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EMR & DATA MIGRATION FOR COMMUNITY CARE PRACTICES



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ABOUT THIS RESOURCE

The process of selecting and migrating patient data to a new Electronic Medical Record (EMR) is a complex activity. There are numerous considerations and decisions that a primary care practice needs to make when thinking about moving to a new EMR. This resource outlines a step-by-step plan to help your practice achieve the optimum EMR migration outcome ensuring the continued delivery of patient care, safety and satisfaction.

This guide illustrates a four phase framework on the planning, selection, implementation and post-migration considerations for a new EMR. The framework is based on tested and proven EMR migration best practices as well as the experience and expertise of OntarioMD staff, EMR vendors, Peer Leaders and IT service providers.

WHO SHOULD USE THIS GUIDE?

This resource is designed for physicians using an OntarioMD-certified EMR, looking to migrate to either a local or Application Service Provider (AS-P)-based (cloud) EMR solution. An experienced team of Physician Peer Leaders, Practice Advisors and change management staff are also available to provide you with advice and support. As you prepare for an EMR migration, OntarioMD also encourages practices to consult with legal, accounting and IT professionals as required.

HOW TO USE THIS GUIDE

The goal of this guide is to get your practice thinking about what you will need for a smooth EMR migration experience. OntarioMD recommends that you review this guide in its entirety before proceeding with an EMR migration. This resource will also be a useful reference if you have already started your EMR migration.

OntarioMD has also developed a number of resources to support physicians as part of its Transition Support Guide. These can be found at <https://www.ontariomd.ca/resource-library/transition-support>. Relevant resources are referenced from within this guide, where appropriate.



WHAT IS AN EMR MIGRATION?

An **EMR migration** is the process of switching from an existing EMR system to a new EMR system. You may need to do so for many reasons, including:

- Your existing EMR no longer meets your needs and you want to change to an EMR offered by another vendor better suited to the needs of your practice.
- You are leaving a practice that uses one certified EMR and you need to migrate all of your patient data to a new practice that uses a different certified EMR.
- Your EMR vendor consolidates with another EMR vendor or goes out of business.

Data migration, on the other hand, refers to the transfer of data between the same or two different EMR systems. An EMR migration may or may not involve data migration. For instance, you may select a new EMR product and simply choose to manually reenter patient data once the new EMR is operational.

The importance of careful planning, preparation and use of EMR migration best practices cannot be understated. For example, your practice may need to recreate clinical forms or may have to manually extract data to the new system. The involvement of staff, excellent communication and allocating sufficient time will help ease the process.

WHAT ARE THE KEY MILESTONES AND PHASES OF AN EMR MIGRATION?

EMR migration is not linear. EMR migrations are time-intensive and certain steps may have to be repeated to satisfy all stakeholders and to achieve the desired outcome. The process will vary depending on your practice size, type, location and even the vendors involved. It may take anywhere from a few weeks to over eight months depending on the complexity of the migration.

