1. Hug, talk, sing and read together
☐ 2. Reinforce limits, be consistent
☐ 3. Learn how to help with nightmares, fears, night terrors
☐ 4. Begin toilet training when child is ready
PT ED - NUTRITION
☐ 1. Provide 3 nutritious meals, 2-3 healthy snacks daily
☐ 2. Eat meals as a family
☐ 3. Limit sugar
☐ 4. Milk 16-24 oz/day
PT ED - AUTISM SCREEN
☐ 1. Babbles?
☐ 2. Points or Gestures?
☐ 3. Any loss of language skills?
☐ 4. Responds when you call his/her name?
☐ 5. Single words?
☐ 6. Shows interest in other children?
☐ 7. Brings objects to show you something?
☐ 8. Imitates you?
☐ 9. Looks at an object/toy you point to?
☐ 10. Seems oversensitive to noise?
☐ 11. Makes unusual movements near his/her face?
☐ 12. Have you ever wondered if he/she is deaf?
☐ 13. Sometimes stares at nothing or wanders with no purpose?

Figure 2-4: Well-Child Exam form

You can configure the items that appear in this section to meet local needs. Items fall into five separate categories:

- WELL CHILD NATL AG STDS 2006 (anticipatory guidance)
- WELL CHILD NATL AUT SCRIN 2006 (autism screening)
- WELL CHILD NATL DEV STDS 2006 (informal developmental milestones)
- WELL CHILD NATL EXAM STDS 2006 (exams)
- WELL CHILD NATL NUTR STDS 2006 (nutrition counseling)

The milestones, exams, and anticipatory-guidance categories are further divided into subcategories. Any of the five major categories can be removed from this health summary component by editing the VEN EHP KB CLINICAL DOMAIN file. To remove a major category (and all dependent subcategories/items) from the Health Summary component, set the value of the ACTIVE WELL CHILD DOMAIN to “NO” as shown in Figure 2-5.

```
INPUT TO WHAT FILE: VEN EHP KB CLINICAL DOMAIN//  
EDIT WHICH FIELD: ALL// ACTIVE WELL CHILD DOMAIN  
THEN EDIT FIELD:  
  
Select VEN EHP KB CLINICAL DOMAIN NAME:    WELL CHILD NATL NUTR STDS 2006  
ACTIVE WELL CHILD DOMAIN: YES// NO
```

Figure 2-5: Setting the Active Well-Child Domain to No

In the Figure 2-5 example, it shows that the user chose to exclude all the nutrition reminders from the health summary.

Individual items are included and excluded by using the Knowledgebase Editor described in 2.3.

2.1.12 WCM Component for PCC+ Sites: PCC+ Well Child Form

The WCM includes a new “national” PCC+ template for well-child care. It is a three-page form. The first two pages are intended to be printed on the same sheet (duplex), head to toe. The third page is primarily used as a handout for the parents.

2.1.12.1 Page 1: Guidelines, Reminders and Findings

The first page, shown in Figure 2-6, contains important historical information and visit-specific guidelines for exams and patient education. It is also used to record current clinical findings. There is a checklist for the physical exam. All abnormal findings must be described in detail in the space provided for narrative text.

The diagram shows the layout of the Well-Child Form page 1 with several callouts pointing to specific sections:

- Alcohol, tobacco, and domestic violence**: Points to the top left section.
- Immunization reminders**: Points to the top right section.
- Allergies**: Points to the left side section.
- Today's measurements and percentiles**: Points to the central measurement table.
- Today's ASQ scores**: Points to the section below the measurements.
- Reminders and guidelines for exams and patient education**: Points to the bottom left section.
- Past measurements and percentiles**: Points to the bottom center section.
- Physical exam results: Describe abnormalities in the space below**: Points to the bottom right section.
- Demographics**: Points to the bottom right section.

The form includes sections for:

- Alcohol, tobacco, and domestic violence**: A section for recording history.
- Immunization reminders**: A table for tracking immunizations.
- Allergies**: A list of allergies with checkboxes for severity.
- Today's measurements and percentiles**: A table for recording vital signs and growth measurements.
- Today's ASQ scores**: A section for recording communication and motor scores.
- Reminders and guidelines for exams and patient education**: A list of guidelines for exams and patient education.
- Past measurements and percentiles**: A table for recording past measurements.
- Physical exam results: Describe abnormalities in the space below**: A section for recording physical exam results.
- Demographics**: A section for recording patient demographics.

Figure 2-6: Well-Child Form page 1

The list of guidelines is identical to the list displayed in the Health Summary (section 2.2). The number of guidelines varies depending on patient age and local policies. Typically, some white space is available at the bottom of the list. Users can write notes in the white space if extra room is needed. The primary provider should sign this page.

2.1.12.2 Page 2: Orders, Plans and Diagnoses

Following the SOAP note format, page 1 is used for recording subjective and objective findings, while page 2 (shown in Figure 2-7) is used for recording assessments and plans. New prescriptions are entered at the bottom of the medication list. The provider checks off orders for immunizations and point-of-care tests. Additional orders and plans can be written in the space provided. Whenever possible, use the check boxes to enter additional diagnoses from the problem and ICD preference lists. This saves time, and reduces errors. If a diagnosis does not appear in the lists, it can be entered in the usual way in the Purpose-of-Visit box.

Figure 2-7 is a screenshot of the Well-Child Form page 2, which is used for recording assessments and plans. The form is divided into several sections, each with a yellow callout box pointing to it:

- Old and new prescriptions**: Located at the top left, pointing to the 'Medications and Prescriptions' section.
- Immunization orders**: Located at the top right, pointing to the 'Immunizations' section.
- Point-of-care test orders**: Located in the middle left, pointing to the 'Point-of-Care Testing' section.
- Free-text orders & plans**: Located in the middle left, pointing to the 'Orders, plans, and instructions' section.
- E & M codes**: Located in the middle left, pointing to the 'E & M Codes' section.
- Patient education CPT codes**: Located in the middle left, pointing to the 'Patient Education CPT Codes' section.
- ICD pick list**: Located in the middle left, pointing to the 'ICD Pick List' section.
- Add-unlisted POVs here**: Located in the middle left, pointing to the 'Add-unlisted POVs here' section.
- Problem/POV list**: Located in the middle right, pointing to the 'Problem/POV List' section.
- Demographics**: Located at the bottom right, pointing to the 'Demographics' section.

Figure 2-7: Well-Child Form page 2

2.1.12.3 Page 3: The “Hand-out” Page

The third page contains growth charts, immunization records for school enrollment, as well as a schoolwork excuse, and is primarily intended as a patient handout.

Pediatric Clinic: DEC 28, 2005 08:55
Provider: GENERIC PROVIDER IHS

Name: RAE WATERMAN
Date: 12/28/2005

Girls Height and Weight

Body Mass Index (BMI) Girls

Head circumference (under age 1) or BMI (over age 2) or blank graph

Immunization history

School/Work Excuse

Accompanying Parent/Guardian:

Diagnosis:

☐ This child was seen in the Children's Clinic today at

☐ This child was home for medical problems from _____ to _____

☐ This child is now able to return to school/day care and is not contagious.

☐ This child may return to school/day care when able for 24 hours.

☐ This child may return to school/day care after 24 hours of antibiotic therapy.

School-excuse note

Demographics

Figure 2-8: Well-Child Form page 3

2.1.12.4 Editing the Well Child Form

Previous versions of PCC+ forms distributed with earlier packages became corrupted or unusable when users attempted to edit them. This new form is very stable and can be edited without fear of damage. A full-size, sample form (ven_0260_peddemo.doc) can be found in the package distribution.

You could build any mail merge table shown in this document from scratch. However, the MS Word version of the tables already contains active mail merge elements. Simply copy any table from this document and paste it in a PCC+ template (this applies only to the MS Word document [.doc] type documents and *not* to Adobe Acrobat [.pdf] documents). Then you can edit the content and make

formatting changes. With Office 2003, when you attach the new combination data/header file (test.txt), the table is populated, just as if you created it, element by element.

Note: This manual will be distributed in two versions: a Word file called ven_026u.doc and an Adobe Acrobat file called ven_026u.pdf. Only the MS Word (.doc) file supports the active documentation feature. For convenience, place the MS Word file in the same folder as the PCC+ forms which are under development.

2.1.13 Adding WCM Knowledgebase Items to a PCC+ Template

It is possible to build customized forms from scratch or to add WCM guidelines to an existing PCC+ form. When building or updating customized forms, all guidelines must be preformatted and available in mail merge fields k1-k100. During WCM installation, the knowledgebase files (VEN EHP KB CATEGORIES and VEN EHP KB ITEMS) are automatically populated with all categories and items related to well-child care. In addition, during WCM installation, a new file was added to PCC+: the VEN EHP KB CLINICAL DOMAIN file. This file is pre-populated with the five WCM domains that contain all 29 knowledgebase categories associated with well-child care. Each of the following 29 knowledgebase categories may contain dozens of guidelines or educational topics:

- WELL CHILD NATL DEV STDS 2006 (Developmental Milestones)
 - o WCDA DEVEL FINE MOTOR
 - o WCDA DEVEL GROSS MOTOR
 - o WCDA DEVEL LANGUAGE
 - o WCDA DEVEL SOCIAL
 - o WCDA DEVEL PROBLEM SOLVING
- WELL CHILD NATL AUT SCRIN 2006 (Autism Screening)
 - o WCDA DEVEL AUTISM SCREEN
- WELL CHILD NATL AG STDS 2006 (Anticipatory Guidance)
 - o WCAG BEHAVIORAL HEALTH
 - o WCAG COMMUNITY INTERACTION
 - o WCAG CONSIDERING PARENTHOOD
 - o WCAG FAMILY RELATIONSHIPS
 - o WCAG FOR THE PARENTS
 - o WCAG HEALTHY HABITS

- o WCAG INFANT CARE
- o WCAG INJURY/ILLNESS PREVENTION
- o WCAG ORAL HEALTH
- o WCAG PARENT-INFANT INTERACTION
- o WCAG PREVENT INJURY & VIOLENCE
- o WCAG PRIMARY TOOTH CARE
- o WCAG RESPONSIBILITY
- o WCAG SCHOOL & VOCATION GOALS
- o WCAG SEXUALITY EDUCATION
- o WCAG SOCIAL COMPETENCE
- o WCAG SUBSTANCE USE & ABUSE
- WELL CHILD NATL NUTR STDS 2006 (Nutrition Education Topics)
 - o WCN NUTRITION
- WELL CHILD NATL EXAM STDS 2006 (Screening Exams –not related to development)
 - o WCEX BEHAVIORAL HEALTH SCREEN
 - o WCEX EXAMS
 - o WCEX GENERAL HEALTH SCREEN
 - o WCEX SPECIAL RISK SCREEN

The easiest way to add WCM guidelines to a form is to use the TCU option on the PCC+ Manager's Menu. When you get to the section of the template configuration dialog box that asks you to edit the knowledgebase, add five knowledgebase clinical domains as shown below. The order in which you add the knowledgebase clinical domains determines the order in which they appear in the template. We recommend the order shown in Figure 2-9.

```

A knowledgebase contains custom guidelines or patient education topics.
Want to include knowledgebase(s) on this form? No// Y (Yes)
Enter the name of a knowledgebase clinical domain: WELL CHILD NATL DEV STDS 2006
Are you adding 'WELL CHILD NATL DEV STDS 2006' as
a new KB DOMAIN (the 1ST for this VEN EHP EF TEMPLATES)? Y (Yes)

Enter the name of a knowledgebase clinical domain: WELL CHILD NATL EXAM STDS 2006
Are you adding 'WELL CHILD NATL EXAM STDS 2006' as
a new KB DOMAIN (the 2ND for this VEN EHP EF TEMPLATES)? Y (Yes)

Enter the name of a knowledgebase clinical domain: WELL CHILD NATL AG STDS 2006
Are you adding 'WELL CHILD NATL AG STDS 2006' as
a new KB DOMAIN (the 3RD for this VEN EHP EF TEMPLATES)? Y (Yes)

Enter the name of a knowledgebase clinical domain: WELL CHILD NATL NUTR STDS 2006
Are you adding 'WELL CHILD NATL NUTR STDS 2006' as
a new KB DOMAIN (the 4TH for this VEN EHP EF TEMPLATES)? Y (Yes)

Enter the name of a knowledgebase clinical domain: WELL CHILD NATL AUT SCRIN 2006

```

Figure 2-9: Recommended order of knowledgebase clinical domains

The process shown in Figure 2-9 connects the required knowledgebase categories or items from each domain to the form by updating the VEN EHP EF TEMPLATE file and by automatically assigning the display order.

