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Module 15. Preparing and Presenting Performance Data

Instructor’s Guide

Practice facilitator (PF) competencies addressed in this module:
• Specialized skills for preparing and presenting performance data

Time

• Pre-session preparation for learners: 60 minutes
• Session: 120 minutes

Objectives

After completing this module, learners will be able to:
1. Manipulate performance data to check for out-of-range values and missing values, and then do any necessary cleaning of the data.
2. Produce simple frequencies from data.
3. Prepare a graphic display of performance data.
4. Benchmark the data against an external standard.

Exercises and Activities To Complete Before and During the Session

Pre-session preparation. Ask the learners to review item 1 and complete the activities in items 2-3 (60 minutes)

1. The content of this module.
2. Using data abstracted from Module 14, have learners calculate Healthcare Effectiveness Data and Information Set performance metrics for the clinic WeServeEveryone, for each of the three time periods, using the Performance Metric Calculator contained in the Appendix 15. For a set of potential benchmarks, see the National Committee for Quality Assurance (NCQA) Quality Compass Web site. Available at: https://www.ncqa.org/programs/data-and-information-technology/data-purchase-and-licensing/quality-compass/.
3. Have learners prepare a presentation of the chart audit findings across the three time periods for the “practice.” Have them include run charts and other graphic displays of the performance data in the presentation. Learners may use the Performance Report Generator (available at: http://www.lanetpbrn.net/wp-content/uploads/Performance-Report-Generator_1.xlsb) or another method of their choosing to generate displays.

During the Session. Presentation (15 minutes)

1. Present key concepts from the module.
Discussion. Ask questions and explore answers with learners (25 minutes)

1. What experience have you had in the past collecting and presenting performance data to an organization?
2. What did you learn?
3. What were your experiences preparing your data to present at the session today? What aspect was easiest for you? What was most challenging? What did you learn from the pre-work assignment?

Activity for learners (60 minutes)

1. Have learners break into pairs or small groups. Designate a Practice Facilitator for each group. Have the Practice Facilitator present findings to the group and guide a discussion about the data using the questions contained in the module:

   • How accurately do you believe these data reflect your practice?
   • Are there problems with the data to be considered or corrected before use?
   • What findings did you expect?
   • What findings were surprising?
   • What do these data suggest to you regarding setting goals for improvement at your practice and prioritizing these goals?

Discussion. Ask questions and explore answers with learners (in pairs or small groups). (20 minutes)

1. Have learners provide feedback to their Practice Facilitator using the Start, Stop, Keep format:

   a. Start doing—Something you might start doing in your presentation of data is:
   b. Stop doing—Something you might stop doing is:
   c. Keep doing—Something you should continue doing is:

2. For learners playing the “practice” roles, discuss what it was like to receive data about your practice’s performance.

   a. What were your concerns?
   b. What was most helpful to you about the data?
   c. What was most helpful to you about your interactions with the facilitator?
   d. What did you learn from this exercise, and how will you use this in your work with your practices?
Preparation and reporting data to a practice or its quality improvement (QI) team is one of the most important steps in data-driven improvement and one of your most important roles as a facilitator. To prepare, you will need to ensure that the data you have collected are accurate. You will also need to make sure that you have summarized them and presented them in a way that makes it easy for members of the practice to understand them and where their performance falls in the context of other similar practices or patient populations. Finally, you will need to be prepared to respond to members’ questions and challenges about the data and to help them reflect on the findings and use the findings to stimulate meaningful action toward improving the practice.

Cleaning and Validating Data

An important step toward presenting data to your practice is preparation. Once the data have been collected and you have entered them into a database, you will need to review them for missing entries, internal inconsistencies, or out-of-range values (e.g., systolic blood pressure of 1125 mm Hg). These need to be corrected or removed from the spreadsheet.

One way to clean and validate data is to manually check the data in your data collection spreadsheets. Look at the data and ask yourself: Is each number plausible? Does the sequence of dates make sense? Do any of the data elements conflict with each other?

Another method is to run frequencies using a statistical program. A number of good online training programs teach basic skills for working with data using statistical software programs. These programs can identify data outliers and inconsistencies.

You will need to talk to staff and clinicians at the practice to better understand the validity or other problems with the data you are collecting. With electronic health records (EHRs) in particular, there can be data elements filled with meaningless data, entered simply to fill a required field. Talk to practice staff to find out whether there are any “junk codes” where the data are not what they appear to be. Much of your early work setting up performance systems is likely to focus on getting data and fixing data so they are accurate.

It is also common for entry fields on EHRs to have been inadvertently mapped to the wrong variable labels in the underlying databases, which are used to generate reports on patient care and practice performance. These mistakes can be difficult to identify but can introduce significant errors into any patient and performance reporting. Clinicians and staff can alert you to areas where these mapping mistakes may exist. When results are inconsistent with what is expected, or seem “strange” to clinicians and staff, this should be a red flag to check for mapping errors.
Describing Your Methods

When preparing reports, be sure to include a description of the methodology. How was the patient sample generated? What time period was used? What were the search parameters? Were any potential respondents or data sources excluded and why? This information is essential for interpreting the results accurately.

Failure to provide sufficient detail when you report data to the practice team can make the data difficult to interpret and validate. Providing too much detail, on the other hand, can bury the team in information and make it difficult for them to make inferences based on the data (Gregory, et al., 2008). For each performance metric, you should clearly describe the methods you used to obtain the data, the exclusion and inclusion criteria, and the denominators and numerators used to generate percentages. Part of your job as a facilitator is to help practices organize their performance data so that it can be easily understood and so that it is actionable.

Displaying Data

A picture paints a thousand words and nowhere is this truer than in presenting performance data. Graphic displays of the data are extremely effective in reporting data to the QI team. Visuals allow people to absorb large amounts of data quickly. Spreadsheets can be programmed to generate visual displays of key system and clinical performance data quickly and efficiently, which can make generating performance reports easier for both you and your practices. Ideally, you will be able to work with the information technology (IT) manager at the practice to build reporting processes and templates through information funneled from the EHR, registry, and practice management systems.

When developing reports, you should include both raw numbers and percentages on the graphic whenever possible to make them easy to interpret. Also include the total number (or N) for each summary statistic. Make sure that values are clearly labeled and legends provided. Data are most compelling when mapped over time through the use of trend lines. QI teams can use these data displays to monitor progress over time and make decisions about QI priorities, training for staff, and revision of processes based on these cumulative data.

A number of applications now exist to help you and your practices generate compelling displays from raw data. These systems take raw data and generate graphic displays such as bar graphs and pie charts and can be used to generate reports on clinical performance. Systems like Crystal Reports require some heavy programming up front but are often used by larger practices to help with this process. A number of new applications are now available under the category of “business analytics” that require less upfront programming and may be useful to you and your practices for these tasks. As a PF, you will want to be familiar with some of these programs and their capabilities as potential resources for your practices to consider as they build their performance reporting capabilities.
Different graphics are effective for presenting different types of data. Data that represent a single point in time can be presented using static displays such as bar graphs and pie charts. Data from multiple time points designed to track trends or changes over time are best displayed in more dynamic formats such as run charts. When possible, use graphics to make the data more accessible to your practices.

**Helping Practices Reflect and Act on Data**

Many if not most times, practices’ information systems contain errors. Errors mapping data entered into an EHR to the database variables are frequent. Expect clinicians and other members of the practice to question the data you present to them. When this happens, it is important that you listen carefully to their discussion of the errors that they believe exist in the data. You will then work with clinicians and often their IT staff to correct these errors and the corresponding performance data. It is not unusual for a practice facilitator to spend a considerable amount of time during the early stages of working with a practice correcting mapping errors in EHRs and other data systems.

Once you have helped the practice correct these errors and can present the corrected data again, you will be able to engage members of the practice in a productive discussion of the findings. Often clinicians and staff believe that they are performing better than they actually are, so the data you present are likely to stimulate robust discussion. It is important that you not become defensive or take challenges from practice members as a personal attack. Instead, it can be helpful to see yourself as an “ally” in helping them to acquire, reflect on, and use these data to help them improve performance.

When presenting performance data to a practice for the first time, it can help to enlist a leader from the practice as the main presenter, or as a co-presenter with you. It can also help to come prepared with a series of questions designed to help members of the practice reflect on the data. Some useful questions to ask include:

- How accurately do you believe these data reflect your practice?
- Are there problems with the data that should be considered or corrected before use? What findings did you expect?
- What findings were a surprise?
- What do these data suggest to you regarding setting goals for improvement at your practice and prioritizing these goals?

Note: this module is based on Module 9 of the Practice Facilitation Handbook. Available at: [https://www.ahrq.gov/ncepcr/tools/pf-handbook/index.html](https://www.ahrq.gov/ncepcr/tools/pf-handbook/index.html)
Reference

Appendix 14. WeServeEveryone Clinic Case Example

WeServeEveryone is a federally qualified health center (FQHC) in Long Beach, California. It served 35,000 patients and provided approximately 80,000 patient visits last year. Average cycle time for a visit at all three of its practice sites is 75 minutes. The organization wants to improve patient experience and is interested in reducing patient cycle time as one way to do this.

Approximately 50 percent of the patients who receive care from the clinic are Latino and about 20 percent are monolingual Spanish. About 3 percent of the patients speak Nahuatl. Thirty percent of patients receiving care from the clinic are Asian and Pacific Islanders, and the remaining 20 percent are Caucasian. Forty-five percent of patients are children, 50 percent of patients are adults, and 5 percent are geriatric. Fifty percent of patients are uninsured, and 98 percent are at or below 200 percent of poverty; 70 percent are at or below 100 percent of poverty. Twenty percent of patients are diagnosed with diabetes, 15 percent with hypertension, and 3 percent with asthma.

The chief medical officer (CMO) of WeServeEveryone was serving as a quality improvement (QI) committee of one for the clinic until recently when she attended a session at a conference about QI methods for FQHCs. After returning, she engaged your organization to assist her in forming a QI committee, updating the clinic’s QI plan, and identifying some first improvement aims.

Because so many of their patients have diabetes, the CMO and the QI team decided to focus their initial QI work on improving their diabetes care. They are interested in seeing how they are performing on HEDIS* quality indicators for diabetes and comparing themselves to benchmarks from the local community clinic association and those contained in the National Healthcare Quality Report.

The clinic recently hired a care coordinator to help with the care of chronic disease patients. It also recently implemented an electronic health record. One of the clinicians recently realized that entries for foot exams had been mapped incorrectly and were not being captured as part of the comprehensive diabetes care record. This is the only data field that appears problematic at this point.

Dr. Sand thinks the clinic is doing “fine” with diabetes care and does not think it is necessary to look at the data. On the other hand, the CMO, Dr. Likes, is very interested in seeing what the data look like not only for diabetes but also for hypertension and asthma.

