



Practice Management and Electronic Health Record Systems: School-Based Health Center Requirements and Configuration Considerations

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Introduction

In today's rapidly changing health care environment, all health care providers are faced with a myriad of delivery, compliance, and financial challenges. National efforts to improve the quality and efficiency of health care are leading organizations toward significant practice transformation initiatives. Practice Management (PM) and Electronic Health Records (EHR) systems are critical tools for supporting these efforts.

Effective and appropriate use of health information technology can help:

- Improve quality, safety, efficiency, and reduce health disparities
- Engage patients and families
- Improve care coordination, population and public health
- Maintain privacy and security

As with any other healthcare provider, PM and EHR systems are essential tools for school-based health centers (SBHCs). These information systems can help streamline operations, improve efficiency, and impact the quality of care. They are also a first step in enabling SBHCs to participate in "Health Information Exchange" which will enable SBHCs to better connect the care they provide on school campuses with the care many students receive in a community setting.

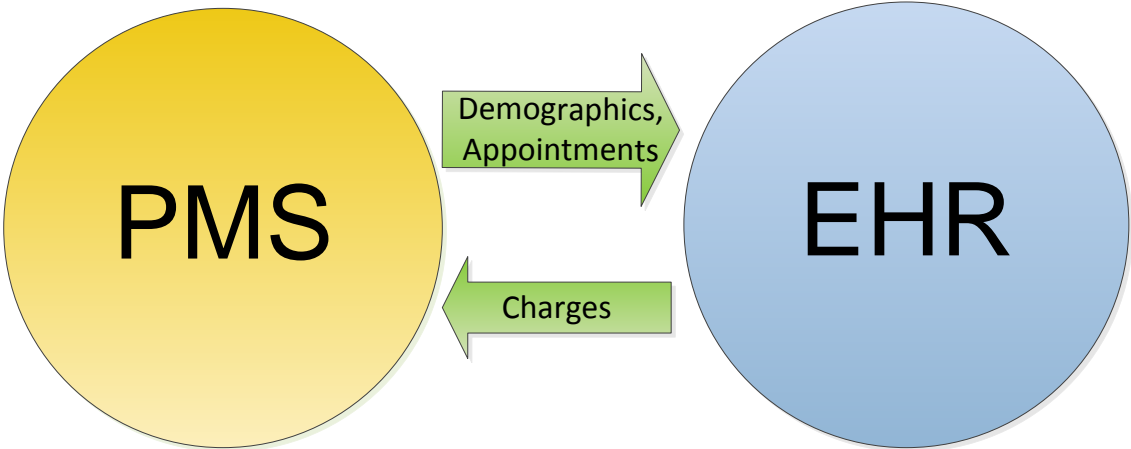
This document describes the typical features found in PM and EHR systems and how they can be adapted for use in an SBHC.

EHR systems can be stand alone, but are typically found in conjunction with a PM system, which is used for registration, scheduling, and billing purposes. An EHR may have its own integrated PM Functionality (figure 1) or be interfaced to a standalone PM system (figure 2).

Figure 1 – Integrated PM System and EHR – Single Software Application



Figure 2 – Interfaced PM System and EHR – Two Different Software Applications with an Interface to Exchange Data



Practice Management Systems

General Functionality

PM systems are computer applications that support the administrative functions of a health center or medical office. Management systems usually have several “modules” with functionality to support the workflow of a health care facility. Typical functional modules include:

- **Registration/Demographics:** Supports the collection of patient information for identification and billing purposes.
- **Scheduling:** Supports the ability to create a master template for a provider and to schedule appointments for patients into the template.
- **Eligibility Checking:** Supports the ability to electronically check insurance eligibility.
- **Check In:** Supports logging the time a patient arrived and generates a billing form for use by the providers. Also useful in notifying clinical staff that a patient is ready to be seen.
- **Charge Capture:** Supports the manual entry of services rendered for billing purposes, using diagnosis and billing codes required by payors. If integrated with an EHR, services rendered may be captured electronically.
- **Billing:** Supports the submission of electronic and paper claims to payors and statements to patients.
- **Collections/Accounts Receivable Management:** Supports the ability to enter payments to satisfy accounts receivable and includes efficient follow-up and tracking needed to effectively manage outstanding accounts receivables.
- **Reporting:** Includes a reporting function to include some standard scheduling, billing, and tracking reports, as well as some capability to create custom or ad-hoc reports.