Next, add the mail merge fields to the PCC+ form. A sample text box containing all the fields is shown in Figure 2-10. The display object can be copied from this document (this applies to MS Word [.doc] documents and NOT to Adobe Acrobat [.pdf] documents), pasted in your local form, and edited to meet your needs. The field automatically generates headers and separators for each category of items in the list.

The topics and their associated display logic are stored in the knowledgebase files: VEN EHP KB CATEGORY and VEN EHP KB ITEM. For detailed instructions on how to build and edit categories and items in the knowledgebase, see section 2.3.

«k1»	«k51»
«k2»	«k52»
«k3»	«k53»
«k4»	«k54»
«k5»	«k55»
«k6»	«k56»
«k7»	«k57»
«k8»	«k58»
«k9»	«k59»
«k10»	«k60»
«k11»	«k61»
«k12»	«k62»
«k13»	«k63»
«k14»	«k64»
«k15»	«k65»
«k16»	«k66»
«k17»	«k67»
«k18»	«k68»
«k19»	«k69»
«k20»	«k70»
«k21»	«k71»
«k22»	«k72»
«k23»	«k73»
«k24»	«k74»
«k25»	«k75»
«k26»	«k76»
«k27»	«k77»
«k28»	«k78»
«k29»	«k79»
«k30»	«k80»
«k31»	«k81»
«k32»	«k82»
«k33»	«k83»
«k34»	«k84»
«k35»	«k85»
«k36»	«k86»
«k37»	«k87»
«k38»	«k88»
«k39»	«k89»
«k40»	«k90»
«k41»	«k91»
«k42»	«k92»
«k43»	«k93»
«k44»	«k94»
«k45»	«k95»
«k46»	«k96»
«k47»	«k97»
«k48»	«k98»
«k49»	«k99»
«k50»	«k100»

Figure 2-10: Mail merge fields

In most cases, 70 items, or fewer, actually show up on any given visit. The items populate the “k” mail-merge fields (k1-k100), and items are automatically formatted with headers. Figure 2-11 provides an example of the merged files containing a list of guidelines. Note that if a mail-merge field is not populated, it is invisible.

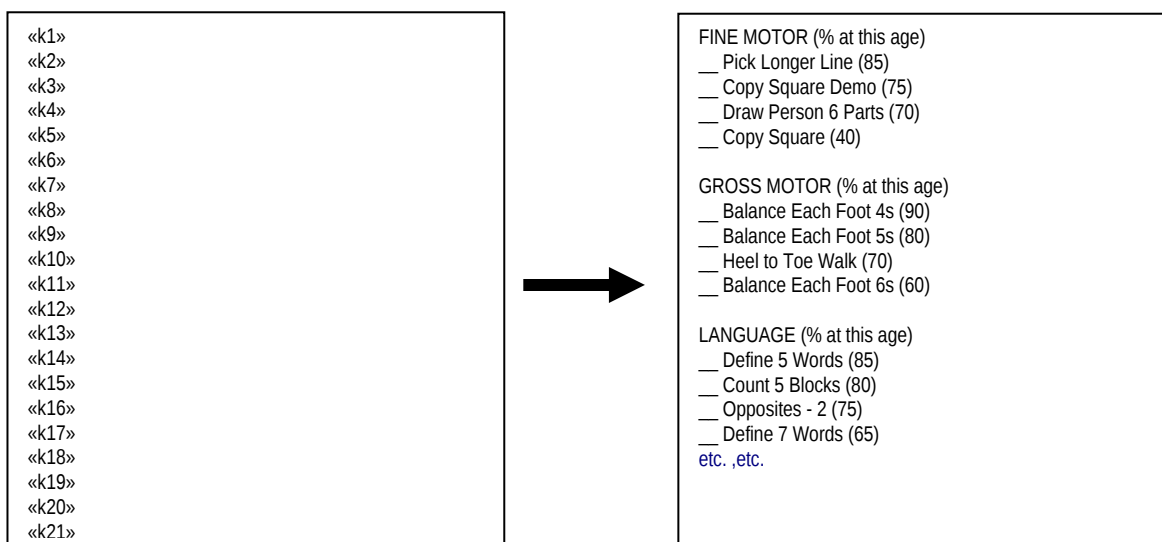


Figure 2-11: Merged file with guidelines

2.1.14 Adding Current Measurements to a PCC+ Template

The measurements from the current visit can be automatically listed and plotted on the PCC+ form. In addition, the chief complaint can be displayed. There are two ways to accomplish this:

- Use the PCC+ Nurse Check-In Module described in the PCC+ Version 2.5 documentation. This is a telnet-based (roll and scroll) process for sites that are not using a GUI to capture check-in measurements.
- Use the EHR Nurse Check-In Module. This is a GUI-based process. Then generate a PCC+ form with the PEHR (Print form linked to EHR visit) option. This assures that a redundant visit is not created.

In either case, the current measurements are printed on the current PCC+ form and results are automatically and instantly entered into the RPMS database. This improves the timeliness, accuracy, and legibility of the results and it increases data capture efficiency. *We strongly urge you to use one of these two methods to check-in every well child.*

Figure 2-12 shows the PCC+ Vital Signs Component. If a nurse check-in process is employed, this component is populated on the printed PCC+ form.

Vital Signs & Measurements						
Temp	Pulse	Resp	BP	Pain (1-10)	O ₂ sat	Pk Flow
«tmp»	«pu»	«rs»	«bp»	«pa»	«o2»	«pf»
Ht	Wt	HC	BMI	Vision ☐ Corrected ☐ Uncorrected		
«ht»	«wt»	«hc» «wt»	«bmi» «hc»	R	L	

Figure 2-12: PCC+ Vital Signs Component

2.1.15 Adding ASQ Scores to a PCC+ Template

The date of the last ASQ exam is stored in field u40. The ASQ questionnaire identifier (a number representing the age in months for that specific questionnaire) is stored in u46. The ASQ scores and cutoff scores are stored in fields u41-u45 shown in Figure 2-13. In the following example, we see the result of the mail merge process. The previous score is printed above the boxes where you enter today's scores (data entries are shown in large blue numerals). The cutoff score is shown in parenthesis. The recommended questionnaire for today is stored in u47, and the associated cutoff scores are in u48-u52.

ASQ Development Scores					
ASQ (mos)	Commun	Fine motor	Gross motor	Prob solving	Personal-Social
«u46» («u40»)	«u41»	«u42»	«u43»	«u44»	«u45»
TODAY: «u47»	«u48»	«u49»	«u50»	«u51»	«u52»



ASQ Development Scores					
ASQ (mos)	Commun	Fine motor	Gross motor	Prob solving	Personal-Social
24 (4/14/2006)	40 (33.5)	35 (35.0)	30 (26.0)	15 (37.0)	30 (33.0)
TODAY: 36	40 (38.8)	30 (30.6)	35 (25.2)	25 (28.9)	10 (36.9)

Figure 2-13: ASQ score examples (upper shows the field identifiers and lower shows today's scores)

2.1.16 Adding Growth Grids to a PCC+ Template

The pediatric growth grids—fully populated and plotted with the latest growth data from the RPMS database—are contained in bitmap images. To insert the growth grids in a PCC+ template, follow the process described in sections 2.1.16.1 and 2.1.16.2. If after modifying the PCC + template the grid does not appear, see section 2.1.16.3.

2.1.16.1 Configuring the Template Properties

This section provides instructions for setting up the Well Child template.

To configure template properties to display growth grid data:

1. Access the PCC+ Manager's menu and select the TCU option.
2. Edit the properties of the Well Child template by responding to the "Want to include Pediatric Growth Grids on the form?" prompt by answering "**YES**" as shown in Figure 2-14.

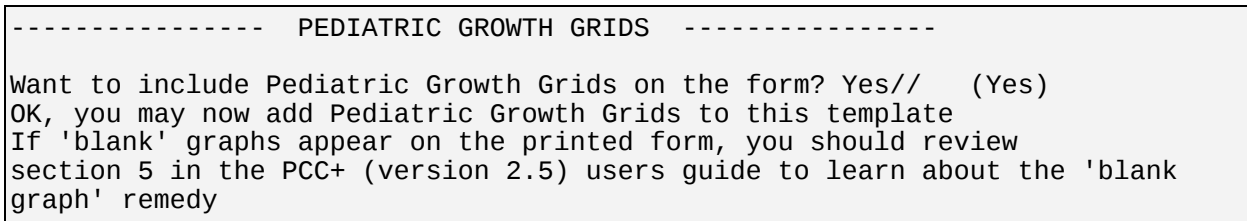


Figure 2-14: Adding Pediatric Growth Grids to the PCC+ Template

2.1.16.2 Inserting the Growth Grids in the Template

The following procedure provides instructions for inserting a growth grid into the PCC+ template.

Note: You must use this method to insert the bitmap file as a link in the template or it cannot be displayed.

To insert growth grids:

1. Select Insert > Picture > From File as shown in Figure 2-15.

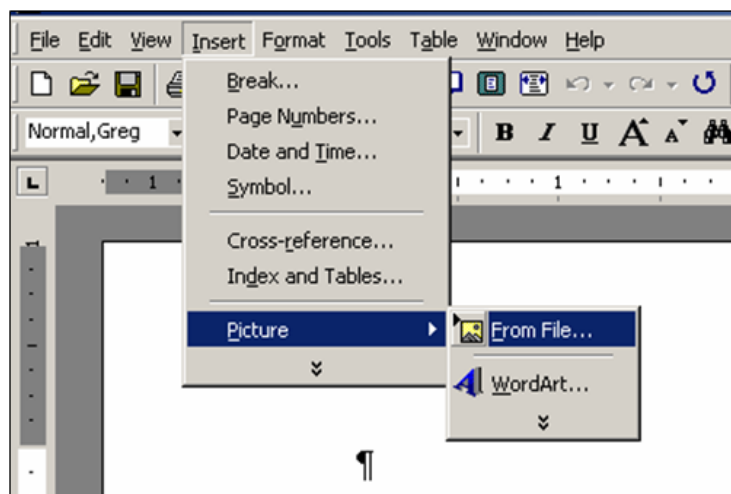


Figure 2-15: Selecting a file to insert

2. Select the bitmap file: WHGraph.bmp.
3. Go to C:\Program Files\ILC\ILC Forms Print Service\Data folder
4. Select the WHGraph.bmp file .
5. Click Link to File as shown in Figure 2-16.