* HEDIS stands for Healthcare Effectiveness Data and Information Set.
Diabetes Chart Audit Form

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<th>Practice Site:</th>
<th>Date of Audit:</th>
<th>PF Reviewing:</th>
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<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
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<th>g</th>
<th>h</th>
<th>i</th>
<th>j</th>
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<tbody>
<tr>
<td>Pt. ID (do not include names)</td>
<td>HbA1c in the past 3 months?</td>
<td>HbA1c less than 7.0?</td>
<td>BP documented at last visit?</td>
<td>BP less than 130/80 mm Hg?</td>
<td>LDL-C in past 12 months?</td>
<td>LDL-C less than 100mg/dL?</td>
<td>Eye exam in the past 12 months?</td>
<td>Foot exam in the past 12 months?</td>
<td>Other indicator (per practice):</td>
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<tr>
<td>0=NO</td>
<td>1=YES</td>
<td>0=NO</td>
<td>1=YES</td>
<td>0=NO</td>
<td>1=YES</td>
<td>0=YES</td>
<td>0=NO</td>
<td>0=NO</td>
<td>0=NO</td>
</tr>
</tbody>
</table>

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<th>10.</th>
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<td>Total(c)=</td>
<td>Total(d)=</td>
<td>Total(e)=</td>
<td>Total(f)=</td>
<td>Total(g)=</td>
<td>Total(h)=</td>
<td>Total(i)=</td>
<td>Total(j)=</td>
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Module 14: Collecting Performance Data Using Chart Audits and Electronic Data Extraction.

Appendix 14A. Sample Data Abstraction
Module 14: Collecting Performance Data Using Chart Audits and Electronic Data Extraction

Appendix 14B. Nine Mock Medical Records

1. Billy Gato (diabetes, hypertension)
2. Cherie Amore (diabetes)
3. Wendy See (diabetes, depression)
4. John Donut (multiple chronic conditions)
5. Adam Pie (multiple chronic conditions, DNR, allergy)
6. Tom Gelato (diabetes, DNR, allergy)
7. Steve Apple (diabetes)
8. Bill Windows (diabetes, DNR)
9. Monica Latte (diabetes, hypertension)
Module 14: Collecting Performance Data Using Chart Audits and Electronic Data Extraction

Appendix 14 B. Sample Medical Record: Billy Gato

WeServeEveryone Clinic
1111 First Street California
111-111-11111 Fax: 111-111-1111

Billy Gato
Home: 555-555-5555
Male DOB: 05/05/1955  0000-55555
Ins: Commercial Orange Shield

Patient Information
Name: Billy Gato
Address: 5555 Mountain Blvd
          Animal, California
Patient ID: 0000-55555
Birth Date: 05/05/1955
Gender: Male
Marital Status: Married
Contact By: Phone
Race: Hispanic
Soc Sec No: 555-55-5555
Language: English
Resp Prov: Carl Savem
Emp. Status: Part-time
Email: 
Sens Chart: No
Home LOC: WeServeEveryone
Fax:
Office Phone: 555-555-5555

Problems
DIABETES MELLITUS (ICD-250.)
HYPERTENSION, BENIGN ESSENTIAL (ICD-401.1)

Medications
PRINIVIL TABS 20 MG (LISINOPRIL) 1 po qd
Last Refill: #30 x 2 : Carl Savem MD (01/27/2010)
HUMULIN INJ 70/30 (INSULIN REG & ISOPHANE (HUMAN)) 20 units ac breakfast
Last Refill: #600 u x 0 : Carl Savem MD (01/27/2010)

Directives

Allergies and Adverse Reactions (! = critical)
! Benadryl

Services Due
FLU VAX, PNEUMOVAX
History of Present Illness
Reason for visit: Routine followup to review medications
Chief Complaint: No complaints

History
Social History: Quit smoking 10 years ago

Diabetes Management
Hyperglycemic Symptoms
Polyuria: no
Polydipsia: no
Blurred vision: no

Sympathomimetic Symptoms
Diaphoresis: no
Agitation: no
Tremor: no
Palpitations: no
Insomnia: no

Neuroglycopenic Symptoms
Confusion: no
Lethargy: no
Somnolence: no
Amnesia: no
Stupor: no
Seizures: no

Review of Systems
General: denies fatigue, malaise, fever, weight loss
Eyes: denies blurring, diplopia, irritation, discharge
Ear/Nose/Throat: denies ear pain or discharge, nasal obstruction or discharge, sore throat
Cardiovascular: denies chest pain, palpitations, paroxysmal nocturnal dyspnea, orthopnea, edema
Respiratory: denies coughing, wheezing, dyspnea, hemoptysis
Gastrointestinal: denies abdominal pain, dysphagia, nausea, vomiting, diarrhea, constipation
Genitourinary: denies hematuria, frequency, urgency, dysuria, discharge, impotence, incontinence
Musculoskeletal: denies back pain, joint swelling, joint stiffness, joint pain
Skin: denies rashes, itching, lumps, sores, lesions, color change
Neurologic: denies syncope, seizures, transient paralysis, weakness, paresthesias
Psychiatric: denies depression, anxiety, mental disturbance, difficulty sleeping, suicidal ideation, hallucinations, paranoia
Endocrine: denies polyuria, polydipsia, polyphagia, weight change, heat or cold intolerance
Heme/Lymphatic: denies easy or excessive bruising, history of blood transfusions, anemia, bleeding disorders, adenopathy, chills, sweats
Allergic/Immunologic: denies urticaria, hay fever, frequent UTIs; denies HIV high risk behaviors

Vital Signs
Billy Gato  
Male  DOB: 05/05/1955  
0000-55555  
Ins: Commercial xxxxx  

Home: 555-555-5555  


Physical Exam  
General Appearance: well developed, well nourished, no acute distress  
Eyes: conjunctiva and lids normal, PERRLA, EOMI, fundi WNL  
Ears, Nose, Mouth, Throat: TM clear, nares clear, oral exam WNL  
Respiratory: clear to auscultation and percussion, respiratory effort normal  
Cardiovascular: regular rate and rhythm, S1-S2, no murmur, rub or gallop, no bruits, peripheral pulses normal and symmetric, no cyanosis, clubbing, edema or varicosities  
Skin: clear, good turgor, color WNL, no rashes, lesions, or ulcerations  

Assessment  
Problems (including changes): Blood pressure is lower. He is following his diet, by his account. He has not had any hypoglycemic episodes, no night sweats. Feet are inspected and there are no callouses, no compromised skin. No vision complaints.  

Impression: Sub optimal sugar, control with retinopathy and neuropathy, high glucometer readings. He will work harder on diet.  

Home Glucose Monitoring:  
AC breakfast 110 to 220  
AC breakfast mean 142  
AC dinner 100 to 250  
AC dinner mean 120  

Plan  
Medications:  
HUMULIN INJ 70/30 20 u ac breakfast  
PRINIVIL TABS 20 MG 1 qd  

Treatment: Will have annual foot exam at next visit.  

Orders:  
Ophthalmology consult  
UA  
HGBA1C  
Metabolic Panel  
Lipid Panel  

Education/Counseling (time): 5 minutes  
Coordinator of Care (time): 10 minutes  
Follow-up/Return Visit: 3 months  
Disposition: return to clinic
Billy Gato  
Male  DOB: 05/05/1955  
0000-55555  
Ins: Commercial xxxxx

09/19/2010 - Lab Report: Metabolic Panel Provider: Carl Savem MD  
Location of Care: Millennium Health System

Tests:

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Metabolic Panel (ML-03CHEM)</td>
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<tr>
<td>ALK PHOS</td>
<td>72 U/L</td>
</tr>
<tr>
<td>BG RANDOM</td>
<td>125 mg/dl</td>
</tr>
<tr>
<td>BUN</td>
<td>16 mg/dl</td>
</tr>
<tr>
<td>CALCIUM</td>
<td>9.6 mg/dl</td>
</tr>
<tr>
<td>CHLORIDE</td>
<td>101 mmol/l</td>
</tr>
<tr>
<td>CO2</td>
<td>27 mmol/l</td>
</tr>
<tr>
<td>CREATININE</td>
<td>0.7 mg/dl</td>
</tr>
<tr>
<td>PO4</td>
<td>2.9 mg/dl</td>
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<tr>
<td>POTASSIUM</td>
<td>4.5 mmol/l</td>
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<tr>
<td>SGOT (AST)</td>
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<tr>
<td>BILI TOTAL</td>
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<tr>
<td>URIC ACID</td>
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<tr>
<td>LDH, TOTAL</td>
<td>136 IU/L</td>
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<tr>
<td>SODIUM</td>
<td>135 mmol/l</td>
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HbA1c level  7.0%

Lipid Profile

- Cholesterol, Total 210 mg/dl
- Triglycerides 236 mg/dl
- HDL Cholesterol 36
- LDL Cholesterol 121
Billy Gato

Male  DOB: 05/05/1955
      0000-55555
      Ins: Commercial xxxxx

Flowsheet

<table>
<thead>
<tr>
<th>Measurements</th>
<th>Date</th>
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<tbody>
<tr>
<td>HEIGHT (in)</td>
<td>65</td>
</tr>
<tr>
<td>WEIGHT (lb)</td>
<td>180</td>
</tr>
<tr>
<td>TEMPERATURE (deg F)</td>
<td>98</td>
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<tr>
<td>TEMP SITE</td>
<td>oral</td>
</tr>
<tr>
<td>PULSE RATE (/min)</td>
<td>72</td>
</tr>
<tr>
<td>PULSE RHYTHM</td>
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<tr>
<td>RESP RATE (/min)</td>
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</tr>
<tr>
<td>BP SYSTOLIC (mm Hg)</td>
<td>134</td>
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<tr>
<td>BP DIASTOLIC (mm Hg)</td>
<td>92</td>
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<tr>
<td>CHOLESTEROL (mg/dL)</td>
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<td>HDL (mg/dL)</td>
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<tr>
<td>LDL (mg/dL)</td>
<td>121</td>
</tr>
<tr>
<td>BG RANDOM (mg/dL)</td>
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</tr>
<tr>
<td>CXR</td>
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<td>EKG</td>
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<td>PAP SMEAR</td>
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<td>BREAST EXAM</td>
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<td>MAMMOGRAM</td>
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<tr>
<td>HEMOCULT</td>
<td>neg</td>
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<tr>
<td>FLU VAX</td>
<td>0.5 ml g</td>
</tr>
<tr>
<td>PNEUMOVAX</td>
<td>0.5 ml g</td>
</tr>
<tr>
<td>TD BOOSTER</td>
<td>0.5 ml g</td>
</tr>
<tr>
<td>Foot Exam</td>
<td>Complete</td>
</tr>
<tr>
<td>Eye Exam</td>
<td>Complete</td>
</tr>
</tbody>
</table>
Appendix 14B. Sample Medical Record: Cherie Amore

WeServeEveryone Clinic
1111 First Street California
111-111-11111 Fax: 111-111-1111

Cherie Amore

Home: 333-333-3333
Female DOB: 03/03/1940 0000-33333 Ins: Commercial xxxxx

Patient Information
Name: Cherie Amore
Address: 3333 Wonder Ave Famous, California
Patient ID: 0000-33333
Birth Date: 03/03/1940
Gender: Female
Contact By: Phone
Soc Sec No: 333-33-3333
Resp Prov: Carl Savem
Referred by: 
Email:
Home LOC: WeServeEveryone

Problems
DIABETES MELLITUS (ICD-250.)