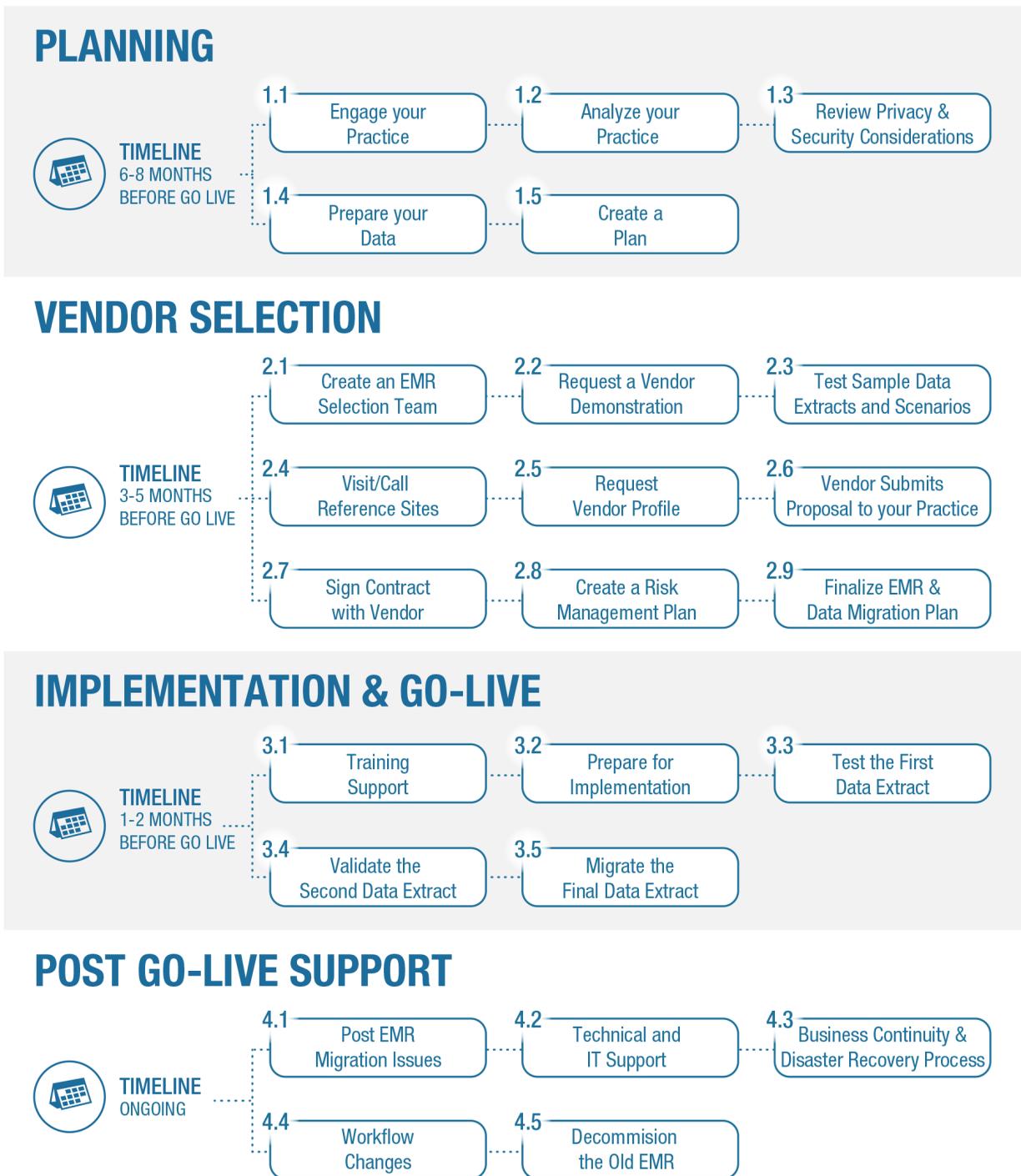


Figure 1 - The EMR Migration Process

Planning the Migration



Goal:

The goals of the planning phase are to engage your staff, develop vendor and EMR evaluation criteria that take all your workflow needs into consideration and select the EMR that best serves your practice needs.

Outcome:

The activities in this phase will lead to the creation of an initial EMR and Data Migration Plan.

When:

Six to eight months before the EMR is scheduled to Go-Live at the practice.

1.1 ENGAGE YOUR PRACTICE

The following are critical success factors for engaging your practice for the EMR migration.

Leadership

- Identify a strong leader to drive the migration from beginning to end. The leader should be selected or assigned before the start of the EMR migration.
- An EMR migration can be a demanding exercise. It is important for the leader to encourage practice staff to support each other as they get a better understanding of the new EMR.
- In a sole practitioner environment, the physician plays this role. In group practices, leadership can come from a computer-savvy physician, the clinic manager or an outside project manager hired for the duration of the migration.

Set Specific Goals and Create a Vision

- What do you want your practice to look like once the EMR migration is complete?
- What do you want to improve with the new EMR? Patient care? Billing? Medication management?
- A common vision may be to achieve greater operational efficiency and better system performance. Communicate this vision with practice staff, vendors and other stakeholders.
- Explore your practices' motivation for looking to select another EMR vendor or product. Why is your practice deciding to move to a new EMR?