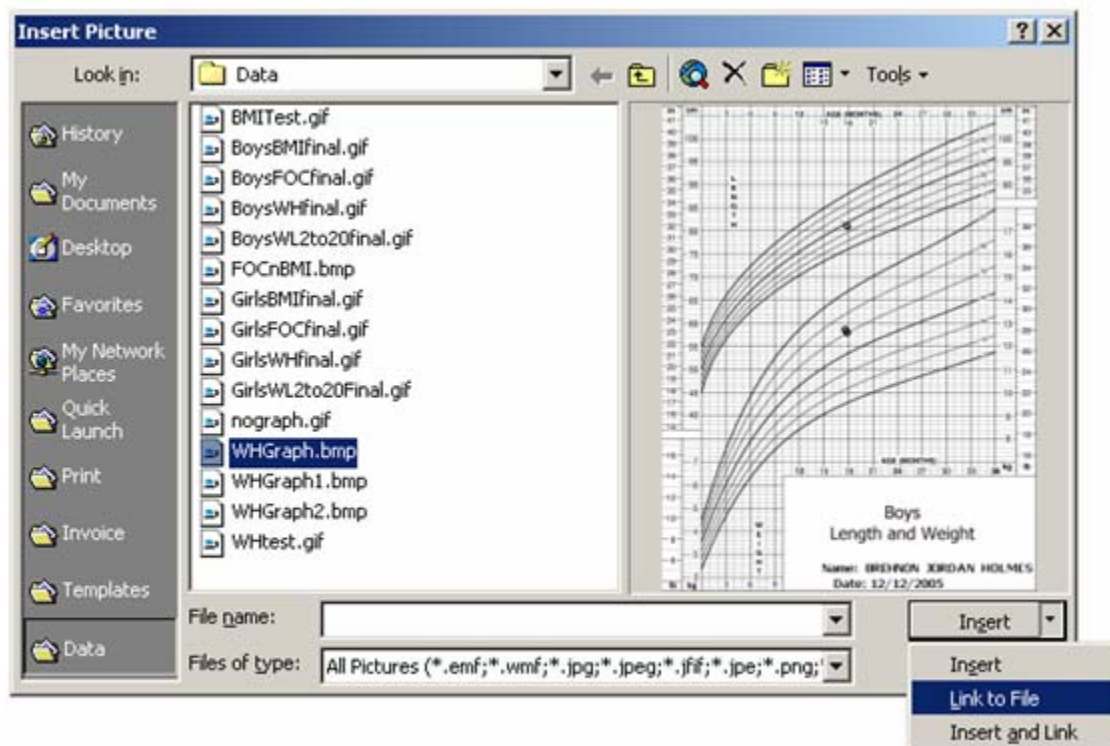


Figure 2-16: Insert Picture dialog box

6. Follow the procedures in the PCC+ (version 2.5) Users Manual to manage the placement and layout of the image.
7. Repeat this procedure for the bitmap file called FOCnBMI.bmp.

The file WHGraph.bmp contains the appropriate age and sex growth grid for height and weight. The file FOCnBMI.bmp contains either a head circumference grid or a BMI grid depending on the patient's age. The head circumference grid is used for ages 0-12 months and the BMI grid is used for ages 24 months and older. For children between the ages of 12 and 23 months, *neither* head circumference *nor* BMI data are plotted.

2.1.16.3 Linking Growth Grids File to the Pediatric Template

Before you attempt this workaround, make sure that the form is registered in the PEDS GROWTH CHART entry of the VEN EHP OCX COMPONENTS file as

described in the PCC+ (v2.5) User Manual. If the form was registered properly but the grids are blank, this may be due to the way MS Word recognizes links to documents. The following procedure creates a link that MS Word can recognize using the full pathname of the growth grid.

To set the link so that the growth grid appears on the template:

1. Put the growth grid data file, ILCFormsObjectData.txt, in the data folder of one of the print servers. This file is distributed with PCC+ version. 2.5.
2. Put the template in a folder located on the same computer. However, *this folder must be stored in a different drive than the test data file*. For example, if the growth-grid data file is in C:\Program Files\ILC\ILC Forms Print Service\Templates, then the template should be located on the D: drive. If there is no D: drive on the computer, then copy the template to a portable, flash memory USB drive (also called a *thumb drive*) that is connected to the computer.
3. Open the document.
4. Highlight the old graphs and delete them.
5. Go to the MS Word toolbar and select Insert → Picture → Form File.
6. Add the graphs by following the technique described in section 2.1.16.2.

Why is all this necessary? This procedure *forces* MS Word to connect the images with their *full* pathname. When MS Word knows the full pathname of the growth grid, the growth grid is inserted in the template.

The Well Child form that is distributed with PCC+ version 2.5 was constructed this way, but the process may have to be repeated on your local system. The only time you must use this procedure is if you are creating other forms that incorporate the growth grids.

2.1.17 Adding an Extended Immunization History to PCC+ Template

Previous version of the Well Child form could display 30 immunizations, maximum. The current version displays 40 immunizations, maximum. PCC+ is capable of displaying 50 immunizations. If a maximally extended immunization record is required, copy the component shown in Figure 2-17. Note that this component only shows past immunizations. The immunization forecast is displayed in a different component.

Immunization record for
April 3, 2008

«ihx1»

«ihx2»

«ihx3»

«ihx4»

«ihx5»

«ihx6»

«ihx7»

«ihx8»

«ihx9»

«ihx10»

«ihx11»

«ihx12»

«ihx13»

«ihx14»

«ihx15»

«ihx16»

«ihx17»

«ihx18»

«ihx19»

«ihx20»

«ihx21»

«ihx22»

«ihx23»

«ihx24»

«ihx25»

«ihx26»

«ihx27»

«ihx28»

«ihx29»

«ihx30»

«ihx31»

«ihx32»

«ihx33»

«ihx34»

«ihx35»

«ihx36»

«ihx37»

«ihx38»

«ihx39»

«ihx40»

«ihx41»

«ihx42»

«ihx43»

«ihx44»

«ihx45»

«ihx46»

«ihx47»

«ihx48»

«ihx49»

«ihx50»

Figure 2-17: PCC+ Immunization Record

2.2 ASQ Components for the Desktop

Users of traditional PCC and PCC+ can use the new ASQ desktop components (referred to as the *ASQ Client*) to generate patient-specific ASQ measurement forms. You can use these same components to record the results through a desktop GUI.

The only requirement is a clinical workstation that is connected to the RPMS server through the local area network (LAN). Almost any networked computer at your facility can host the ASQ Client desktop. Typically the ASQ Client resides on a computer near the nursing station associated with the pediatric clinic. Instructions for obtaining a valid user license and setting up the desktop components can be found in the PCC+ version. 2.5 Installation Guide and Release Notes.

The ASQ documents are age-specific. A total of 18 different documents cover the period from birth to age 5. You must correctly identify a patient and destination printer. The ASQ utility automatically selects the proper document and prints a personalized ASQ form. The first page of the form contains the form identifiers, user instructions, and patient demographics.

Forms cover the following ages in months: 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 27, 30, 33, 36, 42, 48, 54, and 60. The following rules apply to form selection:

- Under age three months: you are notified that no forms are available in this age range.
- If the patient's age is "plus or minus" one month from the age covered by a specific form, that form is selected. This means that each form has a valid, 2-month window of use.
- If the patient is in between a valid age range (such as 45 months), the first form available below the patient's age is printed, *and* you have the option of printing the first form available after the patient's age. In addition, you are notified of the next valid time period to test the current patient. Note that this scenario only occurs at certain times between the ages of 25 and 60 months.
- To accommodate visits that are behind schedule, if the child is between 61 and 71 months of age, you can print a 60 month ASQ form. If the child is older than 71 months, no form can be printed.
- The first time the ASQ request system is activated for a specific patient, you are asked to enter the gestational age at birth. This age is stored in RPMS and is used to determine precisely which form to print. For example, if the child is three weeks premature, then three weeks is added to the date of birth when determining which form to use. Corrections are made until a chronological age of 24 months is achieved as recommended in the ASQ Users Guide. No corrections are made for post maturity.

2.2.1 Stand Alone Desktop Users

The following procedure provides instructions for accessing and printing an existing patient's chart from the standalone desktop and printing it.

To access and print an existing patient's chart:

1. Find the icon named *ASQ.exe*. on the desktop of the client workstation.
2. Click this icon to open the ASQ Client.
3. Log in using your RPMS access and verify codes. If the log in is successful, the Patient Selector dialog box appears.
4. Enter the patient's local chart number and click **Find**.
5. Confirm that this is the correct patient. If this is not the patient you want, enter another chart number.
6. Enter the correct gestational age or verify that the correct age appears.
7. Click **Print** when you are satisfied that the information displayed is correct.

2.2.1.1 Generating an Age-Specific Questionnaire (ASQ)

The Well-Child Module includes 19 ASQ forms. This section provides instructions for selecting the correct form.

The screenshot shows the 'PCC+ ASQ + Desktop Version' window. It contains the following elements and annotations:

- Enter chart number:** A text box containing '145628'. An arrow points to this box from a yellow callout box: '1. Enter chart number and click "find"'. Below the text box is a 'Find' button.
- Patient Identifiers:** A text box displaying 'REED,DEREK LEE', 'MALE DOB: 3/10/05', and 'MOTHER: MOM,DEREKS'. An arrow points to this box from a yellow callout box: '2. Confirm that correct patient was selected'.
- Enter Gestational Age (Wks):** A text box containing '40'. An arrow points to this box from a yellow callout box: '3. View or enter the correct gestational age'.
- Buttons:** At the bottom are 'Exit', 'Print...', and 'Enter Scores >' buttons. An arrow points to the 'Print...' button from a yellow callout box: '4. Print ASQ form or enter the scores from a completed form'.

Figure 2-18 also shows the steps for selecting a patient, viewing or entering the gestational age, and entering ASQ scores or printing an ASQ.

The screenshot shows the 'PCC+ ASQ + Desktop Version' window. It contains the following fields and buttons:

- Enter chart number:** A text box containing '145628' and a 'Find' button below it.
- Patient Identifiers:** A text box containing 'REED,DEREK LEE', 'MALE DOB: 3/10/05', and 'MOTHER: MOM,DEREKS'.
- Enter Gestational Age (Wks):** A text box containing '40'.
- Buttons:** 'Exit', 'Print...', and 'Enter Scores >'.

Four yellow callout boxes with arrows point to specific elements:

1. Enter chart number and click "find"
2. Confirm that correct patient was selected
3. View or enter the correct gestational age
4. Print ASQ form or enter the scores from a completed form

Figure 2-18: ASQ Desktop Version window showing Chart Number, Patient, and Gestational Age

Entering Gestational Age

Note that the gestational age is displayed along with patient identifiers. This value can be updated at any time. It is important that the correct gestational age is recorded if the child is less than two years old since the gestation age is used to determine which ASQ form is printed. An ASQ questionnaire prints even if there is no gestational age (GA) specified, but the user must assume responsibility if the wrong questionnaire is generated due to missing GA data.

Note: The gestational age can be captured in RPMS in several ways—not just with the ASQ component. Consequently, a gestational age may appear in the ASQ dialog box, even if the ASQ component was never used for the current patient. The final common destination for all methods of capturing the gestational age is the BIRTH MEASUREMENTS file.

Printing a Form

When you click **Print**, a standard MS Windows dialog box appears that allows you to select the specific printer for printing the ASQ document. After the printer is chosen, the correct ASQ form—complete with imbedded identifiers—is printed on the specified printer.

2.2.1.2 Entering ASQ Scores

The ASQ form is completed by the parent and scored by a provider. Then, results are entered in RPMS through the traditional PCC encounter form, PCC+ form, or the WBC desktop ASQ components. PCC and PCC+ users rely on traditional data entry

methods to capture ASQ scores. This section describes how to enter scores electronically using ASQ GUI components.