PM Systems and SBHCs

A school-based health center may use some or all of the functionality available in a typical PM system. Below is a table that includes some of the key administrative functions of an SBHC, the functionality in a PM system that will support the task and a discussion of any special configuration that might be needed specifically for an SBHC.

Administrative Services Performed in SBHCs	Practice Management Functionality to Support SBHCs	Special Configuration Needed for SBHCs
Collect, store, and report on patient/student demographic information, at a minimum including the following: <ul style="list-style-type: none"> ■ Patient name 	Registration/Demographics: Functionality typically includes the ability to capture all items listed in the previous column except:	If a PM system has user defined fields, these fields can generally be used to capture a wide variety of information. Fields can usually be set up with the ability

Administrative Services Performed in SBHCs	Practice Management Functionality to Support SBHCs	Special Configuration Needed for SBHCs
<ul style="list-style-type: none"> ■ Patient address, city, state, zip ■ Date of birth ■ Gender ■ Race-ethnicity ■ Language spoken at home ■ Parent/guardian status ■ Insurance status at visit ■ Identification of primary care provider ■ School status (enrolled at this school, another school, or not enrolled) ■ Client is faculty/school personnel ■ Client is family of student user ■ Client is other person from the community <p>Other SBHC related data:</p> <ul style="list-style-type: none"> ■ Grade level ■ Attendance ■ Grade point average 	<ul style="list-style-type: none"> ■ School status ■ Client status (faculty/school personnel, family of student user, other person from the community) <p>Functionality to support a typical pediatric office includes the ability to create a family record, entering the parent data once and attaching multiple children to the parents. It is also important to be able to record several points of data about the child's situation, including recording information about parental custody, guardians, and/or foster parents.</p> <p>Most systems NOT include pre-defined fields for grade level, attendance, and grade point average information.</p>	<p>to limit options for the user to choose, to be free text, or to require a certain number or date format. Some systems allow user defined fields to be included in report creation as well. This would be critical if the users want to do any broad based analysis on any of the user defined fields.</p> <p>Unless there is an interface from the School Information system, data such as grade level, attendance, and grade point average would need to be obtained from the school and manually entered or obtained as self-reported from the student/parent and then manually entered.</p>
<p>Collect, store, and report on patient/student insurance information, including identifying programs the student may be eligible for</p>	<p>Registration/Demographics: Functionality typically includes the ability to capture insurance information. In addition, some systems may assist with program eligibility identification. Systems popular in with Community Health Centers and Federally Qualified Health Centers typically have a sliding scale component. Some have functionality to help determine eligibility for a sliding scale, such as the ability to document income, family size, and other components used to determine Federal Poverty Level (FPL). Actually matching the FPL and other patient attributes to a program for eligibility is not</p>	<p>None</p>

Administrative Services Performed in SBHCs	Practice Management Functionality to Support SBHCs	Special Configuration Needed for SBHCs
	<p>typically included in a PM system.</p> <p>Eligibility Checking: Some PM systems have the ability to check insurance eligibility automatically, either via a daily batch mode or a one time request. These systems use a clearinghouse to which insurance carriers report eligibility. The system then takes the patient's insurance information and bumps it up against the eligibility records in the clearinghouse to evaluate current eligibility.</p>	
Documentation of consents acquired, needed	<p>Registration/Demographics: Some systems will support logging dates that certain consents are obtained and offer a tickler to track when consents are due.</p> <p>Scanning: Some systems will include the ability to scan and store documents in a readable format attached to the patient.</p> <p>Electronic Signature Capture: Some systems include the ability to electronically sign a document using electronic signature pad hardware. This allows the patient/parent to review a consent online and to sign the consent online.</p>	None

PM and EHR Systems:
School-Based Health Center Requirements and Configuration Considerations

Administrative Services Performed in SBHCs	Practice Management Functionality to Support SBHCs	Special Configuration Needed for SBHCs
Scheduling, including the ability to manage both scheduled and walk in visits	<p>Scheduling: Functionality includes the ability to set up a separate template for each provider and include start time, stop time, duration of visits, and the ability to include multiple visit types. Typical functionality also includes the ability to block certain days and times on each schedule.</p>	None
Internal clinic communication and patient flow tracking	<p>Check In: Check in features include the ability to notify the clinician/provider that a patient has arrived and is ready to be seen. A patient can also be marked as a late arrival or even a no show. Typically copayments can be recorded during a check in process.</p>	None
Capture charges for services rendered	<p>Billing: Typical functionality includes the ability to manually enter charges. If integrated with an EMR, charge capture can generally happen automatically.</p>	None
Billing, including CHDP PM 160 functionality	<p>Billing: Most systems will include billing functionality. Few, however, support the PM 160 form generation.</p>	Some systems have the ability set up a print option that will print data items onto a pre-printed form. Setting up a PM 160 may be possible, but would likely be a custom job resulting in additional expense.
Track outstanding accounts receivables	<p>Collections and Accounts Receivable Management: Typical functionality includes the ability to post payments to open accounts receivables and to monitor unpaid visits. Collection modules generally include notes for users to document activities, tickler systems for setting follow-up dates, and</p>	None