Build Commitment

- Involve practice staff at the beginning to help address and reduce staff concern, improve communication and build commitment.
- In the case of a large practice setting, form an "EMR Selection Team" of practice staff that can devote the time needed for the EMR migration process. This will be discussed in greater detail in Section 2.1.

1.2 ANALYZE YOUR PRACTICE

Conduct a readiness assessment of your clinical and practice processes, to gain a better understanding of the gaps between your practice's current state and the desired future state. Assess the current state in terms of what should stay the same and discuss what needs to change in areas such as:

Patient flow: Examine the roles and functions of the various people who interact with patients at different points through their visit.

Point of care: Examine the various forms and/or documents that contain details of a patient visit.

Office communications: Examine the flow of information in the office.

Document management: Examine the movement of paper and documents coming into the office, going out of or around the office and into the patient chart.

Review existing workflows to identify opportunities for improvements. Determine if there is there a better way to perform a task or a process.

In addition to assessing workflows, enhance the planning process by reviewing the following:

Privacy and security: Review your privacy policy. Have members of the practice been trained on the necessary information privacy and security considerations? Please review Section 1.3 below for additional detail.

Business continuity and disaster recovery: Does your practice have a plan for the continuity of practice operations in the event of an interruption?

Past experience: You may also want to look at your past experience with introducing changes or even a new EMR to your practice. What did or did not work successfully in those situations?

1.3 REVIEW PRIVACY AND SECURITY CONSIDERATIONS

As Health Information Custodians (HICs) under the Personal Health Information Protection Act (PHIPA), physicians have certain legal obligations to patients. These include responsibilities related to the use of an Electronic Medical Record (EMR) system.

When considering a move to a new EMR, under PHIPA, it is you, the HIC, and not the EMR vendor, who is ultimately responsible for the proper and secure retention, handling, transfer and disposal of personal health information (PHI). As the HIC, you must take reasonable steps to ensure the necessary privacy and security features have been implemented before, during, and after the migration.

Section 12 of PHIPA states that “A health information custodian shall take steps that are reasonable in the circumstances to ensure that personal health information in the custodian’s custody or control is protected against theft, loss and unauthorized use or disclosure and to ensure that the records containing the information are protected against unauthorized copying, modification or disposal.” Section 13 of PHIPA further states that “A health information custodian shall ensure that the records of personal health information that it has in its custody or under its control are retained, transferred and disposed of in a secure manner.”

Physician Responsibilities Prior to an EMR Migration

When contemplating migration to a new EMR, it is the responsibility of the physician, as the HIC, to select and enter into an agreement with a new vendor that will abide by the terms of PHIPA and to ensure that the new vendor handles patient records properly and securely. For further information on the responsibilities of electronic service providers, including health information network providers, please refer to the Frequently Asked Questions

Privacy for Ontario Physicians and Staff at https://www.ontariomd.ca/documents/resource%20library/privacy-for-ontario_physicians.pdf. These roles and responsibilities should be included in any agreement with an EMR vendor, where applicable.

You should plan your migration to a new EMR well in advance, ensuring that you notify your previous EMR vendor of the migration and discuss the steps necessary to complete the secure migration with both your old and new EMR vendors. While you are not required to become a technical expert, you are required to understand your legal obligations under PHIPA and to ask probing questions to ensure your EMR migration meets those requirements.

Physician Responsibilities During and After an EMR Migration

Physicians must ensure that the PHI is transferred to the new EMR vendor in a secure manner and upon transfer, is retained securely in the new EMR. Once the transfer is complete, physicians must also ensure that the previous vendor no longer has possession of any PHI. You should request that the old EMR vendor provide, in writing, a statement that any PHI has been securely deleted upon transfer, or return the PHI to you in a secure manner.

If a backup is required of the EMR data in the old EMR, you are responsible for ensuring that any backups are securely retained.

Other Consideration

In addition to upholding your obligations under PHIPA, you must understand your accountability with respect to any College of Physicians and Surgeons of Ontario (CPSO) policies. The Canadian Medical Protective Association (CMPA) also provides guidance and support to physicians on issues related to privacy and electronic medical records.

For additional information, please refer to the OntarioMD Privacy and Security Guide at <https://www.ontariomd.ca/privacy-policy>.