Selecting a Visit

Be aware: the ASQ Client requires that a valid visit exist before the ASQ data can be entered. Visits are created at the time of check-in by PCC+, the Scheduling Package, and the EHR. You must choose from all visits made by this patient during the previous four days. Typically you will select the current or latest visit at the top of the list. Figure 2-19 shows the ASQ Desktop version window with a visit selected.

If the ASQ results cannot be correctly associated with a specific, pre-existing visit, you cannot enter ASQ results from the desktop application. If no visit is identified, you must write the results on an encounter form so that the data entry operator can enter them in RPMS. However, even if no visit is identified, you can view the last ASQ results from the ASQ desktop application. Results are treated as measurements in RPMS.

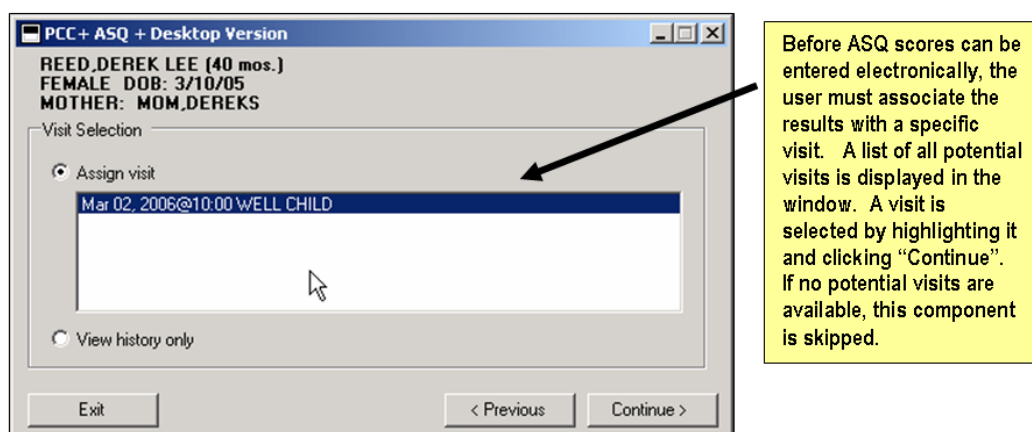


Figure 2-19: PCC+ ASQ Desktop Version window showing Visit Selection

When you click **Continue** on the visit selection window, the ASQ Data Window is displayed.

Note: If no potential visits are found, the window shown in Figure 2-19 is skipped.

The ASQ Data Window enables you to view the previous ASQ results and enter today's scores. There are four possible scenarios:

- If a visit was not selected but there are past results; the table contains a single row that cannot be edited.
- If a visit was selected but there are no past results, the table contains a single row that can be edited.
- If a visit was selected and there are past results, two rows are displayed. The bottom row can be edited

- If no visit was selected and there are no past results, then no rows are displayed. The message box explains the situation. The user only has one choice: click **Exit**.

The content of the component appears in the message box shown in Figure 2-20.

The screenshot shows the 'PCC+ ASQ + Desktop Version' window. At the top, it displays patient information: REED,DEREK LEE (40 mos.), FEMALE DOB: 3/10/05, MOTHER: MOM,DEREKS. Below this is a 'Message' box containing the text: 'New results can be entered and you can view past results'. Below the message box is a table with columns: Date, ASQ (mos), Fine Motor, Gross Motor, Communications, Personal - social, and Problem solving. The table has two rows of data. The first row is for 2/28/06, and the second row is for 3/2/2006. In the 3/2/2006 row, the 'Fine Motor' and 'Problem solving' scores are highlighted in red. Below the table are buttons for 'Exit', '< Previous', and 'Submit'. Four yellow callout boxes with arrows point to specific parts of the window: 'Message box describes the content of the component' points to the message box; 'View past ASQ scores.' points to the table; 'Enter today's ASQ scores.' points to the input boxes for the 3/2/2006 row; and 'Cutoff scores are shown to the right. Scores below the cutoff are shown in red' points to the red text in the 'Problem solving' column for the 3/2/2006 row.

Date	ASQ (mos)	Fine Motor	Gross Motor	Communications	Personal - social	Problem solving
2/28/06	22	40 39	39 30	30 17.5	20	20 25
3/2/2006	40	30 39	35 17.5	40 25	45 30	50 30.5

Figure 2-20: PCC+ ASQ Desktop Version window with visit dates and ASQ Scores

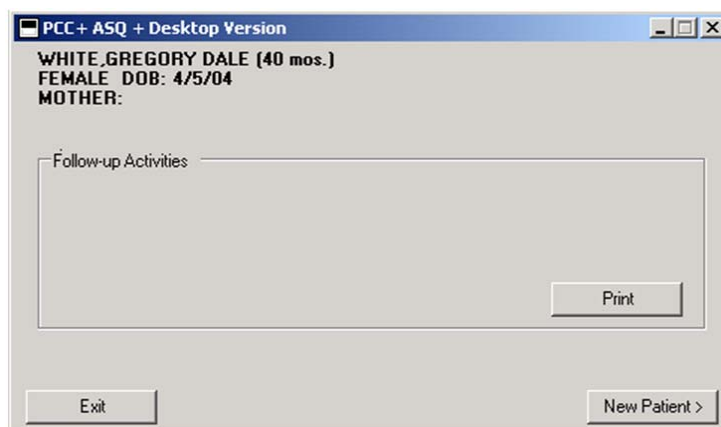
The first box contains the ASQ form-specific identifier: an age in months. The remaining five boxes are used to view or enter scores. Scores are always multiples of 5 and range between 0 and 95. As soon as a two-digit number is entered, several things may occur:

- The score is checked for validity. If a score is invalid, it is automatically deleted and a message appears asking the user to enter a valid number.
- If the score is below the cutoff number, the score and cutoff numbers are displayed in **red** text.
- When a valid two-digit number is entered, the cursor automatically moves to the next box.

In the event that the score is a single digit number such as zero (0) or 5, the user must press Tab to move to the next box. The system then checks the score to determine whether it is below the cutoff value. If it is, the score and cutoff are displayed in **red** text. If the final value is a single digit, it is validated when the user clicks **Submit**. The user is not allowed to submit invalid numbers.

Note: If a box does not contain a number, the system displays a message when Submit is clicked asking you to confirm that an incomplete data set is to be entered.

If all scores are above the cutoff value, the data is saved and the ASQ desktop window closes. If any score is below the cutoff value, a dialog box similar to the one shown in Figure 2-21 appears that allows you to print age-specific follow-up instructions for the parents and providers.



The screenshot shows a software window titled "PCC+ ASQ + Desktop Version". Inside the window, the patient information is displayed as follows:

- WHITE, GREGORY DALE (40 mos.)
- FEMALE DOB: 4/5/04
- MOTHER:

Below the patient information is a large rectangular text area labeled "Follow-up Activities". To the right of this area is a "Print" button. At the bottom left of the window is an "Exit" button, and at the bottom right is a "New Patient >" button.

Figure 2-21: PCC+ ASQ Desktop Version window with Follow-Up Activities

2.2.2 Sample document

A sample ASQ form—including a visit specific header page and the first page of questions—is shown in Figure 2-22 and Figure 2-23.

Ages & Stages Questionnaires®: A Parent-Completed, Child-Monitoring System Second Edition

By Diane Bricker and Jane Squires

with assistance from Linda Mounts, LaWanda Potter, Robert Nickel, Elizabeth Twombly, and Jane Farrell

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36 Month Questionnaire



On the following pages are questions about activities children do. Your child may have already done some of the activities described here, and there may be some your child has not begun doing yet. For each item, please check the box that tells whether your child is doing the activity regularly, sometimes, or not yet.

Important Points to Remember:

- ☒ Be sure to try each activity with your child before checking a box.
- ☒ Try to make completing this questionnaire a game that is fun for you and your child.
- ☒ Make sure your child is rested, fed, and ready to play.

Child's Name: **WATERMAN,RAE**

Chart number: **100003**

Date of Birth: **Nov 10, 2002**

Corrected DOB (If child was premature): **Nov 17,2002**

Date of test: **Thursday, October 05, 2006**

Next valid test time: **Apr 10, 2006 to Jun 10, 2006**

If any of the following information is incorrect, please cross it out and correct it.

Person filling out this questionnaire: **SMITH,JANE**

What is your relationship to the child: **Mother**

Home Phone: **602-555-0010**

Mailing Address: **777 N. 33RD ST., DOUGLAS, ARIZONA, 88776**

Figure 2-22: 36-Month Questionnaire page 1

	YES	SOMETIMES	NOT YET	
COMMUNICATION <i>Be sure to try each activity with your child.</i>				
1. When you ask her to point to her nose, eyes, hair, feet, ears, and so forth, does your child correctly point to at least seven body parts? (She can point to parts of herself, you, or a doll.)	☐	☐	☐	___
2. Does your child make sentences that are three or four words long? Please give an example: _____	☐	☐	☐	___
3. Without giving him help by pointing or using gestures, ask your child to "Put the shoe on the table" and "Put the book under the chair." Does your child carry out both of these directions correctly?	☐	☐	☐	___
4. When looking at a picture book, does your child tell you what is happening or what action is taking place in the picture? (For example, "Barking," "Running," "Eating," and "Crying") You may ask, "What is the dog (or boy) doing?"	☐	☐	☐	___
5. Show your child how a zipper on a coat moves up and down, and say, "See, this goes up and down." Put the zipper to the middle and ask your child to move the zipper down. Return the zipper to the middle and ask your child to move the zipper up. Do this several times, placing the zipper in the middle before asking your child to move it up or down. Does your child consistently move the zipper up when you say "up" and down when you say "down"?	☐	☐	☐	___
6. When you ask, "What is your name?" does your child say both her first and last names?	☐	☐	☐	___
COMMUNICATION TOTAL				___

GROSS MOTOR *Be sure to try each activity with your child.*

1. Without holding onto anything for support, does your child kick a ball by swinging his leg forward?		☐	☐	☐	___
2. Does your child jump with both feet leaving the floor at the same time?		☐	☐	☐	___
3. Does your child walk up stairs, using only one foot on each stair? (The left foot is on one step, and the right foot is on the next.) She may hold onto the railing or wall. (You can look for this at a store, on a playground, or at home.)		☐	☐	☐	___

Figure 2-23: 36-Month Questionnaire page 2

2.3 Knowledgebase Editor

The WCM comes with a Windows-based editor to update the Knowledgebase. After running setup, a new shortcut appears on the desktop of the target workstation desktop. This icon is labeled Knowledgebase Editor.

To open a Knowledgebase Editor:

1. Click the Knowledgebase Editor icon shown on your desktop.
2. Log in using your usual RPMS access and verify codes. The dialog box shown in Figure 2-24 appears.

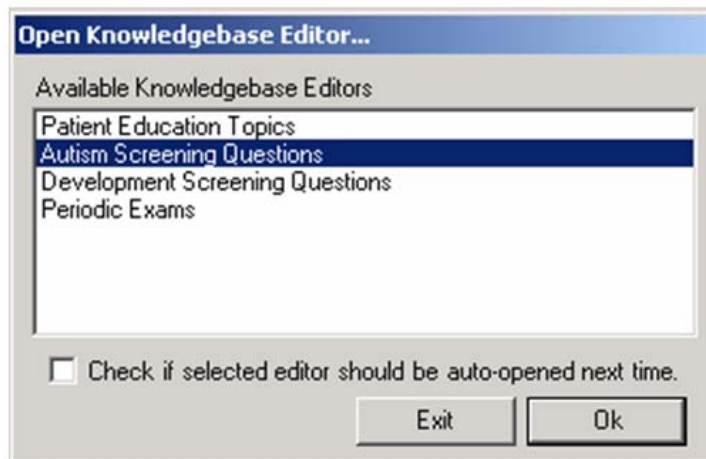


Figure 2-24 : Open Knowledgebase Editor dialog box

3. Select a knowledgebase clinical domain for editing by highlighting your choice from the list shown in the Open Knowledge Editor dialog box.
4. Check the box if you always want to open the same Knowledgebase Editor.
5. Click **Ok** to open to the selected editor now. The selected Knowledgebase Editor opens. Note that it resembles an MS Excel spreadsheet.