Administrative Services Performed in SBHCs	Practice Management Functionality to Support SBHCs	Special Configuration Needed for SBHCs
	re-billing features.	
Reporting and analysis of SBHC activity	Reporting: PM systems come with standard reports and usually with a way to create custom reports. Most fields in most systems are reportable.	SBHCs may need to create some custom reports using the system’s report writer, or may need to request that the vendor do some custom programming to create special reports, which may result in additional cost.
Visit disposition (e.g., sent back to class, home, ER, other)	This functionality is not likely included in a PM system, but may be included in an EMR.	A visit disposition code could set up and entered during the charge entry process. Most systems allow the user to make up “dummy” codes that can be entered but not billed. A different code could be utilized for each disposition option, entered into the system, and then used for reporting purposes. A more ideal way to approach this would be to utilize an EMR for tracking disposition.

Electronic Health Record Systems

General Functionality

EHR systems are computer applications that support the clinical and patient workflow functions of a health center or medial office. EHR systems have several “modules” with functionality to support the clinical workflow of a health care facility. Typical functional modules include:

- **Patient Demographic Data:** Supports the collection of patient information.
- **Clinical History Documentation:** Supports the collection of patient’s family, social, and medical history.
- **Clinical Visit/Encounter Documentation:** Supports the collection of clinical information obtained during an office visit, such as vital signs, chief complaint, provider documentation, physical examination, impression, and plan.

- **Medication Management:** Supports the collection of information regarding current medications, medication allergies and facilitates electronic prescribing, medication administration, and medication reconciliation activities.
- **Orders and Results Management:** Supports the ability for the provider to place an order and document results for a lab test, diagnostic test, medication, and/or procedure.
- **Charge Capture:** Supports the ability to generate charges for a visit based on documentation and orders placed, and in some cases send the billing data to a billing system.
- **Workflow Management:** Includes tools for users to manage the current day's schedule and tasks, such as approving orders and signing off on notes.
- **Reporting:** Supports the ability to run reports to assist with managing daily patient flow, proactively managing patient flow, and other aggregate information needed to support your organization.
- **Scanning:** Supports the ability to scan paper documents and attach them to the electronic chart.
- **Patient Portal:** Support the ability for the patient to log into a secure website and fill out forms, request an appointment, view their chart (or portions of their chart), and communicate with a provider.

Pediatric Specific EHR Functionality

The pediatrics specialty requires some additional or enhanced EHR functionality. In addition to the standard EHR functionality listed above, pediatric systems generally include the following:

- **Well Child Exam Templates:** Includes well child exam templates by age group.
- **Sick Visit Templates for Common Pediatric Problems:** Includes standard templates for common pediatric illness, injury, first aid, and triage.
- **Immunization Management:** Supports the ability to track immunizations needed, immunizations given, including detailed information about administration of immunizations. Interfaces with Immunization registries.
- **Growth Charts:** Growth charts that accommodate child growth records. Height, weight, and other parameters to be measured should be easy to enter and then automatically plotted on the growth charts.
- **Asthma Flow Charts/Action Plans:** Supports ability to track asthma action plans and peak flow charts.
- **Weight-based Dose Calculators:** Supports the ability to calculate medications dosing using age and weights.
- **School, Sports, and Camp Forms Management:** Supports the ability to utilize the data collected in templates to be printed out in formats required by various agencies.
- **Confidential Documents for Adolescent Assessments:** Ability to designate all or part of a chart as confidential for staff viewing and parental access.
- **Consent Management:** Ability to track consents needed for various types of treatment.

EHR Systems and SBHCs

A school-based health center may use some or all of the functionality available in an EHR system and will greatly benefit from the features found in pediatric systems. Below is a table that includes some of the key clinical functions of an SBHC, the functionality in an EHR system that will support the task, and a discussion of any special configuration that might be needed specifically for an SBHC.

