Primary Care Practice Facilitation Curriculum

Module 14: Collecting Performance Data Using Chart Audits and Electronic Data Extraction
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Prepared for:
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Suggested Citation

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Module 14. Collecting Performance Data Using Chart Audits and Electronic Data Extraction

Instructor’s Guide

Practice facilitator (PF) competencies addressed in this module:
- Specialized skill in conducting medical record reviews using paper audits or electronic systems

Time
- Pre-session preparation for learners: 110 minutes
- Session: 60 minutes

Objectives

After completing this module, learners will be able to:
1. For paper-based data: Conduct a paper chart audit using a data abstraction form.
2. For electronic data: Create a sample set of instructions for an electronic data pull for a performance audit.

Exercises and Activities To Complete Before and During the Session

Pre-session preparation. Ask the learners to review information below and complete activity (110 minutes)
1. The content of this module.

Activity for learners (paper-based data) (50 minutes)
1. Have learners conduct chart abstractions of diabetes Healthcare Effectiveness Data and Information Set indicators for three different time periods for the clinic WeServeEveryone. Have them use the mock patient records and data abstraction form in the Appendix.

   • The date of abstraction for the following patients is October 27, 2010:
     o Billy Gato
     o Cherie Amore
     o Wendy See
   • The date of abstraction for the following patients is January 10, 2011:
     o John Donut
     o Adam Pie
     o Tom Gelato
• The date of abstraction for the following patients is April 14, 2011:
  o Steve Apple
  o Bill Windows
  o Monica Latte

**During the session.** Presentation (10 minutes)
  1. Present key concepts from the module.

**Large group discussion.** Ask questions and explore answers with learners. (15 minutes)
  1. What experience have you had conducting paper chart audits or working with electronic systems to collect performance data?
  2. What were three of your lessons learned for each medium?
  3. What were your experiences conducting the paper chart audits for today’s session? What aspect was easiest for you? What was the most challenging? What did you learn from this pre-session assignment that you would apply to your work with practices?

**Activity for learners** (25 minutes)
  1. Divide into pairs or small groups.
  2. Have learners work together to create instructions for the staff person managing the practice EHR or patient registry system to pull a report from the electronic system that parallels that of the paper audit the learner conducted pre-session. Have the learners use the sample Data Pull Instructions template to create the request.

**Discussion.** Ask questions and explore answers with learners. (10 minutes)
  1. What did you learn from creating the instructions for IT and an electronic performance data pull?
  2. How will you use this with your practices?
Module 14.

One of the most important functions of a facilitator is to help practices obtain, present, and interpret data in a meaningful and compelling way and translate the findings into action. Data collection, however, is laborious. Facilitators can spend much of their time with a practice simply building the practice’s capacity to access accurate and reliable data from its information systems and to use these data to guide improvement work.

With data being key to quality improvement (QI), it is important that you feel comfortable collecting, analyzing, and reporting data. Once data have been collected, they will need to be cleaned, analyzed, and presented to both the practice team involved with the project and to practice staff, clinicians, and leadership. The use of data and feedback systems allows practices to see improvements during an intervention, make adjustments, and stay engaged. Also consider Appreciative Inquiry as an approach to collecting valuable performance feedback (for more information, refer to Module 9).

Considerations When Collecting Clinical Performance Data

Many practices, especially small ones, continue to use paper medical records, often even when they have implemented an electronic health record (EHR) system. Others have transferred their record keeping completely to an EHR system. Still others use a combination of paper and electronic, for example, maintaining paper charts but also running a manual electronic registry. In other instances, the practice has gone completely digital but has only entered part of its patient records into its EHR system, so to access information, including information from prior years, you will need to pull data from both their EHR system and paper records to create a full picture. Given this, as a PF, you will want to be skilled in collecting, managing and reporting data from both paper and electronic mediums and in training practice staff and clinicians to do the same.

In general, an audit of 30 to 60 patient records seen during the target time periods is sufficient to generate usable performance data for a practice. You will need to collect data multiple times so the practice can track its progress.