The following figures and paragraphs describe knowledgebase editing and filtering tools.

2.3.1 Activating and Inactivating Screening Questions

Currently, the knowledgebase cannot be edited. Your only option is to activate or inactivate individual items by checking or un-checking the boxes in the far right column. If an item is active, it appears in the health summary, PCC+ form, data entry module, and the WBM EHR component. Figure 2-25 is shown as an example.

TYPE	TITLE	CODE	START (MO)	STOP (MOS)	ACTIVE
WCDA DEVEL AUTISM SCREEN	Babbles?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Points or Gestures?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Any loss of language skills?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Responds when you call his/her name?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Shows interest in other children?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Brings objects to show you something?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Imitates you?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Looks at an object/toy you point to?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Seems oversensitive to noise?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Makes unusual movements near his/her face?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Have you ever wondered if he/she is deaf?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Sometimes stares at nothing or wanders with no purpose?		12	15	☒
WCDA DEVEL AUTISM SCREEN	Babbles?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Points or Gestures?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Any loss of language skills?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Responds when you call his/her name?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Single words?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Shows interest in other children?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Brings objects to show you something?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Imitates you?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Looks at an object/toy you point to?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Seems oversensitive to noise?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Makes unusual movements near his/her face?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Have you ever wondered if he/she is deaf?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Sometimes stares at nothing or wanders with no purpose?		15	18	☒
WCDA DEVEL AUTISM SCREEN	Babbles?		18	24	☒

Figure 2-25: Autism Screening Questions

To active or inactive items:

1. Check or uncheck each item that you want to activate or inactivate. Figure 2-26 shows a checkmark in the Active column of the WCAG Injury/Illness Prevent boxed row.

Note: The Save button in the upper-left corner changes from gray to green the first time you change any item's status.

2. Click **Save** to keep your changes or click **Exit** to close the session without saving changes. As soon as you save the changes, the update is shown in the health summary, PCC+ form, and the WCE Data Entry mnemonic.

TYPE	TITLE	CODE	START (MO)	STOP (MOS)	ACTIVE
WELL CHILD NUTRITION	2-3 snacks a day	CHT-DT	25	65	☐
WCAG NUTRITION	3 meals a day, nutritious snacks	CHS-N	90	114	☐
WCAG NUTRITION	5 fruits/vegetables a day	CHS-N	66	90	☐
WCAG SEXUALITY EDUCATION	Abstinence is still the safest way to prevent both pregnancy and STD	CHA-SX	160	200	☐
WCAG SEXUALITY EDUCATION	Abstinence is still the safest way to prevent both pregnancy and STD	CHA-SX	200	252	☐
WCAG FAMILY RELATIONSHIPS	Accepting support from others (family, friends, professionals)	CHN-PA	0	0.25	☐
WCAG FAMILY RELATIONSHIPS	Accepting support from others (family, friends, professionals)	CHN-PA	0.25	1	☐
WCAG INJURY/ILLNESS PREVENT	Accidents are a major cause of death	CHI-S	1	3	☒
WCAG SEXUALITY EDUCATION	Abstinence is still the safest way to prevent both pregnancy and STD	CHA-SX	120	160	☐

Figure 2-26: Patient Education Topics

2.3.2 Using the Filtering Tool

The Knowledgebase Editor includes several editing and filtering tools. The Filter tool (its icon is the letter A inside a small box) is located below each column heading and changes from gray to blue. The following procedure provides instructions for using a filter.

To use a filter:

1. Click **Filter** to display the drop-down list of filters shown in Figure 2-27.

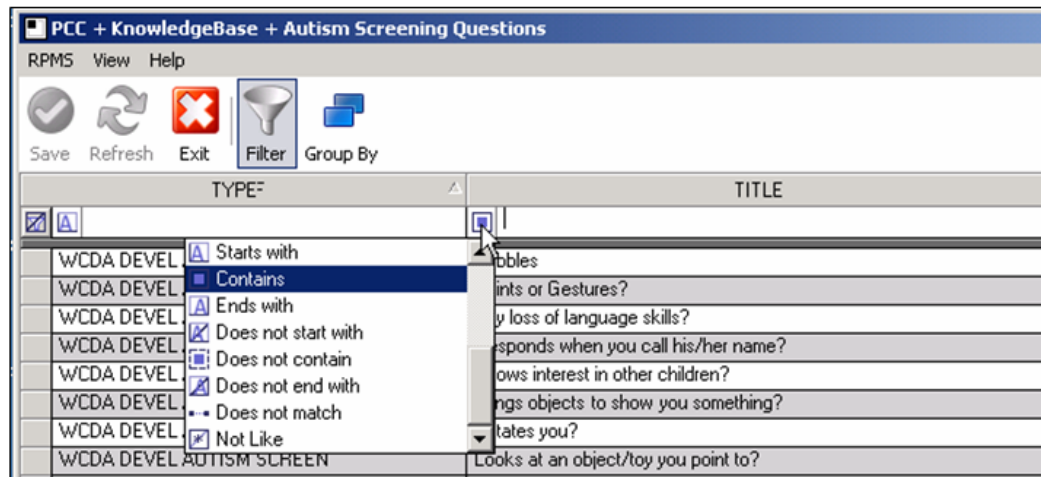


Figure 2-27: Autism Screening Questions--Filters

2. Select the desired filter and the boxed A icon changes to match the icon for the filter you selected.
3. Type some text next to the icon to filter items in the selected column by the text you entered. In Figure 2-28, *lan* appears next to the icon, and only those items with *lan* in the title are displayed.

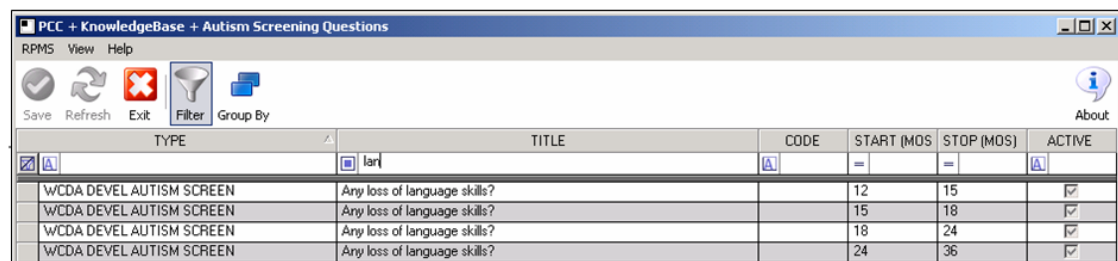


Figure 2-28: Autism Screening Questions—Filtered List

2.3.3 Using the Group By Tool

Another useful feature is the Group By tool shown in Figure 2-29.

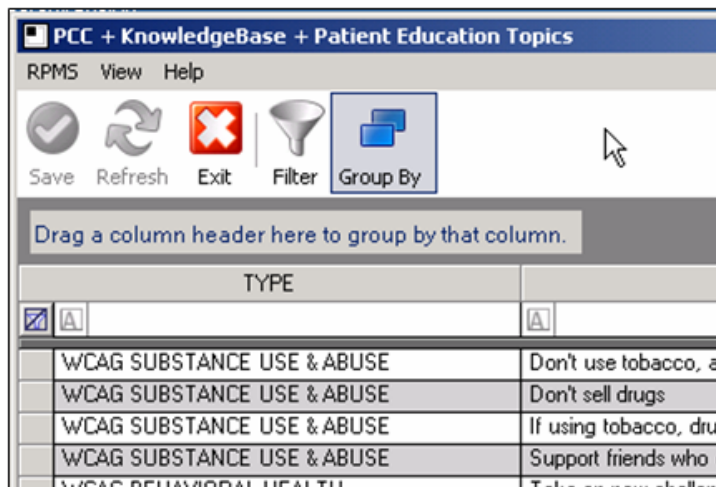


Figure 2-29: Group By tool

To use Group By:

1. Click **Group By**.
2. Drag one or more column headings to the space below the Group By button to sort the list. Figure 2-30 shows the Patient Education Topics list sorted by TYPE and then START (MOS).

Note: When you drag column headings, they are surrounded by small red markers while being dragged into the “Group By” area. When you release a column heading in the Group By area, that column disappears from the table. The column reappears immediately as expandable groups and subgroups. A column heading converts to a group, subgroup, or sub-subgroup depending on the order in which you dragged the column headings to the Group By area.

After reformatting, you can expand a group into its individual items by clicking the boxed plus sign (+) next to the item name. Figure 2-30 shows the regrouped Patient Education Topics in the Knowledgebase Editor.

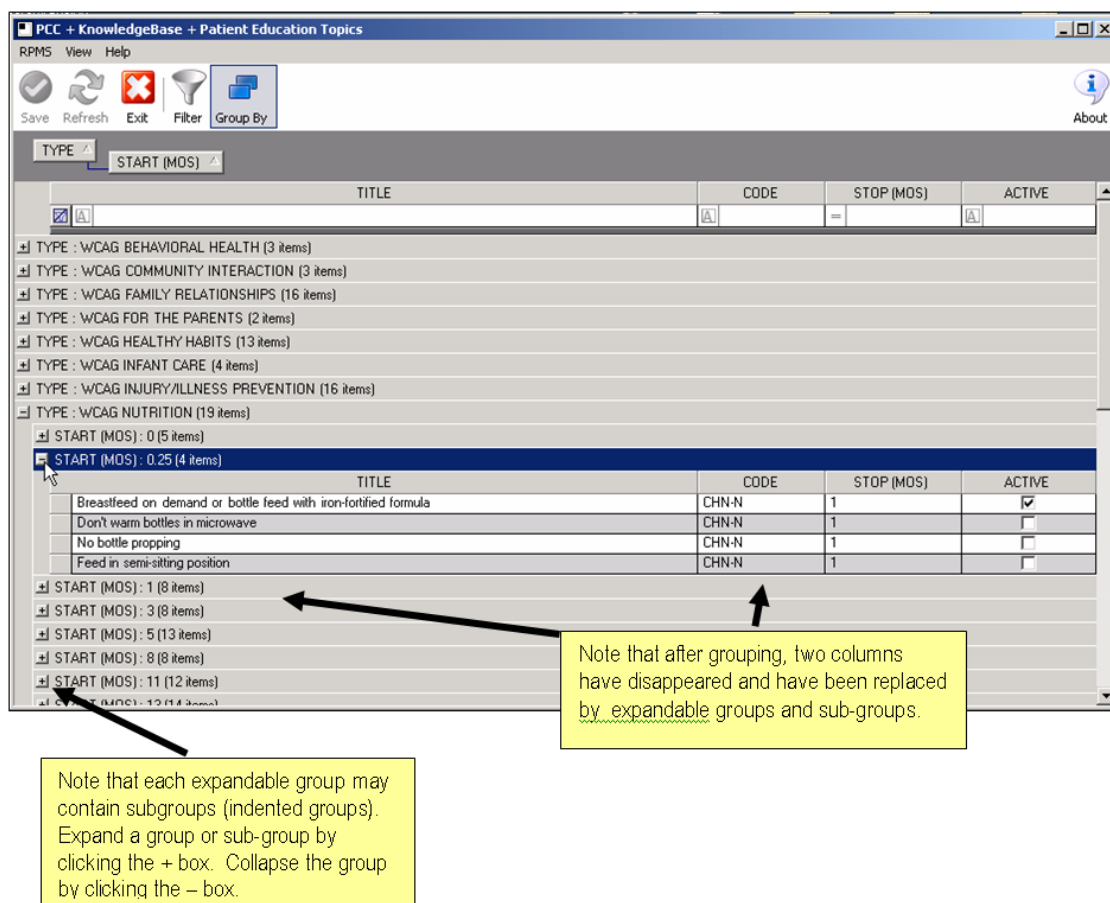


Figure 2-30: Patient Education Topics after using Group By

- Click RPMS in the menu bar, as shown in Figure 2-31, to select another Knowledgebase Editor when you finish editing. This opens the Open Knowledgebase Editor dialog box shown in Figure 2-31.