Medications
HUMULIN INJ 70/30 (INSULIN REG & ISOPHANE (HUMAN)) 20 units ac breakfast
Last Refill: #600 u x 0 : Carl Savem MD (01/27/2010)

Directives

Allergies and Adverse Reactions (! = critical)

Services Due
FLU VAX
OFFICE VISIT

History of Present Illness
Reason for visit: Routine follow up to review medications Chief Complaint: No complaints

History
Social History:

Diabetes Management
Hyperglycemic Symptoms
Polyuria: no
Polydipsia: no
Blurred vision: no

Sympathomimetic Symptoms
Diaphoresis: no
Agitation: no
Tremor: no
Palpitations: no
Insomnia: no

Neuroglycopenic Symptoms
Confusion: no
Lethargy: no
Somnolence: no
Amnesia: no
Stupor: no
Seizures: no

Review of Systems
General: denies fatigue, malaise, fever, weight loss
Eyes: denies blurring, diplopia, irritation, discharge
Ear/Nose/Throat: denies ear pain or discharge, nasal obstruction or discharge, sore throat
Cardiovascular: denies chest pain, palpitations, paroxysmal nocturnal dyspnea, orthopnea, edema
Respiratory: denies coughing, wheezing, dyspnea, hemoptyis
Gastrointestinal: denies abdominal pain
Musculoskeletal: denies back pain, joint swelling, joint stiffness, joint pain
Skin: denies rashes, itching, lumps, sores, lesions, color change
Neurologic: denies syncope, seizures, transient paralysis, weakness, paresthesias
Psychiatric: denies depression, anxiety, mental disturbance, difficulty sleeping, suicidal ideation, hallucinations, paranoia
Endocrine: denies polyuria, polydipsia, polyphagia, weight change, heat or cold intolerance
Heme/Lymphatic: denies easy or excessive bruising, history of blood transfusions, anemia, bleeding disorders, adenopathy, chills, sweats
Allergic/Immunologic: denies hay fever

Vital Signs
Cherie Amore
Home: 333-333-3333
Female DOB: 03/03/1940
0000-33333
Ins: Commercial xxxxx

Ht: 63 in. Wt: 130 lbs. T: 98.0 degF. T site: oral P: 72 Rhythm: regular R: 16 BP: 118/60

Physical Exam
General Appearance: well developed, well nourished, no acute distress
Eyes: conjunctiva and lids normal
Ears, Nose, Mouth, Throat: TM clear, nares clear, oral exam WNL
Respiratory: respiratory effort normal
Cardiovascular: regular rate and rhythm,

Problems (including changes):
She is following diet, by her account. Feet are inspected and there are no callouses, no compromised skin. No vision complaints.

Impression: Sub optimal sugar, control with retinopathy and neuropathy, high glucometer readings.

Home Glucose Monitoring:
AC breakfast 110 to 220
AC breakfast mean 142
AC dinner 100 to 250
AC dinner mean 120

Plan
Medications:
HUMULIN INJ 70/30 20 u ac breakfast

Treatment: Will have annual foot exam at next visit.

Orders:
Ophthalmology consult
UA
HGBA1C
Metabolic Panel
Lipid Panel
Hemoccult

Education/Counseling (time): 10 minutes

Coordination of Care (time): 10 minutes

Follow-up/Return Visit: 3 months

Disposition: return to clinic
**Chart Summary**

Cherie Amore

Home: 333-333-3333  
Female DOB: 03/03/1940  
0000-33333  
Ins: Commercial xxxxx

**10/19/2010 - Lab Report: Metabolic Panel Provider: Carl Savem MD**  
**Location of Care: Millennium Health System**

Tests:

(1) **Metabolic Panel (ML-03CHEM)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALK PHOS</td>
<td>72 U/L</td>
</tr>
<tr>
<td>BG RANDOM</td>
<td>35-100</td>
</tr>
<tr>
<td>BUN</td>
<td>125 mg/dl</td>
</tr>
<tr>
<td>CALCIUM</td>
<td>125 mg/dl</td>
</tr>
<tr>
<td>CHLORIDE</td>
<td>7-25</td>
</tr>
<tr>
<td>CO2</td>
<td>9.6 mg/dl</td>
</tr>
<tr>
<td>CREATININE</td>
<td>101 mmol/l</td>
</tr>
<tr>
<td>PO4</td>
<td>27 mmol/l</td>
</tr>
<tr>
<td>POTASSIUM</td>
<td>23-29</td>
</tr>
<tr>
<td>SGOT (AST)</td>
<td>0.7 mg/dl</td>
</tr>
<tr>
<td>BILI TOTAL</td>
<td>0.6-1.2</td>
</tr>
<tr>
<td>HbA1c level</td>
<td>2.9 mg/dl</td>
</tr>
<tr>
<td>URIC ACID</td>
<td>0.7 mmol/l</td>
</tr>
<tr>
<td>LDH, TOTAL</td>
<td>3.5-5.3</td>
</tr>
<tr>
<td>SODIUM</td>
<td>31 U/L</td>
</tr>
<tr>
<td></td>
<td>0-40</td>
</tr>
<tr>
<td></td>
<td>0.7 mg/dl</td>
</tr>
<tr>
<td></td>
<td>0.0-1.3</td>
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<tr>
<td></td>
<td>4.8 mg/dl</td>
</tr>
<tr>
<td></td>
<td>0-200</td>
</tr>
<tr>
<td></td>
<td>135 mmol/l</td>
</tr>
</tbody>
</table>

(2) **HbA1c Test**  
HbA1c level 8.0%

(3) **Lipid Profile**  
Cholesterol, Total 210 mg/dl  
Triglycerides 236 mg/dl  
HDL Cholesterol 36  
LDL Cholesterol 125
Cherie Amore

103-TEST011

Insurance: BHI (Futura)

DOB: 03/03/1940

Date: 10/18/2010

HEIGH T(in) 63
WEIGHT (lb) 130
TEMPERATURE (deg F) 98
TEMP SITE oral
PULSE RATE (/min) 72
PULSE RHYTHM
RES P RATE (/min) 16
BP SYSTOLIC (mm Hg) 118
BP DIASTOLIC (mm Hg) 60
CHOLESTEROL (mg/dL) 125
HDL (mg/dL) 125
LDL (mg/dL) 33
BG RANDOM (mg/dL)
CXR
EKG
PAP SMEAR
BREAST EXAM
MAMMOGRAM
HEMOCCULT neg
FLU VAX
PNEUMOVAX
TD BOOSTER 0.5 ml g
Foot Exam
Eye Exam
Module 14: Collecting Performance Data Using Chart Audits and Electronic Data Extraction

Appendix 14B. Sample Medical Record: Wendy See

WeServeEveryone Clinic
1111 First Street California
111-111-11111 Fax: 111-111-1111

Wendy See

Home: 777-777-7777
Female DOB: 07/07/1943 0000-77777 Ins: Commercial Orange Shield

Patient Information
Name: Wendy See Home Phone: 777-777-7777
Address: 7777 Candy Lane Office Phone:
Dessert, California

Patient ID: 0000-77777 Fax:
Birth Date: 07/07/1943 Status: Active
Gender: Female Marital Status: Single
Contact By: Phone Race: Asian
Soc Sec No: 777-77-7777 Language: English
Resp Prov: Carl Savem MRN: MR-111-1111
Referred by: Emp. Status: Full-time
Email: Sens Chart: No
Home LOC: WeServeEveryone External ID: MR-111-1111

Problems
DIABETES MELLITUS (ICD-250.)
DEPRESSION (ICD-311)

Medications
HUMULIN INJ 70/30 (INSULIN REG & ISOPHANE (HUMAN)) 20 units ac breakfast
Last Refill: #600 u x 0 : Carl Savem MD (06/17/2010)
PROZAC CAPS 10 MG (FLUOXETINE HCL) 1 po qd
Last Refill: #30 x 2 : Carl Savem MD (06/17/2010)

Directives
Allergies and Adverse Reactions (! = critical)
! Benadryl

Services Due
FLU VAX
OFFICE VISIT

History of Present Illness
Reason for visit: Routine follow up
Chief Complaint: No complaints

History
Social History: Her husband died 2 years ago and she is more introspective.

Diabetes Management
Hyperglycemic Symptoms
Polyuria: no
Polydipsia: no
Blurred vision: no

Sympathomimetic Symptoms
Diaphoresis: no
Agitation: no
Tremor: no
Palpitations: no
Insomnia: no

Neuroglycopenic Symptoms
Confusion: no
Lethargy: no
Somnolence: no
Amnesia: no
Stupor: no
Seizures: no

Review of Systems
General: denies fatigue, malaise, fever, weight loss
Eyes: denies blurring, diplopia, irritation, discharge
Ear/Nose/Throat: denies ear pain or discharge, nasal obstruction or discharge, sore throat
Cardiovascular: denies chest pain, palpitations, paroxysmal nocturnal dyspnea, orthopnea, edema
Respiratory: denies coughing, wheezing, dyspnea, hemoptysis
Gastrointestinal: denies abdominal pain, dysphagia, nausea, vomiting, diarrhea, constipation
Musculoskeletal: denies back pain, joint swelling, joint stiffness, joint pain
Skin: denies rashes, itching, lumps, sores, lesions, color change
Neurologic: denies syncope, seizures, transient paralysis, weakness, paresthesias
Psychiatric: denies depression, anxiety, mental disturbance, difficulty sleeping, suicidal ideation, hallucinations, paranoia
Endocrine: denies polyuria, polydipsia, polyphagia, weight change, heat or cold intolerance
Heme/Lymphatic: denies easy or excessive bruising, history of blood transfusions, anemia, bleeding disorders, adenopathy, chills, sweats
Allergic/Immunologic: denies urticaria, hay fever
Wendy See

Ht: 60 in.  Wt: 120 lbs.  T: 98.0 degF.  T site: oral  P: 72  Rhythm: regular  R: 16  BP: 125/70

Physical Exam
General Appearance: well developed, well nourished, no acute distress
Eyes: conjunctiva and lids normal, PERRLA, EOMI, fundi WNL
Ears, Nose, Mouth, Throat: TM clear, nares clear, oral exam WNL
Respiratory: clear to auscultation and percussion, respiratory effort normal
Cardiovascular: regular rate and rhythm, S1-S2, no murmur, rub or gallop, no bruits, peripheral pulses normal and symmetric, no cyanosis, clubbing, edema or varicosities
Skin: clear, good turgor, color WNL, no rashes, lesions, or ulcerations

Assessment
Problems (including changes): Blood pressure is lower.