For the initial performance audit, it is usually most effective to conduct an audit of the previous 12 months and organize these data by quarter to show fluctuations in performance over that time, but you will want to work with the practice to determine the time period. A 12-month period is useful because fluctuations across the period can be a valuable source of information about factors that may be affecting clinical performance. During active improvement work, monthly performance audits of patients seen during that period can help a practice monitor its progress toward improvement goals and make adjustments to processes and procedures when progress has not occurred.

When a practice is engaged in a Plan Do Study Act (PDSA) cycle, daily performance audits may be needed to assess how effective the modification is in improving the targeted performance metric, and for deciding if a modification is ready to be spread wider in the practice. For a
practice that has achieved an improvement goal, quarterly audits can be used to help them ensure that the improved performance is maintained. They also can alert the practice to the need for adjustments when performance unexpectedly declines.

**Procedures for Paper Chart Audits**

When you are collecting data from a paper-based system, you will want to create a form for abstracting information from the practice’s paper records. If you are collecting data from electronic systems, such as an EHR or patient registry, you will need to prepare a performance data request with specifications about what needs to be pulled from the system. In general, you will want to prepare both abstraction forms and data requests in collaboration with the practice’s QI team (if one exists) as well as with staff at the practice that prepare reports for payers and insurers and other groups. As you work with them to define the information that will be collected, you will want to ask about data they already collect and report and consider whether these data and reports could be used in addition to, or in lieu of, new data collection.

If you are abstracting from paper charts, you will enter the data into the abstraction spreadsheet. Figure 14.1 contains an example of an abstraction spreadsheet. You will most likely work with medical records staff to access the patient charts. Ideally they can provide you with a private place to sit and review the charts that is close to where the records are kept, so it is easy to return them to staff when you complete the abstraction. In practices with paper-based systems, it is very important to return charts in a timely way, as a staff person or clinician may need them for patient care or other purposes. Nothing is more disruptive to care than not being able to find a patient record when you need it.

Unlike with electronic data, where you should be able to collect data on the universe of patients in your target population, you will have to sample patients when doing audits using paper records. For performance audits, a random sampling of 30 to 60 charts or patient records for the initial performance audit can be sufficient to provide information on the practice’s performance. Smaller samples are vulnerable to random variability.

Another approach can be to sample 10 percent of eligible charts or to take a convenience sample from a single day of patients who meet the inclusion criteria (such as patients with certain chronic conditions). For monthly performance monitoring, an audit of the records of 10 patients seen during that month can be sufficient for a practice to evaluate progress toward an improvement goal.

You will need a list of patient records that you want to review. These lists can be generated using billing data with diagnostic codes and information on other inclusion and exclusion criteria. You will then need to give these patient record numbers to medical records staff, who can pull the charts and provide them to you for audit.

You will need to work closely with the QI team and practice manager to ensure that you do not create an undue burden on medical records staff and that you do not pull and retain charts of patients being seen that day.
Procedures for Electronic Health Record Audits

When requesting pulls of electronic data, you will typically create a data or report request and give this to the person in charge of producing reports from the practice’s EHR or registry systems. These data can be provided in a summary format (such as a report of the percentage of patients meeting certain criteria) or in raw form in a spreadsheet of patient-level data that you can manipulate later. In general, the raw form is helpful when getting started as it will allow you to drill down into the data and identify potential errors and underlying causes for these errors. Identifying errors in data such as mis-mapping and multiple locations for the same variable will take up much of your initial time with a practice. Having data in a raw format like an unprocessed spreadsheet will help you do this.

When accessing electronic data, you will usually work with staff at the practice who are in charge of creating reports for the practice. This can be a health educator who has been assigned to manage reporting, a QI staff person, a designated “super-user” for the practice, a clinician, or the front-desk clerk. Whoever this individual is, he or she will become an important part of the QI work you do with the practice, and also ideally a member of the QI team. You will learn from them, and they will learn from you. Over time your goal will be build their knowledge of the type of information and reports to produce to support QI work at the practice; and you will learn from them and build your knowledge about working with data in the particular IT systems they are using.

For your practices that use EHRs and electronic patient registries, you will want to become familiar with the reporting capabilities of these IT systems. Some of the needed functions, however, may require new programming. And depending on the way you want the data arrayed, it could be beyond the functionality of the EHR system. It is worth a significant investment of your time to learn as much as you can about how to coax data from the system. Developing a relationship with those who are in charge of the IT system(s) and can reconfigure reports to meet your needs will have a high payoff.