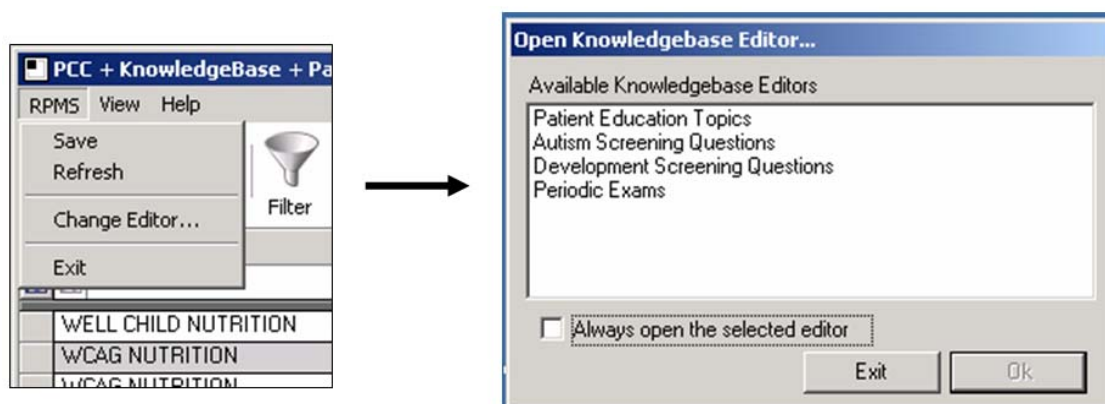


Figure 2-31: Changing Knowledgebase Editors

2.4 The WCE Mnemonic for Data Entry

Most information captured during a PCC data entry session is entered in the usual way by calling the standard mnemonics that have been in place for years; such as., "PV", "PRV", "WT", and so on. However, information that is specifically associated with the well-child exam can be added with a new mnemonic: "WCE". The WCE mnemonic differs from traditional mnemonics in two important ways.

- Mnemonic input is synchronized with one specific well-child visit. Consequently, the data entry dialog box changes somewhat each time a new data set is entered. In addition, the workflow mirrors the organization of data on a specific encounter form.
- Many different kinds of data elements are collected within one single mnemonic's input dialog box. This simplifies navigation, improves efficiency, and reduces user error.

2.4.1 General Instructions

The data entry operator can call the WCE mnemonic at any time during the data entry session of a specific encounter. Note that the elements of the WCM data entry session can be requested individually, or the can be called sequentially by selecting "ALL". The ALL option is the recommended choice. Figure 2-32 shows a list patient education topics with some items selected.

Select from the list of standard patient education topics:

1. Alternatives to TV
2. Always supervised around water
3. Car Seat
4. Dental hygiene
5. Encourage identification programs
6. Helmet/protective gear for sports

Select ITEMS by number: 1-5

Select a number or a valid range of numbers

1. Alternatives to TV [SELECTED]
2. Always supervised around water [SELECTED]
3. Car Seat [SELECTED]
4. Dental hygiene [SELECTED]
5. Encourage identification programs [SELECTED]
6. Helmet/protective gear for sports

Want to make any additional changes? No// Y (Yes)

Select ITEMS by number: -3-4

De-select a valid range of numbers by putting a minus sign in front

1. Alternatives to TV [SELECTED]
2. Always supervised around water [SELECTED]
3. Car Seat
4. Dental hygiene
5. Encourage identification programs [SELECTED]
6. Helmet/protective gear for sports

Select MNEMONIC: WCE WELL CHILD EXAM ALLOWED

*** DATA ENTRY - WELL CHILD EXAM ***

Select one of the following:

1	Clinic	}	Get direct access to the CLN, PRV, and PV mnemonics without exiting the WCE mnemonic
2	Provider		
3	POW		
4	Development assessment	}	Specific WCM elements
5	Patient education		
6	Nutrition		
7	Screening exams	}	Loop through all well child exam elements (4-8) with a single request
8	ASQ score		
A	ALL well child exam elements		
Q	QUIT THIS MNEMONIC		

Your choice: A// 5

Select from the list of standard patient education topics:

1. Alternatives to TV
2. Always supervised around water
3. Car Seat
4. Dental hygiene

Select ITEMS by number: 1-4

After selecting an item (or multiple items), the list is reprinted with selected items marked as such. The process can be repeated

1. Alternatives to TV [SELECTED]
2. Always supervised around water [SELECTED]
3. Car Seat [SELECTED]
4. Dental hygiene [SELECTED]

Want to make any additional changes? No// NO

Figure 2-32: Selection example using patient education topics

There are several ways to select items from a list. The simplest way is to select items—one at a time—by number. You can also enter a valid range of numbers: starting number, hyphen (dash), ending number. Put a minus sign in front of a number—or range of numbers—to deselect items.

2.4.2 Patient Education (Anticipatory Guidance)

This section provides instructions for entering patient education results.

To record patient level of understanding and visit time:

1. Select patient education items from the list (see example in section 2.4.1). Note that this list is different for each encounter.
2. Enter the level of understanding and the total time recorded for the patient-education services on this visit as shown in Figure 2-33.

If possible, record the level of understanding and duration of patient education session

Select one of the following:

1 POOR

2 FAIR

3 GOOD

5

REFUSED understanding: 2// 3 GOOD

Total patient education time (min): (1-100): 60//

Figure 2-33: Patient Education Results

2.4.3 Nutritional Education

The instructions for entering nutritional education results are identical to entering patient education results (see example in section 2.4.2).

2.4.4 Development Comments and Assessments

Sample developmental milestones are printed in the knowledgebase guidelines for the visit. The provider can use these guidelines to do an informal developmental assessment of the child. At the end of this assessment, the provider can record comments about the developmental exam as shown in Figure 2-34. Note that this section of the well-child encounter is not the same as from the periodic, formal development assessment known as the ASQ (see section 2.4.6).

Select one of the following:

1	Clinic
2	Provider
3	POV
4	Development comments/assessments
5	Patient education
6	Nutrition
7	Screening exams
8	ASQ score
A	ALL well child elements
Q	QUIT THIS MNEMONIC

Your choice: **4** Development comments/assessments

Enter development comments/assessments

Fine motor: OK//
 Gross motor: OK//
 Language: OK// **SLIGHTLY DELAYED. RECHECK IN 2 MONTHS**
 Social: OK//

Figure 2-34: Development comments and assessment entries

2.4.5 ASQ Scores

The ASQ is a formal, periodic developmental assessment. The parent fills out an assessment form. The provider tallies the scores on the five sections of the questionnaire and records them in the record as shown in Figure 2-35. Five separate scores are recorded for each ASQ exam, and each valid score must be a multiple of 5; “20” would be a valid score but “21” would be an invalid score.

Select one of the following:

1	Clinic
2	Provider
3	POV
4	Development comments/assessments
5	Patient education
6	Nutrition
7	Screening exams
8	ASQ score
A	ALL well child elements
Q	QUIT THIS MNEMONIC

Your choice: **8** ASQ score

ASQ - FINE MOTOR: **50**
 ASQ - GROSS MOTOR: **35**
 ASQ - LANGUAGE: **25**
 ASQ - SOCIAL: **10**
 ASQ - PROBLEM SOLVING: **35**

Figure 2-35: ASQ Score entries

2.4.6 Screening Exams

There are four types of screening exams: Age-specific, physical exams, general-health exams (apply to all patients), special-risk-screening exams (apply only to certain high risk patients with pre-disposing conditions), and behavioral-health screening exams. In most cases, the provider can record which screening exams were completed and the results of the exam (normal or abnormal) as shown in Figure 2-36, which is displayed on following pages.

Select one of the following:	
1	Clinic
2	Provider
3	POV
4	Development comments/assessments
5	Patient education
6	Nutrition
7	Screening exams
8	ASQ score
A	ALL well child elements
Q	QUIT THIS MNEMONIC
Your choice: 7 Screening exams	
Select EXAM TYPE	
Select one of the following:	
1	General health screening
2	Age-specific physical exam
3	Special risk screening
4	Behavioral health screening
A	ALL OF ABOVE
0	Other exams
Q	QUIT ENTERING EXAMS
Your choice: 3 Special risk screening	
Select special risk screening exam(s)	
1. At risk for TB: PPD	
2. Family hx of lipid disorder, diabetes, acanthosis: Lipid screen	
3. Anemia screen	
4. Lead	
Select ITEMS by number: 3	
1. At risk for TB: PPD	
2. Family hx of lipid disorder, diabetes, acanthosis: Lipid screen	
3. Anemia screen [SELECTED]	
4. Lead	
Want to make any additional changes? No// (No)	

```

Anemia screen
Exam result (N or A): N  NORMAL

    Select one of the following:

        1      General health screening
        2      Age-specific physical exam
        3      Special risk screening
        4      Behavioral health screening
        A      ALL OF ABOVE
        0      Other exams
        Q      QUIT ENTERING EXAMS

Your choice: QUIT ENTERING EXAMS
        0      Other exams
        Q      QUIT ENTERING EXAMS

Your choice: QUIT ENTERING EXAMS

```

Figure 2-36: Screening Exam example

2.4.7 Sample Data Entry Session for Well Child Care

Figure 2-37 provides an example of a data entry session for well-child care, as shown on the pages which follow.

```

----- VISIT FILE -----
VISIT/ADMIT DATE&TIME: NOV 02, 2005@18:51
DATE VISIT CREATED: NOV 02, 2005      TYPE: IHS
PATIENT NAME: WATERMAN,RAE            LOC. OF ENCOUNTER: SELLS HOSPITAL/CLINIC
SERVICE CATEGORY: AMBULATORY
DATE LAST MODIFIED: DEC 27, 2005      USER LAST UPDATE: SHORR,GREG
VCN: 100003.381A
-----

Select MNEMONIC: WCE      WELL CHILD EXAM      ALLOWED
          *** DATA ENTRY - WELL CHILD EXAM ***

    Select one of the following:
        1      Clinic
        2      Provider
        3      POV
        4      Development comments/assessments
        5      Patient education
        6      Nutrition
        7      Screening exams
        8      ASQ score
        A      ALL well child elements
        Q      QUIT THIS MNEMONIC
Your choice: A// 1 Clinic

CLINIC: WELL CHILD// WELL CHILD

    Select one of the following:
        1      Clinic
        2      Provider
        3      POV
        4      Development comments/assessments
        5      Patient education
        6      Nutrition
        7      Screening exams