Impression: Sub optimal sugar, control with retinopathy and neuropathy, high glucometer readings. He will work harder on diet. Will increase insulin by 2 units.

Medications:
HUMULIN INJ 70/30 20 u ac breakfast
PROZAC CAPS 10 MG 1 qd

Treatment: Will have annual foot exam at next visit.

Orders:
UA

Education/Counseling (time): 20 minutes

Coordination of Care (time): 5 minutes

Follow-up/Return Visit: 3 months

Disposition: return to clinic
Wendy See
Male  DOB: 07/07/1943  0000-77777

Tests:

(1)  HbA1c Test
HbA1c level  7.0%

(2)  Lipid Profile
Cholesterol, Total  210 mg/dl
Triglycerides  236 mg/dl
HDL Cholesterol  36
LDL Cholesterol  90
**Wendy See**  
DOB: 07/07/1943  
Ins: Commercial xxxxx  
Home: 777-777-7777  
Chart Summary

**Flowsheet**  
Date: 9/22/2010

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height (in)</strong></td>
<td>60</td>
</tr>
<tr>
<td><strong>Weight (lb)</strong></td>
<td>120</td>
</tr>
<tr>
<td><strong>Temperature (deg F)</strong></td>
<td>98</td>
</tr>
<tr>
<td><strong>Temp Site</strong></td>
<td>oral</td>
</tr>
<tr>
<td><strong>Pulse Rate (/min)</strong></td>
<td>72</td>
</tr>
<tr>
<td><strong>Resp Rate (/min)</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>BP Systolic (mm Hg)</strong></td>
<td>125</td>
</tr>
<tr>
<td><strong>BP Diastolic (mm Hg)</strong></td>
<td>70</td>
</tr>
<tr>
<td><strong>Cholesterol (mg/dL)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>HDL (mg/dL)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>LDL (mg/dL)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>BG Random (mg/dL)</strong></td>
<td>125</td>
</tr>
<tr>
<td><strong>CXR</strong></td>
<td></td>
</tr>
<tr>
<td><strong>EKG</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Pap Smear</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Breast Exam</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Mammogram</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Hemoccult</strong></td>
<td>neg</td>
</tr>
<tr>
<td><strong>Flu Vax</strong></td>
<td>0.5 ml g</td>
</tr>
<tr>
<td><strong>Pneumovax</strong></td>
<td>0.5 ml g</td>
</tr>
<tr>
<td><strong>TD Booster</strong></td>
<td>0.5 ml g</td>
</tr>
<tr>
<td><strong>Foot Exam</strong></td>
<td>Complete</td>
</tr>
<tr>
<td><strong>Eye Exam</strong></td>
<td>Complete</td>
</tr>
</tbody>
</table>
Appendix 14B. Sample Medical Record: John Donut

WeServeEveryone Clinic
1111 First Street California
111-111-11111 Fax: 111-111-1111

John Donut
Male DOB: 01/01/1935 0000-11111
Home: 000-000-0000
Ins: Commercial xxxxx

Patient Information
Name: John Donut
Address: 1111 Donut Road
             Fast Food, California
Patient ID: 0000-11111
Birth Date: 01/01/1935
Gender: Male
Contact By: Phone
Soc Sec No: 111-11-1111
Race: Black
Sens Chart: No
Referral by: Carl Savem
Email:
Home LOC: WeServeEveryone

Problems
DIABETES MELLITUS (ICD-250.)
HYPERTENSION, BENIGN ESSENTIAL (ICD-401.1)
HYPERPLASIA, PROSTATE (ICD-600)
DEPRESSION (ICD-311)
RETINOPATHY, DIABETIC (ICD-362.0)
POLYNEUROPATHY IN DIABETES (ICD-357.2)

Medications
PRINIVIL TABS 20 MG (LISINOPRIL) 1 po qd
Last Refill: #30 x 2 : Carl Savem MD (05/27/2010)
HUMULIN INJ 70/30 (INSULIN REG & ISOPHANE (HUMAN)) 20 units ac breakfast
Last Refill: #600 u x 0 : Carl Savem MD (05/27/2010)

Directives

Allergies and Adverse Reactions (! = critical)

Services Due
HEMOCCULT or SIGMOID, BP DIASTOLIC, BP SYSTOLIC, FLU VAX, PNEUMOVAX, MICROALB
URN
10/31/2010 - Office Visit: F/u Diabetes
Provider: Carl Savem MD
Location of Care: WeServeEveryone Clinic

OFFICE VISIT

History of Present Illness
Reason for visit: Routine follow up to review medications Chief Complaint: No complaints

History

Diabetes Management

Hyperglycemic Symptoms
Polyuria: no
Polydipsia: no
Blurred vision: no

Sympathomimetic Symptoms
Diaphoresis: no
Agitation: no
Tremor: no
Palpitations: no
Insomnia: no

Neuroglycopenic Symptoms
Confusion: no
Lethargy: no
Somnolence: no
Amnesia: no
Stupor: no
Seizures: no

Review of Systems
General: denies fatigue, malaise, fever, weight loss
Eyes: denies blurring, diplopia, irritation, discharge
Ear/Nose/Throat: denies ear pain or discharge, nasal obstruction or discharge, sore throat
Cardiovascular: denies chest pain, palpitations, paroxysmal nocturnal dyspnea, orthopnea, edema
Respiratory: denies coughing, wheezing, dyspnea, hemoptysis
Gastrointestinal: denies abdominal pain, dysphagia, nausea, vomiting, diarrhea, constipation
Genitourinary: denies hematuria, frequency, urgency, dysuria, discharge, impotence, incontinence
Musculoskeletal: denies back pain, joint swelling, joint stiffness, joint pain
Skin: denies rashes, itching, lumps, sores, lesions, color change
Neurologic: denies syncope, seizures, transient paralysis, weakness, paresthesias
Psychiatric: denies depression, anxiety, mental disturbance, difficulty sleeping, suicidal ideation, hallucinations, paranoia
Endocrine: denies polyuria, polydipsia, polyphagia, weight change, heat or cold intolerance
Heme/Lymphatic: denies easy or excessive bruising, history of blood transfusions, anemia, bleeding disorders, adenopathy, chills, sweats
Allergic/Immunologic: denies urticaria, hay fever, frequent UTIs; denies HIV high risk behaviors

Vital Signs
John Donut
Male  DOB: 01/01/1935  0000-11111  Ins: Commercial xxxxx


Physical Exam
General Appearance: well developed, well nourished, no acute distress
Eyes: conjunctiva and lids normal, PERRLA, EOMI, fundi WNL
Ears, Nose, Mouth, Throat: TM clear, nares clear, oral exam WNL
Respiratory: clear to auscultation and percussion, respiratory effort normal
Cardiovascular: regular rate and rhythm, S1-S2, no murmur, rub or gallop, no bruits, peripheral pulses normal and symmetric, no cyanosis, clubbing, edema or varicosities
Skin: clear, good turgor, color WNL, no rashes, lesions, or ulcerations

Assessment
Problems (including changes): Blood pressure is lower. He is following his diet, by his account. He has not had any hypoglycemic episodes, no night sweats. Feet are inspected and there are no callouses, no compromised skin. No vision complaints.

Impression: Sub optimal sugar, control with retinopathy and neuropathy, high glucometer readings. He will work harder on diet. Will increase insulin by 2 units. BP better.

Plan
Medications:
HUMULIN INJ 70/30 20 u ac breakfast
PRINIVIL TABS 20 MG 1 qd

Treatment: Will have annual foot exam at next visit.

Orders:
Ophthalmology consult
UA
HGBA1C
Metabolic Panel
Lipid Panel
Hemoccult

Education/Counseling (time): 10 minutes

Coordination of Care (time): 10 minutes

Follow-up/Return Visit: 3 months

Disposition: return to clinic
John Donut
Male  DOB: 01/01/1935  0000-11111

Ins: BHI (Futura) Grp: BHI1595

10/31/2010 - Lab Report: Metabolic Panel Provider: Carl Savem MD
Location of Care: Millennium Health System

Tests:
(1) Metabolic Panel (ML-03CHEM)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALK PHOS</td>
<td>72 U/L</td>
</tr>
<tr>
<td></td>
<td>35-100</td>
</tr>
<tr>
<td>BG RANDOM</td>
<td>125 mg/dl</td>
</tr>
<tr>
<td></td>
<td>70-125</td>
</tr>
<tr>
<td>BUN</td>
<td>16 mg/dl</td>
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<td></td>
<td>7-25</td>
</tr>
<tr>
<td>CALCIUM</td>
<td>9.6 mg/dl</td>
</tr>
<tr>
<td></td>
<td>8.2-10.2</td>
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<tr>
<td>CHLORIDE</td>
<td>101 mmol/l</td>
</tr>
<tr>
<td></td>
<td>96-109</td>
</tr>
<tr>
<td>CO2</td>
<td>27 mmol/l</td>
</tr>
<tr>
<td></td>
<td>23-29</td>
</tr>
<tr>
<td>CREATININE</td>
<td>0.7 mg/dl</td>
</tr>
<tr>
<td></td>
<td>0.6-1.2</td>
</tr>
<tr>
<td>PO4</td>
<td>2.9 mg/dl</td>
</tr>
<tr>
<td></td>
<td>2.5-4.5</td>
</tr>
<tr>
<td>POTASSIUM</td>
<td>4.5 mmol/l</td>
</tr>
<tr>
<td></td>
<td>3.5-5.3</td>
</tr>
<tr>
<td>SGOT (AST)</td>
<td>31 U/L</td>
</tr>
<tr>
<td></td>
<td>0-40</td>
</tr>
<tr>
<td>BILI TOTAL</td>
<td>0.7 mg/dl</td>
</tr>
<tr>
<td></td>
<td>0.0-1.3</td>
</tr>
<tr>
<td>URIC ACID</td>
<td>4.8 mg/dl</td>
</tr>
<tr>
<td></td>
<td>3.4-7.0</td>
</tr>
<tr>
<td>LDH, TOTAL</td>
<td>136 IU/L</td>
</tr>
<tr>
<td></td>
<td>0-200</td>
</tr>
<tr>
<td>SODIUM</td>
<td>135 mmol/l</td>
</tr>
<tr>
<td></td>
<td>135-145</td>
</tr>
</tbody>
</table>