With electronic patient data, you can work with practice staff to create standing reports on key performance metrics that can be run repeatedly over time. These reports make it easy for the

<table>
<thead>
<tr>
<th>Information to Include in a Data Pull Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>• List of performance variables/metrics</td>
</tr>
<tr>
<td>• Patient inclusion (for example, patients with certain chronic conditions or patients seen in the office in the past 12 months)</td>
</tr>
<tr>
<td>• Patient exclusion criteria (for example, patients with ESRD)</td>
</tr>
<tr>
<td>• Time period covered (start and end date)</td>
</tr>
<tr>
<td>• Format of data</td>
</tr>
</tbody>
</table>

practice to continue performance reporting after the active facilitation intervention is finished.
Equally important is training staff to develop their own reports and modify existing reports so they can easily add new performance metrics over time or change the parameters of old ones.

In addition to providing a list of the performance variables you want included in the data pull, inclusion and exclusion criteria for the patient records that will be queried, and time period for the data, you will need to specify the format for receiving the data, such as a spreadsheet with individual patients or visits as rows and the variables as columns. The advantage of performance audits using data from EHRs is that you can often pull data on the entire population of patients seen during the specified time period, rather than limiting the audit to a subset of 30-to-60 patient records. Provide the IT staff, or whoever will pull the data, precise written descriptions of the criteria for inclusion and exclusion. A sample of instructions for IT for a performance audit data pull is provided in the Appendix.

Balancing Capacity Building and Hands-On Support in Getting Data

It is worth adding a note of caution here. First, it is unrealistic to expect that as a PF, you will have expertise in extracting data from every IT system you encounter in the practices you work with, as this can easily reach 40 or more systems across your panel of practices. Your goal should be to engage and build capacity of practice staff to do this, and help them access resources for training if they do not have this knowledge already, rather than doing the work for them yourself. Of course, if you have expertise in the particular IT system, by all means you can provide the training. And you will also need to help with much of the heavy lifting in identifying sources of errors in the data and helping the practice staff fix it permanently – for example, engaging the IT vendor to correct mapping errors in the system, or to eliminate duplicate entry options for patient information.

You will want to resist taking on the function of extracting and cleaning data for the practice, as it is an essential skill they will need to acquire in order to sustain QI work once you leave or put them on a maintenance schedule of support. This said, in some practices, especially very small ones with limited resources to direct to data collection, you may need to take this task on initially to increase their capacity to eventually do this on their own. For example, you may set-up report templates for the practice that staff can use over and over again, and automate their production as much as is feasible.
Privacy and Data Security

All data collected from a practice are highly sensitive. Whether the data are from patient records or staff surveys, the practice facilitator must keep data secure at all times. You should take a number of measures to protect confidential information. First and foremost, never take identified patient data offsite from a practice.

Electronic data are particularly difficult to secure, especially in the era of cloud computing. Any data transmitted to or stored on your computer, tablet, or laptop should be deidentified with all personal health information (PHI) removed. A list of what is considered protected PHI can be found in the Health Insurance Portability and Accountability Act (HIPAA) descriptions. For more information on HIPAA compliance, see Module 7, Professionalism for Practice Facilitators.
A key code connecting patient PHI, including medical record number, to data you maintain on your computer or any that you are transporting offsite will need to be created to allow you to re-identify data if needed. This key code should be housed at the practice and never taken offsite. In addition, you will need to set the security on your laptop to require a password to access any practice information stored on it. Any data transmitted through email or stored on cloud applications should similarly be deidentified, with the master code maintained only at the practice.

You will need to be familiar with and comply with all regulations of HIPAA as it relates to performance data and access to patient data. In addition to protecting sensitive patient information used in assessing clinical performance, you also need to be concerned about privacy and confidentiality of a practice’s performance data.

Assessing clinical performance can be a threatening and sensitive process for a practice. While sharing aggregated performance data and best practices across practices is a critical part of facilitation and of quality improvement in general, you will need to confirm that you have a practice’s permission to share information about their performance and improvement work before you do this. You will also need to clarify the conditions under which this is acceptable to the practice. Typically, these discussions will occur with practice leadership and your program director, and will be clarified at the start of an improvement intervention. But you will need to remain sensitive to these issues as you work across your practices and with other facilitators.