Clinical Services Performed in SBHCs	EHR Functionality to Support the Service	Special Consideration/Configuration Needed for SBHCs
Physical exams	<p>Pediatric Health Maintenance Templates:</p> <p>Most systems will have pediatric health maintenance templates by age range. Many EHR vendors now use specialists to advise on template content and design. These templates should be able to be used “out of the box” and require little modification. Pediatric focused systems may have more developed templates. Most templates can be modified. However, it is recommended that providers use templates for a period of time before making modifications. Templates can be very complicated, as data fields are tied to critical reports used for quality improvement and Meaningful Use. Modifying templates can break the links on these reports.</p>	Make sure the EHR has pediatric health maintenance templates.
Screenings (e.g., vision, hearing, TB)	<p>Order Entry/Results Management:</p> <p>Most systems will have the ability for the provider to create an order for screening tests. The orders are then carried out by clinic staff and the results recorded in the</p>	Make sure the EHR has the capability to order/result the desired screening tests.

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	<p>EHR. The results can then be routed to the provider for review and sign off, if necessary. Orders remain open until resulted and reviewed, providing a tracking system.</p> <p>Some EHR systems allow you to create standing orders. These would be orders that a provider requests on all patients or some patients based on age or other criteria. More sophisticated health maintenance modules will tie screenings to particular aged based physical exams and initiate orders automatically based on pre-determined criteria.</p> <p>Pediatric focused systems will likely come with certain screening tests already loaded into the system.</p> <p>Orders can generally be tied to CPT codes for charge capture, automatically generating charges upon ordering, resulting or reviewing, based on configuration.</p>	
<p>Immunizations (including mass immunization clinics)</p>	<p>Most systems will have the ability to record immunizations given on a patient by patient basis. Pediatric focused systems may have more developed immunization functionality.</p> <p>Desired features include:</p> <ul style="list-style-type: none"> ■ Recommended Immunization Schedules 	<p>Make sure the system has a robust immunization tracking functionality and the ability to interface with an immunization registry.</p>

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	<ul style="list-style-type: none"> ■ Point of care alerts for immunizations due ■ Online consents with electronic signature capture capability ■ Order entry and order completion functions including ability to record discrete data, including: <ul style="list-style-type: none"> ○ Immunization type and dose ○ Date and time of administration ○ Route and site ○ Lot number and expiration date ○ Manufacturer ○ User administering the immunization ○ Reactions <p>Mass Immunization: Some systems may have the capability to support mass immunization efforts. Features would include streamlined demographic data collection, batching of data entry, or uploading of immunization rosters.</p> <p>Immunization Registries: Ideally, the EHR has a bidirectional interface to an immunization registry. You would be able to query the immunization registry to determine immunization already given and upload the history into your EHR. Information on immunizations given in your offices would be downloaded to the registry. However, there are few registries in California capable of this type of data</p>	

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	<p>exchange. The link below shows regions in California that are ready to exchange immunization data with providers via a standard interface.</p> <p>http://www.cdph.ca.gov/data/informatics/Pages/MeaningfulUseImmunizationMap.aspx</p>	
<p>Primary medical care for injuries and illness, including first aid and triage</p>	<p>Primary Care/Urgent Care Templates: All EHR system should have standard templates for primary medical care illness, injury, first aid, and triage.</p> <p>Pediatric systems may have more specific templates for common childhood illnesses and injuries.</p> <p>Some template modification may be necessary to add visit disposition in order to record whether the student was sent back to class, sent home, or referred to another level of care.</p>	<p>Make sure the EHR allows for template modification to add disposition with drop down choices, such as sent back to class, sent home, referred to PCP/specialist, or sent to ER.</p>
<p>Age-appropriate reproductive health care for adolescents</p>	<p>Most EHR systems will have the capability to record information about reproductive health care provided. Generally this would be done in a template.</p> <p>However, EHR systems vary on their ability to keep certain parts of an EHR record confidential. Some systems allow a provider to identify a document as confidential and access would only be allowed for a certain type of user (generally a provider). Some systems will only allow the entire chart to be labeled</p>	<p>Make sure you understand how the EHR handles confidential services and documents and to develop clearly defined workflows for staff and providers to prevent the inadvertent release of confidential information.</p>

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	confidential. In this case, you would typically have to set up two charts, one for confidential services and another for all other services.	
Management of chronic conditions	<p>Most EHRs will have some functionality to assist you in managing chronic conditions, such as diabetes and asthma. However, stand alone chronic disease management systems or registries are generally better at this functionality. Some of the registries are capable of interfacing with an EHR.</p> <p>The critical functionality includes the ability to set protocols for each condition and for the system to alert you when certain tests or other follow-up activities are due. Reporting is another key component. Ideally the system could generate reports for patients that have a particular condition and have not had a recent lab test or follow-up appointment. This allows for more proactive management of patients with chronic conditions.</p>	Make sure the EHR can support the management of chronic conditions and provide reports to support that effort.
Laboratory tests	<p>Order Entry/Results Management: Most systems will have the ability for the provider to create an order for laboratory tests. If the tests are performed in-house, the results can be entered manually and routed to the provider for review.</p> <p>Interfaced with Lab: Ideally, you would have an interface with your most commonly used laboratory. The lab orders entered by the provider would</p>	Make sure the system has the capability to support lab ordering and resulting.