2) HbA1c Test
HbA1c level  8.0%

(3) Lipid Profile

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholesterol, Total</td>
<td>210 mg/dl</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>236 mg/dl</td>
</tr>
<tr>
<td>HDL Cholesterol</td>
<td>36</td>
</tr>
<tr>
<td>LDL Cholesterol</td>
<td>102</td>
</tr>
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</table>
## Flowsheet

<table>
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<th>Date</th>
<th>10/31/2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEIGHT (in)</td>
<td>74</td>
</tr>
<tr>
<td>WEIGHT (lb)</td>
<td>190</td>
</tr>
<tr>
<td>TEMPERATURE (deg F)</td>
<td>98</td>
</tr>
<tr>
<td>TEMP SITE</td>
<td>oral</td>
</tr>
<tr>
<td>PULSE RATE (/min)</td>
<td>72</td>
</tr>
<tr>
<td>PULSE RHYTHM</td>
<td></td>
</tr>
<tr>
<td>RESP RATE (/min)</td>
<td>16</td>
</tr>
<tr>
<td>BP SYSTOLIC (mm Hg)</td>
<td>158</td>
</tr>
<tr>
<td>BP DIASTOLIC (mm Hg)</td>
<td>90</td>
</tr>
<tr>
<td>CHOLESTEROL (mg/dL)</td>
<td></td>
</tr>
<tr>
<td>HDL (mg/dL)</td>
<td>102</td>
</tr>
<tr>
<td>LDL (mg/dL)</td>
<td></td>
</tr>
<tr>
<td>BG RANDOM (mg/dL)</td>
<td>125</td>
</tr>
<tr>
<td>CXR</td>
<td></td>
</tr>
<tr>
<td>EKG</td>
<td></td>
</tr>
<tr>
<td>PAP SMEAR</td>
<td></td>
</tr>
<tr>
<td>BREAST EXAM</td>
<td></td>
</tr>
<tr>
<td>MAMMOGRAM</td>
<td></td>
</tr>
<tr>
<td>HEMOCCULT</td>
<td>neg</td>
</tr>
<tr>
<td>FLU VAX</td>
<td>0.5 ml g</td>
</tr>
<tr>
<td>PNEUMOVAX</td>
<td>0.5 ml g</td>
</tr>
<tr>
<td>TD BOOSTER</td>
<td>0.5 ml g</td>
</tr>
<tr>
<td>Foot Exam</td>
<td></td>
</tr>
<tr>
<td>Eye Exam</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 14 B. Sample Medical Record: Adam Pie

WeServeEveryone Clinic
1111 First Street California
111-111-11111 Fax: 111-111-1111

Adam Pie
Male DOB: 08/08/1948 0000-88888
Home: 888-888-8888 Ins: Commercial xxxx

Patient Information
Name: Adam Pie
Address: 8888 Crust Dr Filling, California
Patient ID: 0000-88888
Birth Date: 08/08/1948
Gender: Male
Contact By: Phone
Soc Sec No: 888-88-8888
Resp Prov: Carl Savem
Referred by:
Email:
Home LOC: WeServeEveryone

Problem
DIABETES MELLITUS (ICD-250.)
HYPERTENSION, BENIGN ESSENTIAL (ICD-401.1) HYPERPLASIA, PROSTATE (ICD-600)
DEPRESSION (ICD-311)
RETINOPATHY, DIABETIC (ICD-362.0)
POLYNEUROPATHY IN DIABETES (ICD-357.2)

Medications
HYTRIN CAP 5MG (TERAZOSIN HCL) 1 po qd
Last Refill: #30 x 0 : Carl Savem (10/27/2010)
PRINIVIL TABS 20 MG (LISINOPRIL) 1 po qd
Last Refill: #30 x 2 : Carl Savem MD (10/27/2010)
HUMULIN INJ 70/30 (INSULIN REG & ISOPHANE (HUMAN)) 20 units
ac breakfast
Last Refill: #600 u x 0 : Carl Savem MD (10/27/2010)
PROZAC CAPS 10 MG (FLUOXETINE HCL) 1 po qd
Last Refill: #30 x 2 : Carl Savem MD (10/27/2010)

Directives
DO NOT RESUSCITATE

Allergies and Adverse Reactions (! = critical)
! CODEINE

Services Due
HEMOCCULT or SIGMOID, BP DIASTOLIC, BP SYSTOLIC, FLU VAX, PNEUMOVAX,
MICROALB URN, FLU VAX, BP DIASTOLIC, BP SYSTOLIC, FUNDUSCOPY, DIAB FOOT CK,
ALBUMIN URIN, TSH,
CHOLESTEROL, HGBA1C, CREATININE.
OFFICE VISIT

History of Present Illness
Reason for visit: Routine follow up to review medications  Chief Complaint: No complaints

History
Social History: His wife Marzapan died 5 years ago this month and he is more introspective.

Diabetes Management
Hyperglycemic Symptoms
Polyuria: no
Polydipsia: no
Blurred vision: no

Sympathomimetic Symptoms
Diaphoresis: no
Agitation: no
Tremor: no
Palpitations: no
Insomnia: no

Neuroglycopenic Symptoms
Confusion: no
Lethargy: no
Somnolence: no
Amnesia: no
Stupor: no
Seizures: no

Review of Systems
General: denies fatigue, malaise, fever, weight loss
Eyes: denies blurring, diplopia, irritation, discharge
Ear/Nose/Throat: denies ear pain or discharge, nasal obstruction or discharge, sore throat
Cardiovascular: denies chest pain, palpitations, paroxysmal nocturnal dyspnea, orthopnea, edema
Respiratory: denies coughing, wheezing, dyspnea, hemoptysis
Gastrointestinal: denies abdominal pain, dysphagia, nausea, vomiting, diarrhea, constipation
Genitourinary: denies hematuria, frequency, urgency, dysuria, discharge, impotence, incontinence
Musculoskeletal: denies back pain, joint swelling, joint stiffness, joint pain
Skin: denies rashes, itching, lumps, sores, lesions, color change
Neurologic: denies syncope, seizures, transient paralysis, weakness, paresthesias
Psychiatric: denies depression, anxiety, mental disturbance, difficulty sleeping, suicidal ideation, hallucinations, paranoia
Endocrine: denies polyuria, polydipsia, polyphagia, weight change, heat or cold intolerance
Heme/Lymphatic: denies easy or excessive bruising, history of blood transfusions, anemia, bleeding disorders, adenopathy, chills, sweats
Allergic/Immunologic: denies urticaria, hay fever, frequent UTIs; denies HIV high risk behaviors

Vital Signs
Adam Pie
Male DOB: 08/08/1948
Home: 888-888-8888
DOB: 0000-88888
Ins: Commercial xxxx


Physical Exam

General Appearance: well developed, well nourished, no acute distress
Eyes: conjunctiva and lids normal, PERRLA, EOMI, fundi WNL
Ears, Nose, Mouth, Throat: TM clear, nares clear, oral exam WNL
Respiratory: clear to auscultation and percussion, respiratory effort normal
Cardiovascular: regular rate and rhythm, S1-S2, no murmur, rub or gallop, no bruits, peripheral pulses normal and symmetric, no cyanosis, clubbing, edema or varicosities
Skin: clear, good turgor, color WNL, no rashes, lesions, or ulcerations

Assessment

Problems (including changes): Adam is voiding better since increasing Hytrin to 5 mg/day. Blood pressure is lower. He is following his diet, by his account. He has not had any hypoglycemic episodes, no night sweats. Feet are inspected and there are no callouses, no compromised skin. No vision complaints.

Impression: Sub optimal sugar, control with retinopathy and neuropathy, high glucometer readings. He will work harder on diet. Will increase insulin by 2 units. BP and symptoms of prostatism are better.

Home Glucose Monitoring:
AC breakfast 110 to 220
AC breakfast mean 142
AC dinner 100 to 250
AC dinner mean 120

Plan

Medications:
HUMULIN INJ 70/30 20 u ac breakfast
PRINIVIL TABS 20 MG 1 qd
HYTRIN CAP 5MG 1 qd
PROZAC CAPS 10 MG 1 qd

Treatment: Will have annual foot exam at next visit.

Orders:
Ophthalmology consult
UA
HGBA1C
Metabolic Panel
Lipid Panel
Hemoccult

Education/Counseling (time): 10 minutes
Coordination of Care (time): 10 minutes
Follow-up/Return Visit: 3 months
Disposition: return to clinic
12/19/2010 - Lab Report: Metabolic Panel Provider: Carl Savem MD
Location of Care: Millennium Health System

Tests:

1) Metabolic Panel (ML-03CHEM)

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
<th>Reference Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALK PHOS</td>
<td>72 U/L</td>
<td>35-100</td>
</tr>
<tr>
<td>BG RANDOM</td>
<td>125 mg/dl</td>
<td>70-125</td>
</tr>
<tr>
<td>BUN</td>
<td>16 mg/dl</td>
<td>7-25</td>
</tr>
<tr>
<td>CALCIUM</td>
<td>9.6 mg/dl</td>
<td>8.2-10.2</td>
</tr>
<tr>
<td>CHLORIDE</td>
<td>101 mmol/l</td>
<td>96-109</td>
</tr>
<tr>
<td>CO2</td>
<td>27 mmol/l</td>
<td>23-29</td>
</tr>
<tr>
<td>CREATININE</td>
<td>0.7 mg/dl</td>
<td>0.6-1.2</td>
</tr>
<tr>
<td>PO4</td>
<td>2.9 mg/dl</td>
<td>2.5-4.5</td>
</tr>
<tr>
<td>POTASSIUM</td>
<td>4.5 mmol/l</td>
<td>3.5-5.3</td>
</tr>
<tr>
<td>SGOT (AST)</td>
<td>31 U/L</td>
<td>0-40</td>
</tr>
<tr>
<td>BILI TOTAL</td>
<td>0.7 mg/dl</td>
<td>0.0-1.3</td>
</tr>
<tr>
<td>URIC ACID</td>
<td>4.8 mg/dl</td>
<td>3.4-7.0</td>
</tr>
<tr>
<td>LDH, TOTAL</td>
<td>136 IU/L</td>
<td>0-200</td>
</tr>
<tr>
<td>SODIUM</td>
<td>135 mmol/l</td>
<td>135-145</td>
</tr>
</tbody>
</table>