Resources

CPSO policies on Electronic Medical Records

<http://www.cpso.on.ca/policies-publications/policy/medical-records>

Personal Health Information Protection Act, 2004, S.O. 2004, c. 3, Sched. A

<http://www.ontario.ca/laws/statute/04p03>

Information and Privacy Commissioner's Guidelines on the Treatment of Personal Health Information, in the Event of a Change in Practice at

https://www.ipc.on.ca/images/Resources/up-abandonedrec_gdlines.pdf

CMPA Electronic Medical Records Handbook and other relevant resources at

<https://www.cmpa-acpm.ca/web/guest/-/electronic-records-handbook>

Policies and Procedures

<https://www.ontariomd.ca/resource-library/policies-and-procedures>

Create an inventory of your EMR's data sources, and how they are stored:

- Spreadsheets, electronic forms, etc. For an overview of different EMR data categories please review Figure 2.
- Active or complex patients with a lot of items in the problem list.

Ensure at a minimum that Cumulative Patient Profiles (CPPs) are as complete as they can be.

This enhances the quality of the EMR migration.

What data is to be migrated? What data isn't?

An EMR migration may involve different types of data, including patient data, practice level data (billing, address books) as well as system data (e.g. audit logs). See Figure 2 below for additional data types in the EMR. Check with the prospective vendor to determine what data you can expect to be migrated and any costs associated with migrating other data types.

Review data quality practices: This is a great time to “spring clean” your patient records. Patient data is the essential to a practice, built over many years. Make no assumptions about the quality of your data. Begin cleaning up troublesome areas (allergy status, CPP, expired medications) with the assistance of a student or practice staff early on in the process.

Review the requirements and principles set out by the College of Physicians and Surgeons of Ontario (CPSO) for storing and maintaining medical records. Do you have to migrate data that falls outside the policies? What about inactive patients?

Privacy and security: Who is the Health Information Custodian (HIC) within your practice? Who has the authority to move the data? Refer to Section 1.3 for additional information.

Check your EMR Agreement with your current vendor to determine if it includes a data migration support clause. Also consider EMR vendor costs for both extracting data from the old EMR and importing data into the new EMR. Note that your EMR vendor may charge for migrating the “nice-to-have” data artefacts.

Consider upgrading to the version of your current vendor's EMR that complies with the latest OntarioMD EMR Specifications.

Sign-off on all outstanding patient encounters in the EMR.

