



## **Knowledge Based Charting (KBC) 3.0 in Allscripts™ SCM: What to Expect**

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Allscripts, with input from the Clinical Practice Model Resource Center (CPMRC), has recently redesigned the Knowledge Based Charting (KBC) offering. It is now streamlined and is much more intuitive to the caregiver. There are new process questions and configuration options to consider.

### **Flow Sheet Changes**

Prior to KBC 3.0, there were four flow sheets for each age group:

1. KBC Adult Plan of Care
2. KBC Adult Assessment and Intervention
3. KBC Adult Education Goal Outcome
4. KBC Adult Goal Outcome Evaluation

Now with KBC 3.0, there are two flow sheets:

1. KBC Adult Plan of Care
2. KBC Adult Assessment and Intervention

The Education and Goal Outcome charting has moved into the Plan of Care flow sheet, reducing the number of flow sheets.

In addition, charting is streamlined and more practical and is not individualized on the Clinical Practice Guideline (CPG). The first section of the Plan of Care flow sheet displays the Individualization (Mutuality/Preferences) section. At top of the Plan of Care flow sheet, you can choose chart individualization. Then you add a CPG to start the plan of care. The CPGs are labeled with POC, like Asthma POC. It was Asthma FT (freetext), but now it just charts whether you've implemented or revised the CPG POC. It's very simple and quick.

If you want to add a goal beyond the CPG goals, you can do that with up to five generic additional goals on the Plan of Care flow sheet. There is a place for a daily goal as well. Caregivers typically add a time column and a daily goal. The charting on these daily goals then shows on the Clinical Summary View Professional Exchange Report, which facilitates the shift hand-off report.

The CPGs are now combined into one list, in alphabetic order. This makes them much easier to find. The caregiver indicates which is medical/surgical and which is human response. In addition to improved CPGs, there are also brand new ones.

Education documentation is streamlined. The person taught and method used are not repeated anymore. Data is charted once, changing them only when appropriate. General Learning Assessment is found only in the profile. Ongoing education is streamlined and faster on the POC flow sheet.

Commonly used observations are pulled out of the CPGs and are available as an Add Parameter, e.g. Comfort/Fever Reduction Measures.

### **Blue Book Auto Reference**

A new feature automatically copies previous charting on specified observations, such as previous anesthesia and previous functional level. A blue book icon displays near this information to show that data is being referenced. If you hover on the book, it will show the actual data that was pulled into the chart. This is set up for the KBC Adult Patient Profile and the KBC Adult Social Work Assessment. It is possible to specify if you want this auto-copy forward to take place at the observation level. This is part of the new standard configuration within the structured notes.

### **Fan Out, Copy Forward**

Fan out from structured notes into flow sheets now works well. For each observation on a flow sheet, you can check if you want it to copy-forward, and specify how far back to look for charting on that observation. When you complete this configuration the copy-forward quickly, or if you want to block any copy-forward, you can do that at the structured note/flow sheet level, and at the observation level within the structured note.

### **A New Nutrition Flow sheet**

The KBC Adult Nutrition Assessment Flow sheet offers an up to date, efficient means of charting for the nutrition staff. This presents one centralized place to chart nutrition history, physical assessment, nutrition calculations, and recommendations. There is also a place to chart the Problem, Etiology, Signs/Symptoms, or PES statement.

There are calculations for caloric, protein, and fluid recommendations. In addition to these, and the Body Mass Index (BMI), Ideal Body Weight (IBW), and Usual Body Weight (UBW) calculations, there are six professional caloric recommendation equations.

### 1. Harris Benedict Equation

- Uses Basic Metabolic Rate (BMR) and an activity factor to determine the total daily energy expenditure in calories
- Omits lean body mass which need more calories
- Equation will be accurate in all but the very muscular (will under-estimate calorie needs) and the very fat (will over-estimate calorie needs)
- Underestimates needs of the critically ill by as much as 100 cal/day; stress, and activity are factors
- Not recommended for the critically ill
- IF ([Gender] = [Male] THEN  $66.5 + (13.8 * \{\text{weightkg}\}) + (5.0 * \{\text{heightcm}\}) - (6.8 * [\text{AgeY}])$  ELSE IF ([Gender] = [female]) THEN  $655.1 + (9.6 * \{\text{weightkg}\}) + (1.9 * \{\text{heightcm}\}) - (4.7 * [\text{AgeY}])$

### 2. Ireton-Jones Equation (IJE)

- Used to estimate BEE in the obese
- Used for burn and trauma patients
- Energy use predictions, but can vary in caloric needs by as much as 500 cal
- Best predictive accuracy of energy expenditure
- IF ([Gender] = [Male] THEN  $1924 - (11 * [\text{AgeY}]) + (5 * \{\text{weightkg}\}) + 244 + (239 * \{\text{trauma}\}) + (804 * \{\text{burns}\})$  ELSE IF ([Gender] = [female]) THEN  $1924 - (11 * [\text{AgeY}]) + (5 * \{\text{weightkg}\}) + (239 * \{\text{trauma}\}) + (804 * \{\text{burns}\})$