Note: this module is based on Module 8 of the Practice Facilitation Handbook. Available at: http://www.ahrq.gov/professionals/prevention-chronic-care/improve/system/pfhandbook/
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.
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Appendix 14A. Sample Data Abstraction

Diabetes Chart Audit Form

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
<th>g</th>
<th>h</th>
<th>i</th>
<th>j</th>
</tr>
</thead>
<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>
</tr>
<tr>
<td>0=NO 1=YES</td>
<td>0=NO 1=YES</td>
<td>0=NO 1=YES</td>
<td>0=NO 1=YES</td>
<td>0=NO 1=YES</td>
<td>0=NO 1=YES</td>
<td>0=NO 1=YES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td>4.</td>
<td>5.</td>
<td>6.</td>
<td>7.</td>
<td>8.</td>
<td>9.</td>
<td>10.</td>
</tr>
<tr>
<td>21.</td>
<td>22.</td>
<td>23.</td>
<td>24.</td>
<td>25.</td>
<td>26.</td>
<td>27.</td>
<td>28.</td>
<td>29.</td>
<td>30.</td>
</tr>
<tr>
<td>Totals</td>
<td>Total(b)=</td>
<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>
</tr>
</tbody>
</table>
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)
Appendix 14 B. Sample Medical Record: Billy Gato

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

Chart Summary

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
Contact By: Phone
Social Security No: 555-55-5555
Referred by: Carl Savem
Email: 
Home LOC: WeServeEveryone

Home Phone: 555-555-5555
Office Phone:
Fax: 
Status: Active
Marital Status: Married
Race: Hispanic
Language: English
MRN: MR-111-1111
Emp. Status: Part-time
Meds Chart: No
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 (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
OFFICE VISIT

Billy Gato
Male DOB: 05/05/1955
Home: 555-555-5555
0000-55555

09/25/2010 - Office Visit: F/u Diabetes
Provider: Carl Savem MD
Location of Care: WeServeEveryone Clinic

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


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

Coordination of Care (time): 10 minutes

Follow-up/Return Visit: 3 months

Disposition: return to clinic
### Chart Summary

**Billy Gato**  
Male  
DOB: 05/05/1955  
Home: 555.555.5555  
0000-55555  
Ins: Commercial xxxxx  

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

---

#### Tests:

1. **Metabolic Panel (ML-03CHEM)**
   - **ALK PHOS**: 72 U/L  
   - **BG RANDOM**: 125 mg/dl  
   - **BUN**: 16 mg/dl  
   - **CALCIUM**: 9.6 mg/dl  
   - **CHLORIDE**: 101 mmol/l  
   - **CO2**: 27 mmol/l  
   - **CREATININE**: 0.7 mg/dl  
   - **PO4**: 2.9 mg/dl  
   - **POTASSIUM**: 4.5 mmol/l  
   - **SGOT (AST)**: 31 U/L  
   - **BILI TOTAL**: 0.7 mg/dl  
   - **URIC ACID**: 4.8 mg/dl  
   - **LDH, TOTAL**: 136 IU/L  
   - **SODIUM**: 135 mmol/l

   **Values:**  
   - **ALK PHOS**: 35-100  
   - **BG RANDOM**: 70-125  
   - **BUN**: 7-25  
   - **CALCIUM**: 8.2-10.2  
   - **CHLORIDE**: 96-109  
   - **CO2**: 23-29  
   - **CREATININE**: 0.6-1.2  
   - **PO4**: 2.5-4.5  
   - **POTASSIUM**: 3.5-5.3  
   - **SGOT (AST)**: 0-40  
   - **BILI TOTAL**: 0.0-1.3  
   - **URIC ACID**: 3.4-7.0  
   - **LDH, TOTAL**: 0-200  
   - **SODIUM**: 135-145

2. **HbA1c Test**  
   - **HbA1c level**: 7.0%

3. **Lipid Profile**
   - **Cholesterol, Total**: 210 mg/dl  
   - **Triglycerides**: 236 mg/dl  
   - **HDL Cholesterol**: 36  
   - **LDL Cholesterol**: 121
Billy Gato