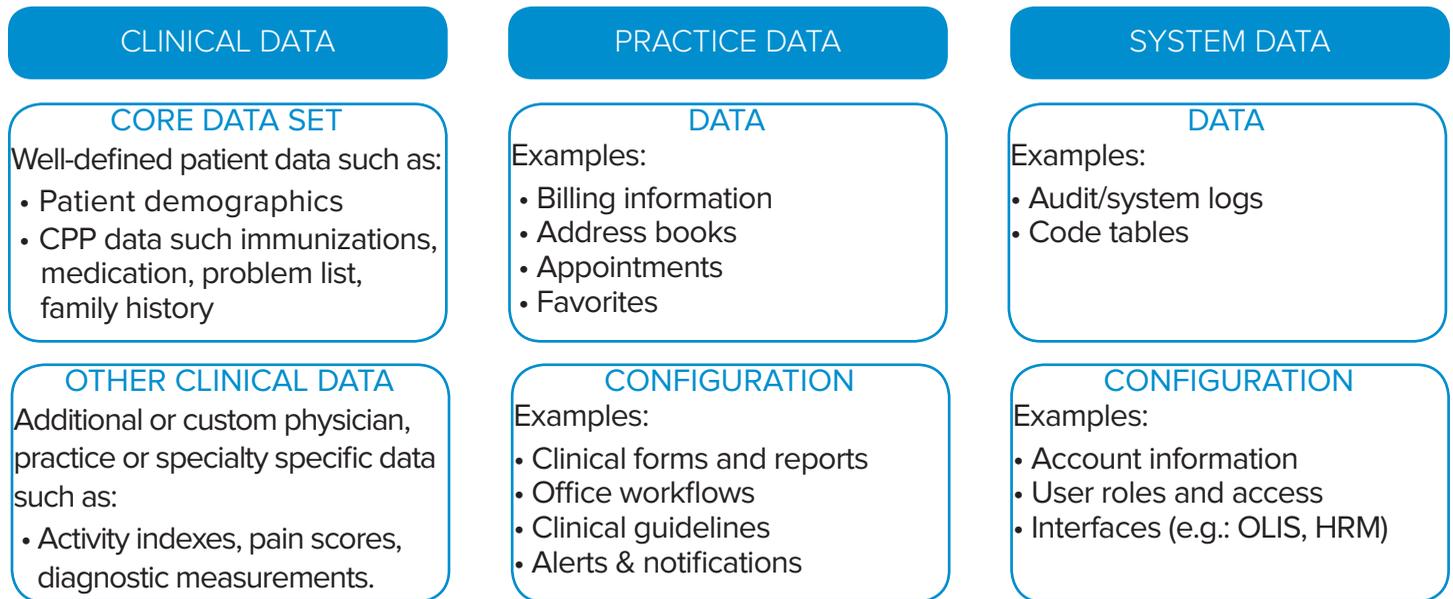


Figure 2 - EMR Data Categories and Configuration

1.5 CREATE A PLAN

The next step is to begin outlining an EMR and Data Migration Plan.

The plan should include:

- Your EMR migration objectives and assumptions
- The scope of the EMR migration, including people, resources and measurable targets
- A clear description of gaps identified in your practice
- The tasks that will be affected and how workflows may change
- A draft EMR migration schedule for the completion of the EMR migration phases
- Roles and responsibilities
- Business Continuity and Disaster Recovery plans

The plan should be flexible, allowing for changes to be made based on the specific EMR software selected for the practice and for contingencies that arise along the way. When contingencies arise, define a cut-off date to make a decision and move on with the tasks at hand.

Resources

To learn more about preparing for a new EMR, refer to the Physician EMR Planning Guide at https://www.ontariomd.ca/idc/groups/public/documents/omd_file_content_item/omd011946.pdf

To learn more about analyzing practice workflows, refer to the Practice Workflow Tool at https://www.ontariomd.ca/idc/groups/public/documents/omd_file_content_item/omd011969.pdf

To see a sample EMR Migration Plan, please refer to the EMR and Data Migration Project Plan template at https://www.ontariomd.ca/portal/server.pt/community/policies_and_procedures

Select a Vendor



Goal:

The next step in the EMR migration process is to select an EMR. At this point, your practice should have a better understanding of existing workflow gaps as well as the functionality you need from an EMR to achieve better practice efficiency and productivity.

Outcome:

Some practices prepare a 'Request for Proposal' (RFP) or a 'Request for Information' (RFI), to summarize their practice requirements. The RFP or RFI helps elicit responses from a 'shortlist' of prospective vendors. These responses will help you compare and decide on the EMR that best suits your needs.

When:

Three to five months before Go-Live.

2.1 CREATE AN EMR SELECTION TEAM

- Create an EMR selection team or working group to investigate, assess and select the EMR. The team should consist of representatives from both the clinical and non-clinical staff. In smaller practices, the selection team could include everybody in the office.
- The selection team should be intimately aware of the overall EMR vision and the results of the planning phase.
- Similarly, the team should possess the business judgment to be able to prioritize data elements for migration.
- The selection team would be responsible for reviewing the “shortlist” of prospective EMRs.
- The selection team should be willing and ready to look beyond the old EMR, appreciate the capability of the new EMR and begin to look for ways to streamline processes.

2.2 REQUEST VENDOR DEMONSTRATIONS (FUNCTIONAL TESTING)

This is an important step in the selection process, typically providing you with a basic introduction to the prospective EMR(s).

- Ask the prospective vendor to demonstrate areas of the EMR you want to see. For instance, you may be interested in the priority of functions when creating a clinical encounter or booking an appointment. The EMR vendor may also offer you a test environment to test drive the new EMR.
- This is an opportunity to rethink your practices’ functional EMR requirements, such as choosing an Application Service Provider (ASP)-based (cloud) solution over a local server solution. Which one will be more efficient in the long term?