2) HbA1c Test
HbA1c level   6.0%

3) Lipid Profile
Cholesterol, Total 210 mg/dl
Triglycerides      236 mg/dl
HDL Cholesterol    36
LDL Cholesterol    127
# FLOWSHEET

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<tr>
<th>Date</th>
<th>12/19/2010</th>
<th>12/18/2010</th>
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<tr>
<td>WEIGHT (lb)</td>
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<tr>
<td>TEMPERATURE (deg F)</td>
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<tr>
<td>TEMP SITE</td>
<td>oral</td>
<td></td>
</tr>
<tr>
<td>PULSE RATE (/min)</td>
<td>72</td>
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</tr>
<tr>
<td>RESP RATE (/min)</td>
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<tr>
<td>BP SYSTOLIC (mm Hg)</td>
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<td>BP DIASTOLIC (mm Hg)</td>
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<tr>
<td>CHOLESTEROL (mg/dL)</td>
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<tr>
<td>HDL (mg/dL)</td>
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<tr>
<td>LDL (mg/dL)</td>
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<td></td>
</tr>
<tr>
<td>BG RANDOM (mg/dL)</td>
<td>125</td>
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<tr>
<td>CXR</td>
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<td>EKG</td>
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<tr>
<td>PAP SMEAR</td>
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<tr>
<td>BREAST EXAM</td>
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<tr>
<td>MAMMOGRAM</td>
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<td></td>
</tr>
<tr>
<td>HEMOCULT</td>
<td>neg</td>
<td></td>
</tr>
<tr>
<td>FLU VAX</td>
<td>0.5 ml g</td>
<td></td>
</tr>
<tr>
<td>PNEUMOVAX</td>
<td>0.5 ml g</td>
<td></td>
</tr>
<tr>
<td>TD BOOSTER</td>
<td>0.5 ml g</td>
<td></td>
</tr>
<tr>
<td>Foot Exam</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>Eye Exam</td>
<td>Complete</td>
<td></td>
</tr>
</tbody>
</table>
Module 14: Collecting Performance Data Using Chart Audits and Electronic Data Extraction

Appendix 14B. Sample Medical Record: Tom Gelato

WeServeEveryone Clinic
1111 First Street California
111-111-1111 Fax: 111-111-1111

Chart Summary

Tom Gelato
Male DOB: 06/06/1938 0000-66666
Home: 666-666-6666
Ins: Commercial xxxxx

Patient Information
Name: Tom Gelato
Address: 5555 Flavor Ave
         Ice Cream, California
Patient ID: 0000-66666
Birth Date: 06/06/1938
Gender: Male
Contact By: Phone
Fax: 666-666-6666
Soc Sec No: 666-666-6666
Resp Prov: Carl Savem
Referred by: Email:
Home LOC: WeServeEveryone

Sens Chart: No
External ID: MR-111-1111

Problems
DIABETES MELLITUS (ICD-250.)

Medications
HUMULIN INJ 70/30 (INSULIN REG & ISOPHANE (HUMAN)) 20 units
ac breakfast
Last Refill: #600 u x 0 : Carl Savem MD (04/17/2010)

Directives
DO NOT RESUSCITATE

Allergies and Adverse Reactions (! = critical)
! CODEINE

Services Due
FLU VAX, PNEUMOVAX, MICROALB URN
Office Visit: F/u Diabetes

Reason for visit: Routine followup
Chief Complaint: No complaints

History

Diabetes Management
Hyperglycemic Symptoms
Polyuria: no
Polydipsia: no
Blurred vision: no

Sympathomimetic Symptoms
Diaphoresis: no
Agitation: no
Tremor: no
Palpitations: no
Insomnia: no

Neuroglycopenic Symptoms
Confusion: no
Lethargy: no
Somnolence: no
Amnesia: no
Stupor: no
Seizures: no

Review of Systems
General: denies fatigue, malaise, fever, weight loss
Eyes: denies blurring, diplopia, irritation, discharge
Ear/Nose/Throat: denies ear pain or discharge, nasal obstruction or discharge, sore throat
Cardiovascular: denies chest pain, palpitations, paroxysmal nocturnal dyspnea, orthopnea, edema
Respiratory: denies coughing, wheezing, dyspnea, hemoptysis
Gastrointestinal: denies abdominal pain, dysphagia, nausea, vomiting, diarrhea, constipation
Musculoskeletal: denies back pain, joint swelling, joint stiffness, joint pain
Skin: denies rashes, itching, lumps, sores, lesions, color change
Neurologic: denies syncope, seizures, transient paralysis, weakness, paresthesias
Psychiatric: denies depression, anxiety, mental disturbance, difficulty sleeping, suicidal ideation, hallucinations, paranoia
Endocrine: denies polyuria, polydipsia, polyphagia, weight change, heat or cold intolerance
Heme/Lymphatic: denies easy or excessive bruising, history of blood transfusions, anemia, bleeding disorders, adenopathy, chills, sweats
Allergic/Immunologic: denies urticaria, hay fever, frequent UTIs; denies HIV high risk behaviors

Vital Signs
Tom Gelato


Physical Exam

General Appearance: well developed, well nourished, no acute distress
Eyes: conjunctiva and lids normal, PERRLA, EOMI, fundi WNL
Ears, Nose, Mouth, Throat: TM clear, nares clear, oral exam WNL
Respiratory: clear to auscultation and percussion, respiratory effort normal
Cardiovascular: regular rate and rhythm, S1-S2, no murmur, rub or gallop, no bruits, peripheral pulses normal and symmetric, no cyanosis, clubbing, edema or varicosities
Skin: clear, good turgor, color WNL, no rashes, lesions, or ulcerations

Assessment

Problems (including changes): Blood pressure is lower. He is following his diet, by his account. He has not had any hypoglycemic episodes, no night sweats. Feet are inspected and there are no callouses, no compromised skin. No vision complaints.

Impression: Sub optimal sugar, control with retinopathy and neuropathy, high glucometer readings.

Home Glucose Monitoring:
AC breakfast 110 to 220
AC breakfast mean 142
AC dinner 100 to 250
AC dinner mean 120

Plan

Medications:
HUMULIN INJ 70/30 20 u ac breakfast

Treatment: Will have annual foot exam at next visit.

Orders:
Ophthalmology consult
UA
HGBA1C
Metabolic Panel
Lipid Panel

Education/Counseling (time): 10 minutes

Coordination of Care (time): 10 minutes

Follow-up/Return Visit: 3 months

Disposition: return to clinic
Tom Gelato  
Male DOB: 06/06/1938  
0000-66666  
Ins: Commercial xxxxx  
Home: 111-111-111  

Tests:

1. Metabolic Panel (ML-03CHEM)
   - ALK PHOS: 72 U/L, 35-100
   - BG RANDOM: 125 mg/dl, 70-125
   - BUN: 16 mg/dl, 7-25
   - CALCIUM: 9.6 mg/dl, 8.2-10.2
   - CHLORIDE: 101 mmol/l, 96-109
   - CO2: 27 mmol/l, 23-29
   - CREATININE: 0.7 mg/dl, 0.6-1.2
   - PO4: 2.9 mg/dl, 2.5-4.5
   - POTASSIUM: 1.4 mmol/l, 3.5-5.3
   - SGOT (AST): 31 U/L, 0-40
   - BILI TOTAL: 0.7 mg/dl, 0.0-1.3
   - URIC ACID: 4.8 mg/dl, 3.4-7.0
   - LDH, TOTAL: 136 IU/L, 0-200
   - SODIUM: 135 mmol/l, 135-145

2. HbA1c Test
   - HbA1c level: 11.0%

3. Lipid Profile
   - Cholesterol, Total: 210 mg/dl
   - Triglycerides: 236 mg/dl
   - HDL Cholesterol: 36
   - LDL Cholesterol: 102
# Chart Summary

**Tom Gelato**  
Home: 666-666-6666  
Ins: Commercial xxxxx  
Male DOB: 06/06/1938  
0000-66666

## Flowsheet

<table>
<thead>
<tr>
<th>Enterprise/Medicine/Internal Medicine</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11/13/2010</td>
</tr>
</tbody>
</table>

| Height (in)       | 66       |
| Weight (lb)       | 195      |
| Temperature (deg F) | 98       |
| Temp Site         | oral     |
| Pulse Rate (/min) | 72       |
| Pulse Rhythm      |          |
| Resp Rate (/min)  | 16       |
| BP Systolic (mm Hg) | 131     |
| BP Diastolic (mm Hg) | 94     |
| Cholesterol (mg/dL) |         |
| HDL (mg/dL)       | 102      |
| LDL (mg/dL)       | 125      |
| BG Random (mg/dL) |          |
| CXR                |          |
| EKG                |          |
| Pap Smear          |          |
| Breast Exam        |          |
| Mammogram          |          |
| Hemoccult          | neg      |
| Flu Vax            |          |
| Pneumovax          |          |
| TD Booster         | 0.5 ml g |
| Foot Exam          |          |
| Eye Exam           |          |
Appendix 14B. Sample Medical Record: Steve Apple

WeServeEveryone Clinic
1111 First Street California
111-111-11111 Fax: 111-111-1111

Steve Apple
Male DOB: 02/02/1945 0000-22222
Ins: Commercial xxxxx
Home: 222-222-2222
Office Phone: 
Fax: 

Patient Information
Name: Steve Apple
Address: 2222 Computer Dr Laptop, California
Patient ID: 0000-22222
Birth Date: 02/02/1945
Gender: Male
Contact By: Phone
Social Security No: 222-22-2222
Resp Prov: Carl Savem
Referred by:
Email:
Home LOC: WeServeEveryone

Problems
DIABETES MELLITUS (ICD-250.)