Male  DOB: 05/05/1955
Home: 555-555-5555
0000-55555
Ins: Commercial xxxxx

**Flowsheet**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEIGHT (in)</td>
<td>09/25/2010</td>
</tr>
<tr>
<td>WEIGHT (lb)</td>
<td>65</td>
</tr>
<tr>
<td>TEMPERATURE (deg F)</td>
<td>180</td>
</tr>
<tr>
<td>TEMP SITE</td>
<td>98</td>
</tr>
<tr>
<td>PULSE RATE (/min)</td>
<td>oral</td>
</tr>
<tr>
<td>PULSE RHYTHM</td>
<td>72</td>
</tr>
<tr>
<td>RESP RATE (/min)</td>
<td>16</td>
</tr>
<tr>
<td>BP SYSTOLIC (mm Hg)</td>
<td>134</td>
</tr>
<tr>
<td>BP DIASTOLIC (mm Hg)</td>
<td>92</td>
</tr>
<tr>
<td>CHOLESTEROL (mg/dL)</td>
<td>65</td>
</tr>
<tr>
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<td>BG RANDOM (mg/dL)</td>
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<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>
<td></td>
</tr>
<tr>
<td>HEMOCULT</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>Complete</td>
</tr>
<tr>
<td>Eye Exam</td>
<td>Complete</td>
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</tbody>
</table>
Module 14: Collecting Performance Data Using Chart Audits and Electronic Data Extraction

Appendix 14B. Sample Medical Record: Cherie Amore

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

Chart Summary

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:
Home LOC: WeServeEveryone

Home Phone: 333-333-3333
Office Phone:
Fax:
Status: Active
Marital Status: Married
Race: White
Language: English
Emp. Status: Full-time
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 (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, 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, 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
DOB: 03/03/1940
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

Cooperation 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  
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>
<th>Normal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALK PHOS</td>
<td>72 U/L</td>
<td>35-100</td>
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<tr>
<td>BG RANDOM</td>
<td>125 mg/dl</td>
<td>70-125</td>
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<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 8.0%

3. **Lipid Profile**

- Cholesterol, Total: 210 mg/dl
- Triglycerides: 236 mg/dl
- HDL Cholesterol: 36
- LDL Cholesterol: 125
Cherie Amore

Home: 333-333-3333

103-TEST011 Insurance: BHI (Futura) Group: BHI1595

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

Date 10/18/2010

HEIGHT (in) 63
WEIGHT (lb) 130
TEMPERATURE (deg F) 98
TEMP SITE oral
PULSE RATE (/min) 72
PULSE RHYTHM
RESP RATE (/min) 16
BP SYSTOLIC (mm Hg) 118
BP DIASTOLIC (mm Hg) 60
CHOLESTEROL (mg/dL)
HDL (mg/dL)
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: 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
Address: 777 Candy Lane
Dessert, California
Home Phone: 777-777-7777
Office Phone:

Patient ID: 0000-77777
Birth Date: 07/07/1943
Gender: Female
Contact By: Phone
Fax:

Soc Sec No: 777-77-7777
Resp Prov: Carl Savem
Referral by:
Email:
Home LOC: WeServeEveryone

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
WeServeEveryone Clinic  
March 24, 2011  
1111 First Street California  
111-111-11111 Fax: 111-111-1111  

Chart Summary  

Wendy See  
Home: 777-777-7777  

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
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
Chart Summary

Wendy See

DOB: 07/07/1943

Home: 777-777-7777

Ins: Commercial xxxxx

Flowsheet

Date: 9/22/2010

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</tr>
<tr>
<td>TEMPERATURE (deg F)</td>
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</tr>
<tr>
<td>TEMP SITE</td>
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<tr>
<td>PULSE RATE (/min)</td>
<td>72</td>
</tr>
<tr>
<td>RESP RATE (/min)</td>
<td>16</td>
</tr>
<tr>
<td>BP SYSTOLIC (mm Hg)</td>
<td>125</td>
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<td>BP DIASTOLIC (mm Hg)</td>
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<td>CXR</td>
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</tr>
<tr>
<td>HEM OCCULT</td>
<td>neg</td>
</tr>
<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>
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</tr>
<tr>
<td>Eye Exam</td>
<td>Complete</td>
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</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