2.3 TEST SAMPLE DATA EXTRACTS AND SCENARIOS

- Contact your old EMR vendor and make arrangements to obtain extracts of your EMR data from the old vendor product.

- Provide the prospective vendor(s) with a sample data set of hand picked complex patient records to test if they can migrate patient data and what it would look like in the new EMR.
- Work through common scenarios and workflows in the prospective EMR. A sample scenario could be: “A diabetic patient with a flowsheet” or “well baby growth charts”. Review the EMR and Data Migration Plan for sample scenarios.
- By having each vendor work through a sample data set and some scenarios, you will gain a better understanding of the logic inherent in the new EMR as well as the number of keystrokes or mouse clicks required to capture and view the information.
- Keep in mind that there is no incentive for the old EMR vendor to migrate all features (additional costs may apply).

2.4 VISIT/PHONE CALL TO VENDOR REFERENCES OR EXPERIENCED SITES

- Visit one or more EMR vendor reference sites provided by the prospective vendor. A reference site should be similar to your practice in terms of size, volume of activity, number of physicians and locations, and group type.
- Alternatively, you may organize a conference call with a practice that has completed a similar EMR migration. You may use this call to hear firsthand, the experience and evaluation of the prospective vendor’s support and ability.
- Keep in mind that reference sites may charge you a fee as compensation for their time.
- Prepare questions well in advance to ensure you get the most out of the visit or call.

2.5 REQUEST VENDOR PROFILE

The overall success of the project will also be influenced by the vendor staff who works with your practice to implement the system, provide training and post-implementation support. Get to know the prospective vendor by requesting a brief resume of the following key individuals

and their EMR migration experience:

- Project Managers, trainer(s) and IT implementation resources
- EMR implementation resources

You should also request a profile of the vendor, including:

- Corporate marketing information that summarizes solutions offered, financials, geographic markets covered, and the overall size of the company (an annual report may offer this detail).
- Number of physicians in Ontario using the EMR in their practice setting (not just billing and scheduling).
- Support locations and the number of employees dedicated to support (e.g. telephone support, typical response times, etc.).
- Systems and modules to interfaces currently in use in Ontario, such as pharmacies, patient portals, laboratories and even OntarioMD's Hospital Report Manager (HRM).
- References for other practices for which the vendor may have performed a migration or done business with before.

Resources

For additional information on OntarioMD Funding Eligible EMR Offerings, please visit <https://www.ontariomd.ca/about-us/our-organization>

2.6 VENDOR SUBMITS PROPOSAL TO YOUR PRACTICE

In this step of vendor and EMR selection, ask the prospective vendor to provide you with a proposal that outlines the following:

EMR

Hardware needed for servers, workstations, printers, keyboards and peripherals

- Bandwidth requirements (i.e. data transfer rate), including upload/download specifications
- Pricing and details of software ownership and licensing for both physicians and support staff
- Detailed pricing of any third party software or services required to make the EMR functional
- Costs for read-only access to the EMR if you decide to maintain the old EMR after the migration
- A Go-Live Date - the date when the new EMR becomes fully operational
- The vendor's standard approach to EMR migration (Are both EMRs available during the migration or is it a "big bang" where the new EMR is turned on and the old one switched off?)
- Details on if and how a read-only copy of your EMR data will be available to you for review after the EMR migration.

DATA

- A written assessment of your practice data and its suitability for migrating to the vendor's EMR database.
- A description of the type of data and EMR features that may or may not be migrated.
- Obtain estimates of EMR migration costs (What is included and what are the costs for what is not included?) For example, some vendors may charge an hourly/daily rate for services provided.
- Prospective dates for a test EMR migration

SERVICE AND SUPPORT

- Ask the new vendor where data testing will be performed. In some cases, the vendor may provide a virtual test "sandbox" environment before and during the migration for your practice to compare patient data in the new and old EMR. The test environment may also be a physical location, such as at the practice.
- Service support availability from the vendor, detailed training schedules and costs.

- Clauses in the new EMR vendor contract around data extracts and data migration.
- Privacy and security considerations; what provisions is the prospective EMR vendor willing to make to ensure that patient data is not compromised during and after the EMR migration? Please review section 1.3 for additional detail.
- Business continuity and disaster recovery plans
- A description of the triage process for handling EMR issues encountered during the migration.