### 3. Mifflin-St Jeor

- Estimate of the Basal Energy Expenditure (BEE), aka RMR and RMR
- Gives the most reliable results for general hospital and clinic patients
- Not recommended for critically ill
- IF ([Gender] = [Male]) THEN  $5 + (10 * \{\text{weightkg}\}) + (6.25 * \{\text{heightcm}\}) - (5 * [\text{AgeY}])$  ELSE IF ([Gender] = [Female]) THEN  $-161 + (10 * \{\text{weightkg}\}) + (6.25 * \{\text{heightcm}\}) - (5 * [\text{AgeY}])$

### 4. Owen

- Nutrition intake and protein grams: In the critically ill, protein and calorie requirements are often overestimated
- Indirect calorimetry is the preferred method for determining RMR in critically ill patients
- IF ([Gender] = [Male]) THEN  $879 + (10.2 * \{\text{weightkg}\})$  ELSE IF ([Gender]= [Female]) THEN  $795 + (7.18 * \{\text{weightkg}\})$

## 5. Penn State equation

- Predicts relationship between resting metabolic rate (RMR) and pulmonary dysfunction, and is accurate
- Starts with Harris Benedict but adjusts based on breathing parameters
- Takes into account dyspnea
- Fahrenheit scale: add 7% of REE for every 1° over normal
- $(\{HBE\} * 0.85) + (\{Ve\} * 33) + (\{MaxTempC\} * 175) - 6433$

## 6. Swinamer

- Predicts RMR, good for non-obese patients
- 55% of non-obese subjects were predicted within 10% of RMR
- Includes ventilator and spontaneous breathing
- $(\{BSA\} * 941) - ([AgeY] * 6.3) + (\{TempC\} * 104) + (\{RR\} * 24) + (\{VT\} * 804) - 4243$

## Social Work

A new KBC Adult Social Work Assessment structured note pulls together the information used by social work and case management. This is a comprehensive note enabling documentation of living environment, financial needs, substance use, cognitive and physical function, legal issues, and discharge needs. This social work assessment automatically copies forward information about previous functional level, giving the blue book icon. You can turn this off if you don't want to automatically copy forward.

## Clinical Summary Tiles Changes

Streamlining and other updates mean that we need to change some of our Clinical Summary tiles. Here is a synopsis of the changes you will need to make.

### Substance Use Tile

The prefix PRO is changed to CAS for substance abuse observations; e.g. PRO alcohol freq is changed to CAS alcohol freq.

### Mutuality Tile

There is a section on the POC flow sheet titled "Individualization (Mutuality/Preferences)." Under that section are new observations in KBC 3.0, called "Additional Goals." These include a new Daily Goal. Add these to the mutuality tile to enhance patient care efficiency. Set the timeframe for 24 or even 12 hours for shift report purposes. Consider changing the name of the tile to "Individualization/Mutuality" to adapt to the new section name.

Include the observations GAS additional goal, and up to five additional goals; e.g. GAS additional goal FT and GAS additional goal2FT.

### Nutrition Physical Findings Tile

The word “assess” is added to the nutrition physical finding observations; e.g. AS RD skin is now is changed to AS RD assess skin.

### Plan of Care Tile

In prior versions, we used INVG IND acute pain FT to individualize the Plan of Care. Now in 3.0 we use the INVG POC acute pain as the primary observation for the plan of care. Take out the INVG...FT observations. Add the INVG POC observations.

The new Human Response observations start with HRRF; e.g. HRRF anxiety. Consider adding the HRRF observations to the Plan of Care tile.

### Education Tile

We used to show any charting from the 3.0 KBC Education Outcome Record in the Education tile. Now we show any observations dealing specifically with education. These include the “ED gen” general education observations, with orientation to the room as one example. We also include charting on the additional goals, whose observations start with EDA. And we include any education about the chosen CPG(s), whose observations start with EDG. Include the EDgen, EDA and EDG observations on this tile.

### Goal Outcome Tile

Prior versions of KBC used observations in the pattern of PP...progress. Now we adapt to the new approach and use the pattern PP...assess. This is where we chart the current assessment of the patient’s signs and symptoms relative to the CPG. The caregiver assesses progress to the goal, which is shown in the Goal Outcome tile. Since there are new additional freetext goals, we add those as well. These have the pattern GAS outcome “xxx.”

Each new feature in the KBC 3.0 presents process questions and configurations options. If you would like more information about KBC 3.0 or Allscripts solutions provided by VCS, please contact us at 610.444.1233 or [vcs@getvitalized.com](mailto:vcs@getvitalized.com). Additional information about the services and solutions offered by VCS can be found at our website, [www.getvitalized.com](http://www.getvitalized.com).