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
Resp Prov: Carl Savem
Referred by:
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
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, hemoptyis
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  
Home: 000-000-0000  
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  
Ins: BHI (Futura) Grp: BHI1595  
0000-11111  
Home: 000-000-0000  
Ins: Commercial xxxxx  

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>Result</th>
<th>Reference Range</th>
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</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  8.0%  

(3) Lipid Profile  
Cholesterol, Total  210 mg/dl  
Triglycerides  236 mg/dl  
HDL Cholesterol  36  
LDL Cholesterol  102
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<thead>
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<tbody>
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<td>TEMPERATURE (deg F)</td>
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<td>TEMP SITE</td>
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</tr>
<tr>
<td>PULSE RATE (/min)</td>
<td>72</td>
</tr>
<tr>
<td>PULSE RHYTHM</td>
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</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>102</td>
</tr>
<tr>
<td>HDL (mg/dL)</td>
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</tr>
<tr>
<td>LDL (mg/dL)</td>
<td>125</td>
</tr>
<tr>
<td>BG RANDOM (mg/dL)</td>
<td>125</td>
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<tr>
<td>CXR</td>
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</tr>
<tr>
<td>EKG</td>
<td></td>
</tr>
<tr>
<td>PAP SMEAR</td>
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<td></td>
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</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>
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<tr>
<td>TD BOOSTER</td>
<td>0.5 ml g</td>
</tr>
<tr>
<td>Foot Exam</td>
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</tr>
<tr>
<td>Eye Exam</td>
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</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

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

Home Phone: 888-888-8888
Office Phone:
Fax:
Status: Active
Marital Status: Married
Race: White
Language: English
MRN: MR-111-1111
Emp. Status: Full-time
External ID: MR-111-1111

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

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>Value</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>CALCULUM</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>
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(2) HbA1c Test
HbA1c level 6.0%

(3) Lipid Profile

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
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<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>
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<tr>
<td>LDL Cholesterol</td>
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## FLOWSHEET

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<td>HEIGHT (in)</td>
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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>
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<tr>
<td>PULSE RATE (/min)</td>
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<td></td>
</tr>
<tr>
<td>RESPIRATION (/min)</td>
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<tr>
<td>BP SYSTOLIC (mm Hg)</td>
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<tr>
<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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<td></td>
</tr>
<tr>
<td>LDL (mg/dL)</td>
<td></td>
<td>127</td>
</tr>
<tr>
<td>BG RANDOM (mg/dL)</td>
<td>125</td>
<td></td>
</tr>
<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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<td>MAMMOGRAM</td>
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<td>HEMOCULT</td>
<td>neg</td>
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<tr>
<td>FLU VAX</td>
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<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>
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</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
111-111-11111 Fax: 111-111-1111

Tom Gelato
Male DOB: 06/06/1938
0000-66666

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
Soc Sec No: 666-666-6666
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 (04/17/2010)

Directives
DO NOT RESUSCITATE

Allergies and Adverse Reactions (! = critical)
! CODEINE

Services Due
FLU VAX, PNEUMOVAX, MICROALB URN
OFFICE VISIT

History of Present Illness
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
**Chart Summary**

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

Tests:

(1) Metabolic Panel (ML-03CHEM)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</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 11.0%

(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>
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<tr>
<td>LDL Cholesterol</td>
<td>102</td>
</tr>
</tbody>
</table>
**Tom Gelato**  
Male DOB: 06/06/1938   Ins: Commercial xxxxx  
Home: 666-666-6666  
DOB: 0000-66666