```

```
      8      ASQ score
      A      ALL well child elements
      Q      QUIT THIS MNEMONIC
Your choice: 2  Provider

Enter PROVIDER (code/initials or name): QUICK, DAN
P)primary or S)econdary?: P  PRIMARY
Enter a SECONDARY PROVIDER (code/initials or name): YAO, JOE

      Select one of the following:
      1      Clinic
      2      Provider
      3      POV
      4      Development comments/assessments
      5      Patient education
      6      Nutrition
      7      Screening exams
      8      ASQ score
      A      ALL well child elements
      Q      QUIT THIS MNEMONIC
Your choice: POV

***  WELL CHILD EXAM (V20.2) has been automatically added as a POV  ***
Add additional POV's below...

Enter PURPOSE of VISIT:

      Select one of the following:
      1      Clinic
      2      Provider
      3      POV
      4      Development comments/assessments
      5      Patient education
      6      Nutrition
      7      Screening exams
      8      ASQ score
      A      ALL well child elements
      Q      QUIT THIS MNEMONIC
Your choice: 4  Development comments/assessments

Enter development comments/assessments

Fine motor: OK//
Gross motor: OK//
Language: OK// SLIGHTLY DELAYED.  RECHECK IN 2 MONTHS
Social: OK//

      Select one of the following:
      1      Clinic
      2      Provider
      3      POV
      4      Development comments/assessments
      5      Patient education
      6      Nutrition
      7      Screening exams
      8      ASQ score
      A      ALL well child elements
      Q      QUIT THIS MNEMONIC
Your choice: 5  Patient education
```

Select from the list of standard patient education topics:

1. Alternatives to TV
2. Always supervised around water
3. Car Seat
4. Dental hygiene
5. Encourage identification programs
6. Helmet/protective gear for sports

Select ITEMS by number: **1-5**

1. Alternatives to TV [SELECTED]
2. Always supervised around water [SELECTED]
3. Car Seat [SELECTED]
4. Dental hygiene [SELECTED]
5. Encourage identification programs [SELECTED]
6. Helmet/protective gear for sports

Want to make any additional changes? No// Y (Yes)

Select ITEMS by number: **-3-4**

1. Alternatives to TV [SELECTED]
2. Always supervised around water [SELECTED]
3. Car Seat
4. Dental hygiene
5. Encourage identification programs [SELECTED]
6. Helmet/protective gear for sports

Want to make any additional changes? No//N (No)

If possible, record the level of understanding and duration of patient education session

Select one of the following:

- | | |
|---|---------|
| 1 | POOR |
| 2 | FAIR |
| 3 | GOOD |
| 5 | REFUSED |

Level of understanding: **3** GOOD

Total patient education time (min): (1-100): **20**

Want to enter any patient education topics not listed above? No//N (No)

Select one of the following:

- | | |
|---|----------------------------------|
| 1 | Clinic |
| 2 | Provider |
| 3 | POV |
| 4 | Development comments/assessments |
| 5 | Patient education |
| 6 | Nutrition |
| 7 | Screening exams |
| 8 | ASQ score |
| A | ALL well child elements |
| Q | QUIT THIS MNEMONIC |

Your choice: **6** Nutrition

Select from the list of standard nutrition counseling topics:

1. 2-3 snacks a day
2. Ensure balanced diet
3. Feed at family mealtimes, make enjoyable
4. Offer nutritious foods, child decides amount

Select ITEMS by number: **1-4**

1. 2-3 snacks a day [SELECTED]
 2. Ensure balanced diet [SELECTED]
 3. Feed at family mealtimes, make enjoyable [SELECTED]
 4. Offer nutritious foods, child decides amount [SELECTED]
 Want to make any additional changes? No// -2??
 Answer with 'Yes' or 'No': Y (Yes)
 Select ITEMS by number: -2

1. 2-3 snacks a day [SELECTED]
 2. Ensure balanced diet
 3. Feed at family mealtimes, make enjoyable [SELECTED]
 4. Offer nutritious foods, child decides amount [SELECTED]
 Want to make any additional changes? No//N (No)
 If possible, record the level of understanding and duration of nutrition counseling session

Select one of the following:

1	POOR
2	FAIR
3	GOOD
5	REFUSED

Level of understanding: 2 **FAIR**
 Total nutrition counseling time (min): (1-100): **10**

Select one of the following:

1	Clinic
2	Provider
3	POV
4	Development comments/assessments
5	Patient education
6	Nutrition
7	Screening exams
8	ASQ score
A	ALL well child elements
Q	QUIT THIS MNEMONIC

Your choice: 7 Screening exams

Select EXAM TYPE

Select one of the following:

1	General health screening
2	Age-specific physical exam
3	Special risk screening
4	Behavioral health screening
A	ALL OF ABOVE
0	Other exams
Q	QUIT ENTERING EXAMS

Your choice: 3 Special risk screening

Select special risk screening exam(s)

- At risk for TB: PPD
- Family hx of lipid disorder, diabetes, acanthosis: Lipid screen
- Anemia screen
- Lead

Select ITEMS by number: 3

- At risk for TB: PPD

2. Family hx of lipid disorder, diabetes, acanthosis: Lipid screen
3. Anemia screen [SELECTED]
4. Lead
Want to make any additional changes? No// (No)
Anemia screen
Exam result (N or A): **N** NORMAL

Select one of the following:

1	General health screening
2	Age-specific physical exam
3	Special risk screening
4	Behavioral health screening
A	ALL OF ABOVE
0	Other exams
Q	QUIT ENTERING EXAMS

Your choice: **QUIT** ENTERING EXAMS

Select one of the following:

1	Clinic
2	Provider
3	POV
4	Development comments/assessments
5	Patient education
6	Nutrition
7	Screening exams
8	ASQ score
A	ALL well child elements
Q	QUIT THIS MNEMONIC

Your choice: **8** ASQ score

ASQ - FINE MOTOR: **50**
ASQ - GROSS MOTOR: **35**
ASQ - LANGUAGE: **25**
ASQ - SOCIAL: **10**
ASQ - PROBLEM SOLVING: **50**

Select one of the following:

1	Clinic
2	Provider
3	POV
4	Development comments/assessments
5	Patient education
6	Nutrition
7	Screening exams
8	ASQ score
A	ALL well child elements
Q	QUIT THIS MNEMONIC

Your choice: **Q**

Figure 2-37: Sample Well-Child Care data entry session

2.5 Getting the Most from the Well Child Module

To take maximum advantage of WCM technology, we strongly recommend that you enter all measurements, including vitals and ASQ scores, BEFORE the PCC+ form is printed. That way the results appear on the printed form. The provider can view all the current results, including the updated growth grid and ASQ scores. This information helps guide the exam, and it benefits the patient, parent, and provider.

3.0 RPMS Specific Rules of Behavior

In addition, to the Rules of Behavior (RoBs) that follow, the following special rules are required for use of PCC+:

Each PCC+ form contains confidential patient information and must be treated with the same respect and security precautions as all other patient records. PCC+ printer servers must be located in a secure area. All printers used to print PCC+ documents must be located in the medical records departments or in clinical areas that cannot be accessed by unauthorized personnel.

3.1 All RPMS Users

In addition to these rules, each application may include additional RoBs, which may be defined within the individual application's documentation (e.g., PCC, Dental, Pharmacy).

3.1.1 Access

RPMS Users Shall:

- ✓ Only use data for which you have been granted authorization.
- ✓ Only give information to personnel who have access authority and have a need to know.
- ✓ Always verify a caller's identification and job purpose with your supervisor or the entity provided as employer *before* providing any type of information system access, sensitive information, or non-public agency information.
- ✓ Be aware that personal use of information resources is authorized on a limited basis within the provisions Indian Health Manual Chapter 6 OMS Limited Personal Use of Information Technology Resources TN 03-05," August 6, 2003.

- ✗ Retrieve information for someone who does not have authority to access the information.
- ✗ Access, research, or change any user account, file, directory, table, or record not required to perform your OFFICIAL duties.
- ✗ Store sensitive files on a PC hard drive, or portable devices or media, if access to the PC or files cannot be physically or technically limited.
- ✗ Exceed their authorized access limits in RPMS by changing information or searching databases beyond the responsibilities of their job or by divulging information to anyone not authorized to know that information.

3.1.2 Logging On To the System

RPMS Users Shall:

- ✓ Have a unique User Identification/Account name and password.
- ✓ Be granted access based on authenticating the account name and password entered.
- ✓ Be locked out of an account after 5 successive failed login attempts within a specified time period (e.g., one hour).

3.1.3 Information Accessibility

RPMS shall restrict access to information based on the type and identity of the user. However, regardless of the type of user, access shall be restricted to the minimum level necessary to perform the job.

Users Shall:

- ✓ Access only those documents they created and those other documents to which they have a valid need-to-know and to which they have specifically granted access through an RPMS application based on their menus (job roles), keys, and FileMan access codes. Some users may be afforded additional privileges based on the function they perform such as system administrator or application administrator.
- ✓ Acquire a written preauthorization in accordance with IHS policies and procedures prior to interconnection to or transferring data from RPMS.

3.1.4 Accountability

Users Shall:

- ✓ Behave in an ethical, technically proficient, informed, and trustworthy manner.
- ✓ Logout of the system whenever they leave the vicinity of their PC.
- ✓ Be alert to threats and vulnerabilities in the security of the system.
- ✓ Report all security incidents to their local Information System Security Officer (ISSO)
- ✓ Differentiate tasks and functions to ensure that no one person has sole access to or control over important resources.
- ✓ Protect all sensitive data entrusted to them as part of their government employment.
- ✓ Shall abide by all Department and Agency policies and procedures and guidelines related to ethics, conduct, behavior and IT information processes.

3.1.5 Confidentiality

Users Shall:

- ✓ Be aware of the sensitivity of electronic and hardcopy information, and protect it accordingly.
- ✓ Store hardcopy reports/storage media containing confidential information in a locked room or cabinet.
- ✓ Erase sensitive data on storage media, prior to reusing or disposing of the media.
- ✓ Protect all RPMS terminals from public viewing at all times.
- ✓ Abide by all HIPAA regulations to ensure patient confidentiality.

Users Shall Not:

- X** Allow confidential information to remain on the PC screen when someone who is not authorized to that data is in the vicinity.
- X** Store sensitive files on a portable device or media without encrypting.

3.1.6 Integrity

Users Shall:

- ✓ Protect your system against viruses and similar malicious programs.
- ✓ Observe all software license agreements.
- ✓ Follow industry standard procedures for maintaining and managing RPMS hardware, operating system software, application software, and/or database software and database tables.
- ✓ Comply with all copyright regulations and license agreements associated with RPMS software.

Users Shall Not:

- X** Violate Federal copyright laws.
- X** Install or use unauthorized software within the system libraries or folders.
- X** Use freeware, shareware or public domain software on/with the system without your manager's written permission and without scanning it for viruses first.

3.1.7 Passwords

Users Shall:

- ✓ Change passwords a minimum of every 90 days.
- ✓ Create passwords with a minimum of eight characters.
- ✓ If the system allows, use a combination of alpha, numeric characters for passwords, with at least one uppercase letter, one lower case letter, and one number. It is recommended, if possible, that a special character also be used in the password.
- ✓ Change vendor-supplied passwords immediately.
- ✓ Protect passwords by committing them to memory or store them in a safe place

Users Shall:

(do not store passwords in login scripts, or batch files.

- ✓ Change password immediately if password has been seen, guessed or otherwise compromised; and report the compromise or suspected compromise to your ISSO.
- ✓ Keep user identifications (ID) and passwords confidential.