THIRD PARTY CONTRACTS

A new EMR may require changes to the configuration, hardware and networking infrastructure within your practice. These changes may create glitches in your practice set-up. As this is outside of the scope of work by the EMR vendor, some practices may hire an outside IT specialist on a contract basis to serve as the EMR project manager for the period of implementation. If you choose this option, ask the third party IT vendor for:

- Service support availability and schedules
- Detailed training schedules and costs
- Whether you use an EMR vendor and/or a third party IT vendor to perform the data migration, develop clearly written policies and procedures, confidentiality agreements and service agreements.

TRANSITION PLAN

Are both the new and old EMRs available after the EMR migration? This allows staff to gradually get accustomed to the new EMR. If some data is missing or if the staff is unfamiliar with a workflow, they can easily revert to the old EMR to verify.

- How will the old vendor provide the practice with copies of the patient records for reference?
- Consider setting aside time before the practice opens for staff to get comfortable with logging in, looking at charts and handling incoming calls, before, during and after the EMR migration.

2.7 SIGN CONTRACT WITH VENDOR

If the terms within the proposal meet your practice requirements, the next step is to accept and sign a contract with the vendor. It is advisable to examine the terms and conditions within the old and new EMR vendor contracts, seeking legal advice where necessary.

- Examine the terms and conditions of the EMR contract in detail, seeking legal advice where necessary. For example, if a practice decides to pull out of the EMR migration contract agreement, early termination penalties may be applied if stipulated within the contract.

- The final decision to go ahead with a new EMR must be approved by decision makers in the practice.

- Ensure all clinical and administrative staff are aware of what is and is not included in the migration, as well as the risks, assumptions and timelines for completion of the migration.

2.8 CREATE A RISK MANAGEMENT PLAN

What can go wrong during the migration and what will you do if something does? In the case of a complex data migration, create a Risk Management Plan to identify risk factors. Creating a Risk Management Plan will better position your practice to respond to EMR migration challenges before and after they occur. OntarioMD field staff may be available to assist you with identifying EMR migration risks. The plan should outline what actions will be taken, by whom, as well as costs if the migration is not 100% successful.

2.9 FINALIZE THE EMR AND DATA MIGRATION PLAN

All the appropriate detail from the previous steps should be added to the EMR and Data Migration Plan with the new EMR vendor. Your practice, along with the vendor and OntarioMD's field staff, will contribute to this plan. Circulate a copy to practice staff so everyone understands the requirements, challenges and time frames for the next EMR migration phases.

To review a sample EMR and Data Migration Plan, please visit <https://www.ontariomd.ca/emr-certification/overview>

BEST PRACTICE

Start early: Begin the EMR migration effort giving yourself at least 6-8 months before the anticipated Go-Live date. An EMR migration requires attention to detail and the process will take a considerable amount of time and commitment from all parties involved, especially from the practice and EMR vendor.

The time required to perform an EMR migration will vary based on different factors, including the amount and quality of data to be migrated. Take into account the following:

- Your and your vendor's availability to participate in certain activities (e.g. testing)
- Downtime and reduced practice efficiency while the data is being migrated; and
- Facilities available for testing (e.g. data, server, monitors and other hardware, etc.)

Engage a data analyst (internal or external): A data analyst will work with the team to ensure that all requirements are understood and addressed at that the data is ready for migration.

Test Environment: Request a test 'sandbox' environment for practice staff to get accustomed to the new EMR about 4-8 weeks before the Go-Live date. This will help ease the transition to the new EMR. Keep in mind that not all vendors may provide you with such an option. Discuss these details with the vendor during the selection process.

Continue to maintain a working relationship with your old EMR vendor and understand the importance of your practices' role in the migration process.

Implementation and Data Migration Go-Live



At this point, you should have selected the vendor and EMR that you and your team have determined to be the best option for your practice. Ensure that the EMR and Data Migration Plan you have developed is circulated within the practice and to your new vendor.

Goal:

This phase involves the setup and configuration of the new EMR as well as the mapping of EMR data from the old EMR to the new EMR. It also involves working with three data extracts or more; the first extract for testing, the second for validation and the final extract for the actual data migration.

