Student Health Center ITS Project, October, 2012

Addendum to Application and "PyraMED (P5) Replacement Comments Summary"

In an effort to provide more specific and quantifiable information for the SHC ITS application , each staff member was interviewed and most were observed while navigating and negotiating the current PyraMED electronic medical records system this week. In addition the answers to some specific questions are now attached in order to clarify contract language regarding notice of non-renewal to current vendor, time lines and staff work schedules.

To enhance the readers understanding, SHC staff use the term "clicks" to mean click of the mouse. Each click of the mouse takes the user to a new menu or page. Though the user has technically opened a page in the process of navigating to an end page, the user cannot view more than one page of information at a time. In other words, the user has to use the pages sequentially as opposed to comparatively. The term "errors" most often refers to the screen freezing which stops any further data entry in a patient's chart. Wait time is the time between click and a page loading and data entry beginning.

Let's begin with Medical Records at the scheduling desk. Medical Records has had an electronic scheduling program for many years. When comparing the former scheduling program to PyraMED the staff notes additional time is not required for registering and scheduling returning patients. By comparison, for each new patient to the clinic, scheduling personnel estimate additional time is required. With PyraMED three minutes per person is added to the process. Up to one third of patients seen in any given year are new to the clinic.

The Medical Records Referral Coordinator scans items into charts and notes P5 freezes 3-4 times per week and takes 2-3 minutes to resolve most often by rebooting. Other staff members have to scan signature forms and other medical forms into the charts daily. When two people are logged into "image indexing" concurrently the system freezes frequently taking 2 minutes or more to resolve each event.

The Billing clerk is also the P5 Coordinator. She states she gets the error message "Media Highway has stopped working" two to three times per week. This problem can happen as often as daily, happens most frequently when she has more than one tab open and takes three to five minutes to resolve. This person most often provides the assistance needed for problem-solving to all other staff. From August 13th to October 1st, she spent an average seven hours per day assisting staff with P5 problems. In the past two weeks, she has been spending 45 minutes to an hour per week resolving P5 problems. When billing patients for supplies or equipment, the billing clerk must "click" through screens twenty-two times before the billing can be electronically sent to the Cashier. This process takes two minutes per encounter. When billing Family Pact (FPact), a Medi-Cal family planning program, the billing clerk must "click" through twenty-three steps before the billing can be printed and sent by mail. Slightly more complex, it can take an additional minute per billing. When there is a "split" billing (part through the Cashier and part through FPact) the billing clerk has an additional three clicks per billing. This process can take up to four minutes per billing. The billing process now requires Providers to enter some of the

billing information on each encounter which the billing clerk then has to verify. The entire billing process now takes twice the amount of time compared to the prior method of billing.

We have four staff Medical Assistants (MA) who, on average, now report one to three P5 error messages per week which have taken 10-15 minutes to resolve in most cases but occasionally take as long as 35 minutes. The MA's primary complaints center on the wait time between pages loading and the logic one has to memorize in order to dispense medications for shots, chart supplies given or document another service. The wait time can be as short as five seconds or as long as 40 seconds. How to dispense a medication is an example of the logic path problem where, instead of clicking on the "Medications" tab, one has to go into a main menu, then to Pharmacy Workplace, find the patient (even though you have the patient open on a page already), order the medication, dispense the medication and then fill the medication in the chart then verify all the information again. This has to happen before the MA physically gets the medication for the patient.

With two staff RNs, the main complaint occurs when they need to "claim" a patient from the dashboard and send the patient back to the dashboard for the next Provider. Compared to using paper charts historically, the RNs estimate the wait time for P5 responding, in the claim part of the process alone, adds 45 minutes to one hour of time per day.

We have three staff Family Nurse Practitioners and three Medical Doctors on staff. When they used paper charts the charts followed the patients. Orders for Lab, XRay and Nursing/MA functions were on paper. They were able to look at the patients most of the time while the patients were giving their histories. All EMR systems change the model. Orders are submitted electronically and providers must enter data in a variety of screens while the patients are talking. Facing the patient is no longer the strongest component of the encounter. Following on the heels of this paradigm shift are the following issues. For these providers, the greatest complaints occur with the wait times while navigating the many pages needed per encounter. The wait time, on average, for each page to load is eight to 30 seconds. When entering diagnoses or medications the program may not recognize some of the common brand names or have the generic name in the most commonly used format. The providers often have to access pertinent internet programs to find all the format possibilities, return to P5 and try them until they find one that works. The Providers state, on average working with this EMR adds two to 10 minutes to each encounter. Signing off on charts, when all the MAs, RNs and providers have finished has doubled the time it takes in their estimation. They have recently reported one to five error messages per week which have taken three to 15 fifteen minutes to resolve. The FNPs and MDs have to navigate the most amount of pages per encounter. They strongly express frustration with the wait times between pages and the number of navigation steps necessary to complete the charting for each encounter. When frustration level is placed on a scale from 0 – 10 with 0 equal to no frustration and 10 equal to exceedingly angry the average frustration level on a good day is reported at 4 whereas the average on a bad day is about a seven.

From the Pharmacist's view point P5drug data entry is inflexible as one would have to know the one format P5 uses for the specific drug.

XRay is not interfaced with P5.

The Laboratory is interfaced with P5. The Lab uses Orchard, a Laboratory Information System that interfaces with the reference Laboratory, Quest. Two significant problems exist as follows: By convention, normal Lab results are printed in black with red print used to signify abnormal results. Quest sends the results by this convention, Orchard transfers this information to P5 by this convention but P5 lists all results in black. With P5 there is no actual signal and lab results that are repeats of a former test are not grouped. The second problem occurs when a patient requires follow-up Lab tests. In P5 the lab test has the encounter identification number. Any subsequent follow-up tests cannot be ordered at the time of the encounter. A Provider has to open a new encounter for each follow-up Lab test. Creating new encounters for each follow-up test takes three to four minutes per new encounter.

As written above, the additional time, though only seconds, between steps in all of these encounter processes, add up to additional minutes per encounter and the logic of the P5 program is sequential as opposed to comparative and very “cumbersome” to navigate. Instead of the useful tool a well-designed program can be this program modifies the behavior and work flow of the very people a well-designed program would aid. Many members of our staff have had opportunities to work on call at other local and distant clinics and thus have seen other EMR programs. Some of those programs are similarly difficult but some of those programs have been extremely easy for them to learn and navigate in as little as a four hour shift.

We understand the PyraMed program has many capabilities for every type of medical setting and is customizable. Our partner Health Center staff at CSU San Luis Obispo has successfully customized the same program. CSU San Luis Obispo has a full-time IT Tech who works directly with the Medical Director and his staff to customize, maintain and resolve issues with the system. In contrast, our Medical Director works 10/12 year and though we require a great deal of IT help, we do not have a full time IT Tech on staff. P5 is a system with more functionality than we use, can handle or will need for a Student Health Clinic.