---

**Chart Summary**

**Flowsheet**

<table>
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<th>Parameter</th>
<th>Value</th>
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<tbody>
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<td>Height (in)</td>
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<tr>
<td>Weight (lb)</td>
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<td>Temperature (deg F)</td>
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</tr>
<tr>
<td>Temp Site</td>
<td>oral</td>
</tr>
<tr>
<td>Pulse Rate (/min)</td>
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</tr>
<tr>
<td>Pulse Rhythm</td>
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</tr>
<tr>
<td>Resp Rate (/min)</td>
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</tr>
<tr>
<td>BP Systolic (mm Hg)</td>
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<tr>
<td>BP Diastolic (mm Hg)</td>
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<tr>
<td>Cholesterol (mg/dL)</td>
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</tr>
<tr>
<td>HDL (mg/dL)</td>
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</tr>
<tr>
<td>LDL (mg/dL)</td>
<td>125</td>
</tr>
<tr>
<td>BG Random (mg/dL)</td>
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<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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<td>HEM Occult</td>
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<td>Flu Vax</td>
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<td>PneumoVax</td>
<td></td>
</tr>
<tr>
<td>TD Booster 0.5 ml g</td>
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</tr>
<tr>
<td>Foot Exam</td>
<td></td>
</tr>
<tr>
<td>Eye Exam</td>
<td></td>
</tr>
</tbody>
</table>
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
Home: 222-222-2222 Ins: Commercial xxxxx

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
Soc Sec 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
Steve Apple
Male DOB: 02/02/1945


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
**Chart Summary**

**Steve Apple**  
Male DOB: 02/02/1945  
0000-22222  
Ins: Commercial xxxxx  
Home: 222.222.2222


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</th>
<th>Normal Range</th>
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<tbody>
<tr>
<td>ALK PHOS</td>
<td>72 U/L</td>
<td>35-100</td>
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<tr>
<td>BG RANDOM</td>
<td>125 mg/dl</td>
<td>70-125</td>
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<tr>
<td>BUN</td>
<td>16 mg/dl</td>
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<td>CHLORIDE</td>
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<tr>
<td>CREATININE</td>
<td>0.7 mg/dl</td>
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</tr>
<tr>
<td>PO4</td>
<td>2.9 mg/dl</td>
<td>2.5-4.5</td>
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<td>POTASSIUM</td>
<td>4.5 mmol/l</td>
<td>3.5-5.3</td>
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<td>SGOT (AST)</td>
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<td>BILI TOTAL</td>
<td>0.7 mg/dl</td>
<td>0.0-1.3</td>
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<tr>
<td>URIC ACID</td>
<td>4.8 mg/dl</td>
<td>3.4-7.0</td>
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<tr>
<td>LDH, TOTAL</td>
<td>136 IU/L</td>
<td>0-200</td>
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<tr>
<td>SODIUM</td>
<td>135 mmol/l</td>
<td>135-145</td>
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</table>

(2) HbA1c Test

HbA1c level 5.0%

(3) Lipid Profile

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<tbody>
<tr>
<td>Cholesterol, Total</td>
<td>210 mg/dl</td>
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<tr>
<td>Triglycerides</td>
<td>236 mg/dl</td>
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<tr>
<td>HDL Cholesterol</td>
<td>36</td>
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<tr>
<td>LDL Cholesterol</td>
<td>87</td>
</tr>
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Chart Summary

Steve Apple

Male DOB: 02/02/1945  Home: 222-222-2222  Ins: Commercial xxxx

0000-22222

Flowsheet

Date: 2/1/2011

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<td>TEMP SITE</td>
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</tr>
<tr>
<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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<tr>
<td>BP SYSTOLIC (mm Hg)</td>
<td>118</td>
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<tr>
<td>BP DIASTOLIC (mm Hg)</td>
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<td>CHOLESTEROL (mg/dL)</td>
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<td>HDL (mg/dL)</td>
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<tr>
<td>LDL (mg/dL)</td>
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<td>BG RANDOM (mg/dL)</td>
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<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>
<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>
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<tr>
<td>Foot Exam</td>
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</tr>
<tr>
<td>Eye Exam</td>
<td>Complete</td>
</tr>
</tbody>
</table>
Appendix 14 B. Sample Medical Record: Bill Windows

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

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

Patient Information
Name: Bill Windows
Address: 9999 Computer Dr
Operating System, California
Patient ID: 0000-99999
Birth Date: 09/09/1953
Gender: Male
Contact By: Phone
Soc Sec No: 999-99-9999
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 (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.
WeServeEveryone Clinic
1111 First Street California
111-111-11111 Fax: 111-111-1111