Users Shall Not:

- ✗ Use common words found in any dictionary as a password.
- ✗ Use obvious readable passwords or passwords that incorporate personal data elements (e.g., user's name, date of birth, address, telephone number, or social security number; names of children or spouses; favorite band, sports team, or automobile; or other personal attributes).
- ✗ Share passwords/IDs with anyone or accept the use of another's password/ID, even if offered.
- ✗ Reuse passwords. A new password must contain no more than five characters per 8 characters from the previous password.
- ✗ Post passwords.
- ✗ Keep a password list in an obvious place, such as under keyboards, in desk drawers, or in any other location where it might be disclosed.
- ✗ Give a password out over the phone.

3.1.8 Backups

Users Shall:

- ✓ Plan for contingencies such as physical disasters, loss of processing, and disclosure of information by preparing alternate work strategies and system recovery mechanisms.
- ✓ Make backups of systems and files on a regular, defined basis.
- ✓ If possible, store backups away from the system in a secure environment.

3.1.9 Reporting

Users Shall:

- ✓ Contact and inform your ISSO that you have identified an IT security incident and you will begin the reporting process by providing an IT Incident Reporting Form regarding this incident.
- ✓ Report security incidents as detailed in IHS SOP 05-03, *Incident Handling Guide*.

Users Shall Not:

- ✗ Assume that someone else has already reported an incident. The risk of an incident going unreported far outweighs the possibility that an incident gets reported more than once.

3.1.10 Session Time Outs

RPMS system implements system-based timeouts that back users out of a prompt after no more than 5 minutes of inactivity.

Users Shall:

- ✓ Utilize a screen saver with password protection set to suspend operations at no greater than 10-minutes of inactivity. This will prevent inappropriate access and viewing of any material displayed on your screen after some period of inactivity.

3.1.11 Hardware

Users Shall:

- ✓ Avoid placing system equipment near obvious environmental hazards (e.g., water pipes).
- ✓ Keep an inventory of all system equipment.
- ✓ Keep records of maintenance/repairs performed on system equipment.

Users Shall Not:

- X Do not eat or drink near system equipment.

3.1.12 Awareness

Users Shall:

- ✓ Participate in organization-wide security training as required.
- ✓ Read and adhere to security information pertaining to system hardware and software.
- ✓ Take the annual information security awareness.
- ✓ Read all applicable RPMS Manuals for the applications used in their jobs.

3.1.13 Remote Access

Each subscriber organization establishes its own policies for determining which employees may work at home or in other remote workplace locations. Any remote work arrangement should include policies that:

- a. Are in writing.
- b. Provide authentication of the remote user through the use of ID and password or other acceptable technical means.
- c. Outline the work requirements and the security safeguards and procedures the employee is expected to follow.
- d. Ensure adequate storage of files, removal and non-recovery of temporary files created in processing sensitive data, virus protection,

intrusion detection, and provides physical security for government equipment and sensitive data.

- e. Establish mechanisms to back up data created and/or stored at alternate work locations.

Remote Users Shall:

- ✓ Remotely access RPMS through a virtual private network (VPN) when ever possible. Use of direct dial in access must be justified and approved in writing and its use secured in accordance with industry best practices or government procedures.

Remote Users Shall Not:

- X Disable any encryption established for network, internet and web browser communications.

3.2 RPMS Developers

Developers Shall:

- ✓ Always be mindful of protecting the confidentiality, availability, and integrity of RPMS when writing or revising code.
- ✓ Always follow the IHS RPMS Programming Standards and Conventions (SAC) when developing for RPMS.
- ✓ Only access information or code within the namespaces for which they have been assigned as part of their duties.
- ✓ Remember that all RPMS code is the property of the U.S. Government, not the developer.
- ✓ Shall not access live production systems without obtaining appropriate written access, shall only retain that access for the shortest period possible to accomplish the task that requires the access.
- ✓ Shall observe separation of duties policies and procedures to the fullest extent possible.
- ✓ Shall document or comment all changes to any RPMS software at the time the change or update is made. Documentation shall include the programmer's initials, date of change and reason for the change.
- ✓ Shall use checksums or other integrity mechanism when releasing their certified applications to assure the integrity of the routines within their RPMS applications.
- ✓ Shall follow industry best standards for systems they are assigned to develop or maintain; abide by all Department and Agency policies and procedures.
- ✓ Shall document and implement security processes whenever available.

Developers Shall Not:

- X** Write any code that adversely impacts RPMS, such as backdoor access, “Easter eggs,” time bombs, or any other malicious code or make inappropriate comments within the code, manuals, or help frames.
- X** Grant any user or system administrator access to RPMS unless proper documentation is provided.
- X** Not release any sensitive agency or patient information.

3.3 Privileged Users

Personnel who have significant access to processes and data in RPMS, such as, system security administrators, systems administrators, and database administrators have added responsibilities to ensure the secure operation of RPMS.

Privileged Users Shall:

- ✓ Verify that any user requesting access to any RPMS system has completed the appropriate access request forms.
- ✓ Ensure that government personnel and contractor personnel understand and comply with license requirements. End users, supervisors, and functional managers are ultimately responsible for this compliance.
- ✓ Advise the system owner on matters concerning information technology security.
- ✓ Assist the system owner in developing security plans, risk assessments, and supporting documentation for the certification and accreditation process.
- ✓ Ensure that any changes to RPMS that affect contingency and disaster recovery plans are conveyed to the person responsible for maintaining continuity of operations plans.
- ✓ Ensure that adequate physical and administrative safeguards are operational within their areas of responsibility and that access to information and data is restricted to authorized personnel on a need to know basis.
- ✓ Verify that users have received appropriate security training before allowing access to RPMS.
- ✓ Implement applicable security access procedures and mechanisms, incorporate appropriate levels of system auditing, and review audit logs.
- ✓ Document and investigate known or suspected security incidents or violations and report them to the ISSO, CISO, and systems owner.
- ✓ Protect the supervisor, superuser or system administrator passwords.
- ✓ Avoid instances where the same individual has responsibility for several functions (i.e., transaction entry and transaction approval).
- ✓ Watch for unscheduled, unusual, and unauthorized programs.
- ✓ Help train system users on the appropriate use and security of the system.
- ✓ Establish protective controls to ensure the accountability, integrity, confidentiality, and availability of the system.

Privileged Users Shall:

- ✓ Replace passwords when a compromise is suspected. Delete user accounts as quickly as possible from the time that the user is no longer authorized system. Passwords forgotten by their owner should be replaced, not reissued.
- ✓ Terminate user accounts when a user transfers or has been terminated. If the user has authority to grant authorizations to others, review these other authorizations. Retrieve any devices used to gain access to the system or equipment. Cancel logon IDs and passwords, and delete or reassign related active and back up files.
- ✓ Use a suspend program to prevent an unauthorized user from logging on with the current user's ID if the system is left on and unattended.
- ✓ Verify the identity of the user when resetting passwords. This can be done either in person or having the user answer a question that can be compared to one in the administrator's database.
- ✓ Shall follow industry best standards for systems they are assigned to; abide by all Department and Agency policies and procedures.

Privileged Shall Not:

- X Access any files, records, systems, etc., that are not explicitly needed to perform their duties
- X Grant any user or system administrator access to RPMS unless proper documentation is provided.
- X Not release any sensitive agency or patient information.

4.0 Glossary

Term	Definition
Archiving	The storing of historical or little-used data off-line (often on tape).
ASUFAC number	Area Service Unit Facility; A unique identifier for each facility within IHS. A six-digit number comprised of 2 digits for Area, 2 digits for Service Unit, and 2 digits for Facility.
Banner	A line of text with a user's name and domain.
Browser	An interactive application that displays ASCII text on a terminal that supports a scroll region. The text can be in the form of a word-processing field or sequential local or global array. The user is allowed to navigate freely within the document.
Callable Entry Points	Places in a routine that can be called from an application program.
Cross-reference	An indexing method whereby files can include pre-sorted lists of entries as part of the stored database. Cross-references (x-refs) facilitate look-up and reporting.
Default Facility	A user selects a facility identification to work with patients registered to that facility.
Entry Point	Entry point within a routine that is referenced by a "DO" or "GOTO" command from a routine internal to a package.
File	A set of related records or entries treated as a single unit.
FileMan	The database management system for RPMS.
Global	In MUMPS, global refers to a variable stored on disk (global variable) or the array to which the global variable may belong (global array).
Health Record Number (HRN)	Each facility assigns a unique number within that facility to each patient. Each HRN with its facility identification "ASUFAC" make a unique identifier within all of IHS.

Term	Definition
INDEX (%INDEX)	A Kernel utility used to verify routines and other MUMPS code associated with a package. Checking is done according to current ANSI MUMPS standards and RPMS programming standards. This tool can be invoked through an option or from direct mode (>D ^%INDEX).
Init	Initialization of an application package. The initialization step in the installation process builds files from a set of routines (the init routines). Init is a shortened form of initialization.
Internal Entry Number (IEN)	The number used to identify an entry within a file. Every record has a unique internal entry number.
IRM	Information Resource Management. The IHS personnel responsible for information systems management and security.
Kernel	The set of MUMPS software utilities that function as an intermediary between the host operating system and application packages, such as Laboratory and Pharmacy. The Kernel provides a standard and consistent user and programmer interface between application packages and the underlying MUMPS implementation. These utilities provide the foundation for RPMS.
Menu	A list of choices for computing activity. A menu is a type of option designed to identify a series of items (other options) for presentation to the user for selection. When displayed, menu-type options are preceded by the word “Select” and followed by the word “option” as in Select Menu Management option: (the menu’s select prompt).
Namespace	A unique set of 2 to 4 alpha characters that are assigned by the database administrator to a software application.
Option	An entry in the Option file. As an item on a menu, an option provides an opportunity for users to select it, thereby invoking the associated computing activity. Options may also be scheduled to run in the background, non-interactively, by TaskMan.
Patient Care Component (PCC)	The central repository for data in the Resource and Patient Management System (RPMS).

Term	Definition
PCC+ Clinic*	A specific defined location within the local health care facility where care is delivered; “Family Medicine West” or “High Risk Prenatal Clinic”. Each PCC+ clinic is associated with a default PCC+ template, default PCC+ document printer location, and default provider. Note that a PCC+ clinic differs from a RPMS “Clinic Stop” and a hospital location used in the scheduling package.
Print daemon*	A background RPMS process that manages user requests to print PCC+ templates and passes the requests to the PCC+ print service.
Print service*	A live Windows process on each PCC+ print server that fields requests from the PCC+ Print Daemon and generates fully-merged, visit-specific PCC+ templates on the appropriate printer.
Print Server*	A dedicated Windows server that hosts the PCC+ print service stores all PCC+ templates and generates PCC+ documents.
Queuing	Requesting that a job be processed at a later time rather than within the current session.
Routine	A program or sequence of instructions called by a program that may have some general or frequent use. MUMPS routines are groups of program lines that are saved, loaded, and called as a single unit via a specific name.
Template	A PCC+ encounter form stored as a Word mail merge document.
Template*	A Word document that links the contents of the RPMS database to a PCC+ encounter form via MS Word’s mail merge process.
UCI	User Class Identification: a computing area.
Up-Hat (^)	A circumflex, also known as a “hat” or “caret,” that is used as a piece delimiter in a global. The up-hat is denoted as “^” and is typed by pressing Shift+6 on the keyboard.
Utility	A callable routine line tag or function. A universal routine usable by anyone.

Term	Definition
Variable	A character or group of characters that refers to a value. MUMPS recognizes 3 types of variables: local variables, global variables, and special variables. Local variables exist in a partition of the main memory and disappear at sign-off. A global variable is stored on disk, potentially available to any user. Global variables usually exist as parts of global arrays.

5.0 Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT User Support (IHS) by:

Phone: (505) 248-4371 or
(888) 830-7280

Fax: (505) 248-4279

Web: <http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm>

Email: support@ihs.gov