Medications
PRINIVIL TABS 20 MG (LISINOPRIL) 1 po qd
Last Refill: #30 x 2 : Carl Savem MD (11/27/2010)
HUMULIN INJ 70/30 (INSULIN REG & ISOPHANE (HUMAN)) 20 units ac breakfast
Last Refill: #600 u x 0 : Carl Savem MD (11/27/2010)

Directives

Allergies and Adverse Reactions (! = critical)

Services Due
CREATININE
OFFICE VISIT

History of Present Illness
Reason for visit: Routine follow up to review medications
Chief Complaint: No complaints

History

Diabetes Management

Hyperglycemic Symptoms
Polyuria: no
Polydipsia: no
Blurred vision: no

Sympathomimetic Symptoms
Diaphoresis: no
Agitation: no
Tremor: no
Palpitations: no
Insomnia: no

Neuroglycopenic Symptoms

Confusion: no
Lethargy: no
Somnolence: no
Amnesia: no
Stupor: no
Seizures: no

Review of Systems

General: denies fatigue, malaise,
Eyes: denies blurring, diplopia, irritation, discharge
Ear/Nose/Throat: denies ear pain or discharge, nasal obstruction or discharge, sore throat
Cardiovascular: denies chest pain, palpitations, paroxysmal nocturnal dyspnea, orthopnea, edema
Respiratory: denies coughing, wheezing, dyspnea, hemoptysis
Gastrointestinal: denies abdominal pain
Musculoskeletal: denies back pain, joint swelling, joint stiffness, joint pain
Skin: denies rashes, itching, lumps, sores, lesions, color change
Neurologic: denies syncope, seizures
Psychiatric: denies depression, anxiety, mental disturbance, difficulty sleeping, hallucinations, paranoia
Endocrine: denies polyuria, polydipsia, polyphagia, weight change, heat or cold intolerance
Heme/Lymphatic: denies easy or excessive bruising, history of blood transfusions, anemia, bleeding disorders, adenopathy, chills, sweats
Allergic/Immunologic: denies urticaria, hay fever

Vital Signs
Chart Summary

Steve Apple
Male DOB: 02/02/1945
0000-22222
Ins: Commercial xxxxx

Home: 222-222-2222


Physical Exam

General Appearance: no acute distress
Eyes: conjunctiva and lids normal, PERRLA, EOMI, fundi WNL
Ears, Nose, Mouth, Throat: TM clear, nares clear, oral exam WNL
Respiratory: clear to auscultation and percussion, respiratory effort normal
Cardiovascular: regular rate and rhythm, S1-S2, no murmur, rub or gallop, no bruits, peripheral pulses normal and symmetric, no cyanosis, clubbing, edema or varicosities
Skin: clear, good turgor, color WNL, no rashes, lesions, or ulcerations

Assessment

Problems (including changes): Feet are inspected and there are no callouses, no compromised skin. No vision complaints.

Impression: Sub optimal sugar, control with retinopathy and neuropathy, high glucometer readings.

Plan

Medications:
HUMULIN INJ 70/30 20 u ac breakfast
PRINIVIL TABS 20 MG 1 qd

Treatment: Will have annual foot exam at next visit.

Orders:

Lipid Panel

Education/Counseling (time): 15 minutes

Coordination of Care (time): 5 minutes

Follow-up/Return Visit: 3 months

Disposition: return to clinic
Steve Apple  
Male DOB: 02/02/1945  0000-22222  
Home: 222.222.2222  
Ins: Commercial xxxxx  


Patient: Steve Apple  
Note: All result statuses are Final unless otherwise noted.  

Tests:  
(1) Metabolic Panel (ML-03CHEM)

<table>
<thead>
<tr>
<th>Test</th>
<th>Result (Units)</th>
<th>Normal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALK PHOS</td>
<td>72 U/L</td>
<td>35-100</td>
</tr>
<tr>
<td>BG RANDOM</td>
<td>125 mg/dl</td>
<td>70-125</td>
</tr>
<tr>
<td>BUN</td>
<td>16 mg/dl</td>
<td>7-25</td>
</tr>
<tr>
<td>CALCIUM</td>
<td>9.6 mg/dl</td>
<td>8.2-10.2</td>
</tr>
<tr>
<td>CHLORIDE</td>
<td>101 mmol/l</td>
<td>96-109</td>
</tr>
<tr>
<td>CO2</td>
<td>27 mmol/l</td>
<td>23-29</td>
</tr>
<tr>
<td>CREATININE</td>
<td>0.7 mg/dl</td>
<td>0.6-1.2</td>
</tr>
<tr>
<td>PO4</td>
<td>2.9 mg/dl</td>
<td>2.5-4.5</td>
</tr>
<tr>
<td>POTASSIUM</td>
<td>4.5 mmol/l</td>
<td>3.5-5.3</td>
</tr>
<tr>
<td>SGOT (AST)</td>
<td>31 U/L</td>
<td>0-40</td>
</tr>
<tr>
<td>BILI TOTAL</td>
<td>0.7 mg/dl</td>
<td>0.0-1.3</td>
</tr>
<tr>
<td>URIC ACID</td>
<td>4.8 mg/dl</td>
<td>3.4-7.0</td>
</tr>
<tr>
<td>LDH, TOTAL</td>
<td>136 IU/L</td>
<td>0-200</td>
</tr>
<tr>
<td>SODIUM</td>
<td>135 mmol/l</td>
<td>135-145</td>
</tr>
</tbody>
</table>

(2) HbA1c Test  
HbA1c level  5.0%  

(3) Lipid Profile  
Cholesterol, Total  210 mg/dl  
Triglycerides  236 mg/dl  
HDL Cholesterol  36  
LDL Cholesterol  87
**Flowsheet**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Date</th>
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<tbody>
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<td>WEIGHT (lb)</td>
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</tr>
<tr>
<td>TEMPERATURE (deg F)</td>
<td>98</td>
</tr>
<tr>
<td>TEMP SITE</td>
<td>oral</td>
</tr>
<tr>
<td>PULSE RATE (/min)</td>
<td>72</td>
</tr>
<tr>
<td>RESP RATE (/min)</td>
<td>16</td>
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<tr>
<td>BP SYSTOLIC (mm Hg)</td>
<td>118</td>
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<tr>
<td>BP DIASTOLIC (mm Hg)</td>
<td>70</td>
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<tr>
<td>CHOLESTEROL (mg/dL)</td>
<td></td>
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<tr>
<td>HDL (mg/dL)</td>
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<td>LDL (mg/dL)</td>
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</tr>
<tr>
<td>BG RANDOM (mg/dL)</td>
<td>125</td>
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<td>CXR</td>
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<td>EKG</td>
<td></td>
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<tr>
<td>PAP SMEAR</td>
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<tr>
<td>BREAST EXAM</td>
<td></td>
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<tr>
<td>MAMMOGRAM</td>
<td></td>
</tr>
<tr>
<td>HEMOCULT</td>
<td>neg</td>
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<tr>
<td>FLU VAX</td>
<td>0.5 ml g</td>
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<tr>
<td>PNEUMOVAX</td>
<td>0.5 ml g</td>
</tr>
<tr>
<td>TD BOOSTER</td>
<td>0.5 ml g</td>
</tr>
<tr>
<td>Foot Exam</td>
<td>Complete</td>
</tr>
<tr>
<td>Eye Exam</td>
<td>Complete</td>
</tr>
</tbody>
</table>
Module 14: Collecting Performance Data Using Chart Audits and Electronic Data Extraction

Appendix 14 B. Sample Medical Record: Bill Windows

WeServeEveryone Clinic
1111 First Street California
111-111-11111 Fax: 111-111-1111

Chart Summary

Bill Windows
Male DOB: 09/09/1953 0000-99999
Ins: Commercial xxxxx

Patient Information
Name: Bill Windows
Home Phone: 999-999-9999
Address: 9999 Computer Dr
Office Phone: Operating System, California

Patient ID: 0000-99999
Birth Date: 09/09/1953
Gender: Male
Status: Active
Contact By: Phone
Race: White
Soc Sec No: 999-99-9999
Language: English
Resp Prov: Carl Savem
MRN: MR-111-1111
Referred by:
Emp. Status: Full-time
Email: Sens Chart: No
Home LOC: WeServeEveryone
External ID: MR-111-1111

Problems
DIABETES MELLITUS (ICD-250.)

Medications
HUMULIN INJ 70/30 (INSULIN REG & ISOPHANE (HUMAN)) 20 units ac breakfast
Last Refill: #600 u x 0: Carl Savem MD (09/27/2010)

Directives
DO NOT RESUSCITATE

Allergies and Adverse Reactions (! = critical)

Services Due
BP DIASTOLIC, BP SYSTOLIC, FLU VAX, PNEUMOVAX, MICROALB URN, FLU VAX, BP
DIASTOLIC, BP SYSTOLIC, DIAB FOOT CK, ALBUMIN URIN, TSH, CHOLESTEROL, HGBA1C,
CREATININE.
OFFICE VISIT

History of Present Illness

Reason for visit: Routine follow up for Diabetes
Chief Complaint: No complaints

Diabetes Management

Hyperglycemic Symptoms
Polyuria: no
Polydipsia: no
Blurred vision: no

Sympathomimetic Symptoms
Diaphoresis: no
Agitation: no
Tremor: no
Palpitations: no
Insomnia: no

Neuroglycopenic Symptoms
Confusion: no
Lethargy: no
Somnolence: no
Amnesia: no
Stupor: no
Seizures: no

Review of Systems

General: denies fatigue, malaise, fever, weight loss
Eyes: denies blurring, diplopia, irritation, discharge
Ear/Nose/Throat: denies ear pain or discharge, nasal obstruction or discharge, sore throat
Cardiovascular: denies chest pain, palpitations, paroxysmal nocturnal dyspnea, orthopnea, edema
Respiratory: denies coughing, wheezing, dyspnea, hemoptysis
Gastrointestinal: denies abdominal pain, dysphagia, nausea, vomiting, diarrhea, constipation
Genitourinary: denies hematuria, frequency, urgency, dysuria, discharge, impotence, incontinence
Musculoskeletal: denies back pain, joint swelling, joint stiffness, joint pain
Skin: denies rashes, itching, lumps, sores, lesions, color change
Neurologic: denies syncope, seizures, transient paralysis, weakness, paresthesias
Psychiatric: denies depression, anxiety, mental disturbance, difficulty sleeping, suicidal ideation, hallucinations, paranoia
Endocrine: denies polyuria, polydipsia, polyphagia, weight change, heat or cold intolerance
Heme/Lymphatic: denies easy or excessive bruising, history of blood transfusions, anemia, bleeding disorders, adenopathy, chills, sweats
Allergic/Immunologic: denies urticaria, hay fever, frequent UTIs; denies HIV high risk behaviors

Vital Signs
Bill Windows

Male DOB: 09/09/1953


Physical Exam

General Appearance: well developed, well nourished, no acute distress
Eyes: conjunctiva and lids normal
Ears, Nose, Mouth, Throat: TM clear, nares clear, oral exam WNL
Respiratory: respiratory effort normal
Cardiovascular: regular rate and rhythm
Skin: clear, good turgor, color WNL, no rashes, lesions, or ulcerations

Assessment

Problems (including changes): He is following his diet, by his account. He has not had any hypoglycemic episodes, no night sweats. Feet are inspected and there are no callouses, no compromised skin. No vision complaints.

Impression: Sub optimal sugar, high glucometer readings. He will work harder on diet. Will increase insulin by 2 units. BP and symptoms are better.

Home Glucose Monitoring:
AC breakfast 110 to 220
AC breakfast mean 142
AC dinner 100 to 250
AC dinner mean 120

Plan

Medications:
HUMULIN INJ 70/30 20 u ac breakfast

Treatment: Will have annual foot exam at next visit.