Bill Windows
Male DOB: 09/09/1953

Home: 999-999-9999
Ins: Commercial xxxxx

01/20/11- 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 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

DOB: 09/09/1953

0000-99999

Ins: Commercial xxxxx


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
Bill Windows
Male DOB: 09/09/1953

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
Bill Windows
Male DOB: 09/09/1953

Flow sheet

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<th>01/19/2011</th>
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<td>TEMPERATURE (deg F)</td>
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<tr>
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<td>oral</td>
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</tr>
<tr>
<td>PULSE RATE (/min)</td>
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<td></td>
</tr>
<tr>
<td>PULSE RHYTHM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP RATE (/min)</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>BP SYSTOLIC (mm Hg)</td>
<td>128</td>
<td></td>
</tr>
<tr>
<td>BP DIASTOLIC (mm Hg)</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>CHOLESTEROL (mg/dL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDL (mg/dL)</td>
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<td></td>
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<tr>
<td>LDL (mg/dL)</td>
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<tr>
<td>BG RANDOM (mg/dL)</td>
<td>125</td>
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<td>CXR</td>
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<td>PAP SMEAR</td>
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<td>BREAST EXAM</td>
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</tr>
<tr>
<td>MAMMOGRAM</td>
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<td></td>
</tr>
<tr>
<td>HEMOCCULT</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: 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

Home: 444-44-4444
Home Phone: 444-444-4444
Office Phone: 
Fax: 
Status: Active
Marital Status: Divorced
Race: Black
Language: English
MRN: MR-111-1111
Emp. Status: Full-time
Sens Chart: No
External ID: MR-111-1111

Patient Information
Name: Monica Latte
Address: 4444 Coffee Ave
Chocolate, California

Patient ID: 0000-44444
Birth Date: 04/04/1950
Gender: Female
Contact By: Phone
Soc Sec No: 444-44-4444
Resp Prov: Carl Savem
Referred by: 
Email: 
Home LOC: WeServeEveryone

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

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
**Chart Summary**

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

Ht: 64 in. Wt: 140 lbs. T: 98.0 degF. T site: oral  
P: 72  Rhythm: regular  R: 16  BP: 158/90

**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
### Monika Latte

Female DOB: 04/04/1950

Home: 444-444-4444

Ins: Commercial xxxxx

---

**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  
Home: 444-444-4444

**Flowsheet**

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</table>

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</thead>
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<tr>
<td>WEIGHT (lb)</td>
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<td>TEMPERATURE (deg F)</td>
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<td>TEMP SITE</td>
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<td>PULSE RATE (/min)</td>
<td>72</td>
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<td>PULSE RHYTHM</td>
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<td>RESP RATE (/min)</td>
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<td>BP DIASTOLIC (mm Hg)</td>
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<tr>
<td>BG RANDOM (mg/dL)</td>
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<td>CXR</td>
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<td>Foot Exam</td>
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<tr>
<td>Eye Exam</td>
<td>Complete</td>
</tr>
</tbody>
</table>
Module 14: Collecting Performance Data Using Chart Audits and Electronic Data Extraction

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  \[\text{Age} > 50 \text{ years and} < 85 \text{ on 1/1/12}\]

- 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  \[\text{Age} > 50 \text{ years and} < 85 \text{ on 1/1/12}\]

- 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?
Appendix 14D. Performance Metric Calculator for Diabetes

<table>
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<th>Audit Result</th>
<th>Practice Goal</th>
<th>National or Local Benchmark</th>
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<tbody>
<tr>
<td>HbA1c screening rate = [Total(A)/30 (total # of charts audited)] × 100 =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HbA1c less than 7.0 = [Total(B)/Total(A)] × 100 =</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Blood pressure documented = [Total(C)/30 (total # of charts audited)] × 100 =</td>
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<td></td>
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</tr>
<tr>
<td>Blood pressure less than 130/80 = [Total(D)/Total(C)] × 100 =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDL-C screening rate = [Total(E)/30 (total # of charts audited)] × 100 =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDL-C less than 100 mg/dL = [Total(F)/Total(E)] × 100 =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Exams = [Total(G)/30 (total # of charts audited)] × 100 =</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Foot Exams = [Total(H)/30 (total # of charts audited)] × 100 =</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>