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	<p>be transmitted to the lab over the interface. The results would then be sent back through the interface, matched up to the patient and then presented to the provider in their worklist or approval queue.</p> <p>No Interface with Lab: Lab requisition slips can be printed out and provided to the patient. Results can then be entered into the EHR in discrete fields manually.</p>	
<p>Over the counter medications and prescription writing</p>	<p>Medication Management: All EHR systems have the capability to order medications, including over-the-counter medications and prescription medications. This is done through an “orders entry” module, where the provider orders the medication, including the full instructions on how the patient should take the medication (i.e., frequency, quantity, duration).</p> <p>Pediatric systems typically have dosing calculators to assist a provider in dosing for children.</p> <p>ePrescribing: Any EHR system certified for Meaningful Use will include the ability to ePrescribe. This means the prescription is transmitted via an interface to a pharmacy clearinghouse, usually SureScripts, and then routed to a pharmacy. When a refill</p>	<p>Make sure the system has a weight-based dosing calculator.</p>

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	is needed the patient can call the pharmacy and the pharmacy will request a refill via the interface. Some EHRs will allow you to bring in any prescription information found in SureScripts (with the patient's approval) and add it to your medication list. This improves patient safety, as it provides the prescriber with other medication information.	
Referrals and coordination of outside services	Typically EHRs will handle a referral as an order. The provider can order a referral to a specialist, or to the student's PCP (if the SBHC is not the PCP). The referral coordinator can then complete the steps outlined in the order, such as contacting the specialist/PCP, making an appointment, and sending a copy of the patient's records. A final step in the referral could be to obtain a copy of the specialist's/PCP's report. This would constitute a closed loop referral process, important for assuring that the patient gets the care they need.	This function is extremely important when the SBHC provides limited services (e.g., medication or chronic disease management) or urgent care to students for whom the SBHC is not the primary care provider (PCP). Ensure that your EHR supports your proactive coordination of care, referrals, and follow-up with the PCP as well as with needed specialists.
Mental health services	Most systems will have basic mental health templates.	Make sure the system has mental health templates or that you can design custom templates to track your SBHCs integrated mental health services.
Nutrition and weight counseling	Most systems will have templates to address nutrition and weight counseling.	Make sure the system has nutrition and weight counseling templates or that you can design custom templates.
School forms, sports physicals	Templates are typically used to capture information during a visit. Most EHR systems can take that data and produce a form that can be printed out. Some	Review and modify pre-defined physical exam output forms as needed for your students. Special forms may need to be designed if they are not included with the

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	<p>systems will come with some pre-defined forms, such as school or sports physicals. These may need some modifications to meet the needs of your SBHC.</p> <p>Producing a form that is based on the data already entered is desirable. Some systems can replicate forms exactly, producing a printed version that mirrors required formats. You may want to verify with your school or proper agency to validate that the computer-generated forms will be accepted.</p>	<p>system.</p>
<p>Group services (e.g., small group, classroom, health education, mental health)</p>	<p>Some EHRs have the ability to create a group and document for the entire group at once. This functionality is not very common, but may become more prevalent as more health EHRs begin to incorporate behavioral health functionality to support integration of primary care and behavioral health integration.</p> <p>Simple to use templates could be developed to document participation in group events on a student by student basis.</p>	<p>Determine if the EHR supports your SBHCs group programs. If not, you can develop custom templates to document these services on a student by student basis.</p>
<p>Dental services</p>	<p>Most EHR systems will not have the capability to document dental services. Custom templates can be developed to support limited documentation of dental services.</p> <p>Key differences between medical and dental functionality are the ability to</p>	<p>Make sure you can design custom templates if you want to use your medical EHR to document dental services.</p>

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	<p>develop treatment plans, the ability to document by clicking on the appropriate tooth, and the integration with digital X-ray. Billing requirements are also different for dental services and may require specialized PM functionality.</p>	