Orders:
UA
HGBA1C
Metabolic Panel
Lipid Panel

Education/Counseling (time): 10 minutes

Coordination of Care (time): 10 minutes

Follow-up/Return Visit: 3 months

Disposition: return to clinic
01/20/2015 - Lab Report: Metabolic Panel Provider: Carl Savem MD
Location of Care: Millennium Health System

Patient: Bill Windows
Note: All result statuses are Final unless otherwise noted.

Tests:

(1) HbA1c Test
HbA1c level 6.0%

(2) Lipid Profile
Cholesterol, Total 210 mg/dl
Triglycerides 236 mg/dl
HDL Cholesterol 36
LDL Cholesterol 127
## Chart Summary

**Bill Windows**  
Male DOB: 09/09/1953  
0000-99999  
Home: 999-999-9999  
Ins: Commercial xxxxx

### Flowsheet

**Enterprise/Medicine/Internal Medicine**

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<td>PULSE RATE (/min)</td>
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<tr>
<td>PULSE RHYTHM</td>
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<tr>
<td>RESP RATE (/min)</td>
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<td>BP SYSTOLIC (mm Hg)</td>
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<tr>
<td>BP DIASTOLIC (mm Hg)</td>
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<td></td>
</tr>
<tr>
<td>CHOLESTEROL (mg/dL)</td>
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<td></td>
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<tr>
<td>HDL (mg/dL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDL (mg/dL)</td>
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<td>BG RANDOM (mg/dL)</td>
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</tr>
<tr>
<td>CXR</td>
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<tr>
<td>EKG</td>
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<td>PAP SMEAR</td>
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<td>BREAST EXAM</td>
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<td>MAMMOGRAM</td>
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</tr>
<tr>
<td>FLU VAX</td>
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<td></td>
</tr>
<tr>
<td>PNEUMOVAX</td>
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<td></td>
</tr>
<tr>
<td>TD BOOSTER</td>
<td>0.5 ml g</td>
<td></td>
</tr>
<tr>
<td>Foot Exam</td>
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<td></td>
</tr>
<tr>
<td>Eye Exam</td>
<td>Complete</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 14B. Sample Medical Record: Monica Latte

WeServeEveryone Clinic
1111 First Street California
111-111-11111 Fax: 111-111-1111

Monica Latte
Female DOB: 04/04/1950 0000-44444
Ins: Commercial Orange Shield

Patient Information
Name: Monica Latte
Address: 4444 Coffee Ave
Chocolate, California
Soc Sec No: 444-44-4444
Resp Prov: Carl Savem
Home Phone: 444-444-4444
Fax: 111-111-1111
Office Phone: 111-111-1111

Birth Date: 04/04/1950
Gender: Female
Contact By: Phone
Sens Chart: No
Emp. Status: Full-time
Marital Status: Divorced
Race: Black
Language: English
MRN: MR-111-1111
External ID: MR-111-1111

Problems
DIABETES MELLITUS (ICD-250.)
HYPERTENSION, BENIGN ESSENTIAL (ICD-401.1)

Medications
PRINIVIL TABS 20 MG (LISINOPRIL) 1 po qd
Last Refill: #30 x 2 : Carl Savem MD (08/27/2010)
HUMULIN INJ 70/30 (INSULIN REG & ISOPHANE (HUMAN)) 20 units ac breakfast
Last Refill: #600 u x 0 : Carl Savem MD (08/27/2010)

Directives

Allergies and Adverse Reactions (! = critical)

Services Due
FLU VAX, PNEUMOVAX, MICROALB URN
Office Visit: F/u Diabetes
Provider: Carl Savem MD
Location of Care: WeServeEveryone Clinic

OFFICE VISIT

History of Present Illness
Reason for visit: Routine follow
Chief Complaint: No complaints

History

Diabetes Management

Hyperglycemic Symptoms
Polyuria: no
Polydipsia: no
Blurred vision: no

Sympathomimetic Symptoms
Diaphoresis: no
Agitation: no
Tremor: no
Palpitations: no
Insomnia: no

Neuroglycopenic Symptoms
Confusion: no
Lethargy: no
Somnolence: no
Amnesia: no
Stupor: no
Seizures: no

Review of Systems
General: denies fatigue, malaise, fever, weight loss
Eyes: denies blurring, diplopia, irritation, discharge
Ear/Nose/Throat: denies ear pain or discharge
Cardiovascular: denies chest pain
Respiratory: denies coughing, wheezing, dyspnea, hemoptysis
Gastrointestinal: denies abdominal pain, dysphagia, nausea, vomiting, diarrhea, constipation
Musculoskeletal: denies back pain, joint swelling, joint stiffness, joint pain
Skin: denies rashes, itching, lumps, sores, lesions, color change
Neurologic: denies syncope
Psychiatric: denies depression, anxiety, mental disturbance, difficulty sleeping, suicidal ideation, hallucinations, paranoia
Endocrine: denies polyuria, polydipsia, polyphagia, weight change, heat or cold intolerance
Heme/Lymphatic: denies easy or excessive bruising, history of blood transfusions, anemia, bleeding disorders, adenopathy, chills, sweats
Allergic/Immunologic: denies urticaria

Vital Signs
Monica Latte
Female DOB: 04/04/1950 0000-44444
Ins: Commercial xxxxx
Home: 444-444-4444


Physical Exam
- **General Appearance:** well developed, well nourished, no acute distress
- **Eyes:** conjunctiva and lids normal, PERRLA, EOMI, fundi WNL
- **Ears, Nose, Mouth, Throat:** TM clear, nares clear, oral exam WNL
- **Respiratory:** clear to auscultation and percussion, respiratory effort normal
- **Cardiovascular:** regular rate and rhythm, S1-S2, no murmur, rub or gallop, no bruits, peripheral pulses normal and symmetric, no cyanosis, clubbing, edema or varicosities
- **Skin:** clear, good turgor, color WNL, no rashes, lesions, or ulcerations

Assessment
- **Problems (including changes):** Blood pressure is lower. Feet are inspected and there are no callouses, no compromised skin. No vision complaints.
- **Impression:** Sub optimal sugar, control with retinopathy and neuropathy, high glucometer readings. Will work harder on diet. Will increase insulin by 2 units.

Home Glucose Monitoring:
- AC breakfast 110 to 220
- AC breakfast mean 142
- AC dinner 100 to 250
- AC dinner mean 120

Plan
- **Medications:**
  - HUMULIN INJ 70/30 20 u ac breakfast
  - PRINIVIL TABS 20 MG 1 qd
- **Treatment:** Will have annual foot exam at next visit.
- **Orders:**
  - UA
  - Metabolic Panel
- **Education/Counseling (time):** 5 minutes
- **Coordination of Care (time):** 20 minutes
- **Follow-up/Return Visit:** 3 months
- **Disposition:** return to clinic
03/18/2011 - Lab Report: Metabolic Panel Provider: Carl Savem MD

Tests:

(1) HbA1c Test
HbA1c level 6.0%

(2) Lipid Profile
Cholesterol, Total 210 mg/dl
Triglycerides 236 mg/dl
HDL Cholesterol 36
LDL Cholesterol 107
**Monica Latte**

**Female DOB:** 04/04/1950  
**Ins:** Commercial xxxxx

**Chart Summary**

**Home:** 444-444-4444

**Flowsheet**

Enterprise/Medicine/Internal Medicine  
**Date:** 03/18/2011

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<td><strong>TEMP SITE</strong></td>
<td>oral</td>
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<tr>
<td><strong>PULSE RATE (/min)</strong></td>
<td>72</td>
</tr>
<tr>
<td><strong>PULSE RHYTHM</strong></td>
<td></td>
</tr>
<tr>
<td><strong>RESP RATE (/min)</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>BP SYSTOLIC (mm Hg)</strong></td>
<td>158</td>
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<tr>
<td><strong>BP DIASTOLIC (mm Hg)</strong></td>
<td>90</td>
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<tr>
<td><strong>CHOLESTEROL (mg/dL)</strong></td>
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<tr>
<td><strong>HDL (mg/dL)</strong></td>
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<td><strong>LDL (mg/dL)</strong></td>
<td>107</td>
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<td><strong>BG RANDOM (mg/dL)</strong></td>
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<td><strong>Foot Exam</strong></td>
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</tr>
<tr>
<td><strong>Eye Exam</strong></td>
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</table>
Appendix 14C. Sample Set of Electronic Pull Instructions for IT Staff

Diabetic Patient Identification

IT Instructions

Patient list generator

Step 1: Identify all patients that meet all of the following criteria:

- **Diabetic:** Select patients with any ICD9 = 250.xxx in the billing data.
- Among those, select patients with birth dates after 1/1/1927 and prior to 1/1/1962 [Age > 50 years and <85 on 1/1/12]

- Record number of patients seen at least twice in the 2-year period (3/30/2010-3/31/2012) ___

- Record number of diabetics identified ___
- Of diabetic patients selected, select those with three hemoglobin A1c values dated from 3/31/2011 to 3/31/2012:
  - Record number of patients identified ___

Step 2: Identify all patients that meet all of the following criteria:

- **Hypertensive:** Select patients with any ICD9 = 401 or 402 or 403 or 404.
- Among those, select patients with birth dates after 1/1/1927 and prior to 1/1/1962 [Age > 50 years and <85 on 1/1/12]

- Record number of patients seen at least twice in the 2-year period (3/30/2010-3/31/2012) ___

- Record number of hypertensives identified ___

Of diabetic patients identified in Step 1 (excluding criteria for hemoglobin A1c values, including those seen twice in both 12-month periods and only those within the range of birth dates listed), how many have any ICD9 = 401 or 402 or 403 or 404?
## Module 15: Collecting Performance Data Using Chart Audits and Electronic Data Extraction

### Appendix 15. Performance Metric Calculator for Diabetes

#### Diabetes HEDIS Measure Outcomes

<table>
<thead>
<tr>
<th>HEDIS Measure</th>
<th>Audit Result</th>
<th>Practice Goal</th>
<th>National or Local Benchmark</th>
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<tbody>
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<td>HbA1c screening rate = [\frac{\text{Total}(A)}{30} \times 100]</td>
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<tr>
<td>HbA1c less than 7.0 = [\frac{\text{Total}(B)}{\text{Total}(A)} \times 100]</td>
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<tr>
<td>Blood pressure documented = [\frac{\text{Total}(C)}{30} \times 100]</td>
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<td>Blood pressure less than 130/80 = [\frac{\text{Total}(D)}{\text{Total}(C)} \times 100]</td>
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<td></td>
</tr>
<tr>
<td>Eye Exams = [\frac{\text{Total}(G)}{30} \times 100]</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Foot Exams = [\frac{\text{Total}(H)}{30} \times 100]</td>
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</table>