Outcome:

Your practice will be better prepared for the final EMR and Data Migration.

When:

One to two months before Go-Live.

3.1 TRAINING AND SUPPORT

Training is an important success factor as your practice transitions to using the new EMR. Your new vendor will often provide a training package as a part of the data migration. Instead of scheduling all of this training before the data migration, schedule some of the training before, during and after the data migration.

- Schedule short, focused training sessions about one or two weeks before Go-Live.
- Increase the frequency and intensity of EMR training around the Go-Live date.
- Schedule a training session a few weeks after the Go-Live date, once practice staff is better accustomed to the system and are able to ask specific, advanced questions.
- A member of the practice should be assigned the role of a superuser or clinical champion to answer questions and to help staff get used to the new system. This staff member will be more experienced with the system and can help train other users of the system.

When setting up training sessions in larger practices, group together practice staff who have a similar level of understanding with the EMR. Group tech savvy practice staff together and train them separately from practice staff who are not as comfortable with the EMR. This will ensure that participants can benefit the most from the training offered.

- Prepare questions for the trainer on specific workflows such as electronic prescriptions.
- If your vendor has provided you with a temporary 'lab' environment, encourage staff to practice and get better at using the EMR.
- Vendors know more about their EMR than they do about your practice. Ensure you highlight to trainers the areas of workflow and functionality you consider critical to your practice.

- If it is evident that your practice needs additional training, purchase additional services from the new vendor. It will be well worth it.

- Consider creating a short newsletter for your practice staff, sending out tips and best practices for the first few weeks after Go-Live.

For more information, please refer to the Physician Training Requirements Guide at <http://bit.ly/18CFnCe>.

3.2 PREPARE FOR IMPLEMENTATION

Goal:

Prepare your practice and data for the implementation.

Outcome:

Your practice is ready for the EMR migration challenges taking into account factors in addition to the data itself.

SETUP AND CONFIGURATION

- Prior to the implementation of the new EMR, set up the necessary system accounts for practice staff, including passwords and other access considerations.
- Prepare the tools and processes to ensure you hit the ground running including forms, calendars and other utilities.
- Prepare the Issues Log that will be used to record issues encountered during and after the EMR migration. Please review the sample EMR and Data Migration Project Plan at <https://www.ontariomd.ca/iet/transition%20support/emr%20data%20migration%20project%20plan%20v1.4.docxi>.

DATA MAPPING

- A data map is a mapping of data values in your current EMR to the corresponding data fields in the new EMR. Request a data map of your current EMRs data extract from your current EMR vendor to provide to your new EMR vendor.

- The new EMR vendor will use the map to enhance the quality of the data migration and subsequent extracts.
- If the current EMR vendor cannot provide a sample data extract, give your new EMR vendor a copy of the full data extract from the current EMR vendor. The new EMR vendor may sometimes use this extract to test the EMR migration to see how long it would take.
- A best practice is to project the EMR on a screen and have the EMR selection team review and compare what the data and preferences look like in the new EMR.

3.3 TEST THE FIRST DATA EXTRACT

Goal:

First test a full data extract to get a better understanding of the feasibility of an EMR migration.

Outcome:

Your practice and staff are better positioned to address potential data migration challenges.

Before testing begins, it is recommended that you contact your old EMR vendor to request the first patient data extract to provide to your new EMR vendor. Note that this extract may be performed at the vendor location or at the practice. This is the first of three recommended extracts within the testing phase. Please note that in some cases the steps within section 3.4 may be performed before those in section 3.3.

- The new EMR vendor receives the first sample EMR data extract and attempts to import the data into the new EMR.
- As an output, the new vendor will provide a report to you on which data can be migrated, and which cannot, how long the migration would take, as well as identify any outstanding issues. There may be several iterations of this process to ensure that you and the vendor are in agreement, setting the right expectations.

- Review and revisit the costs associated with custom data migration work outlined earlier. For example, reminders, decision support tools, queries and other EMR elements may be migrated at an additional cost.

- Obtain sign-off from the entire EMR selection team on acceptance of the results of the test migration.

3.4 VALIDATE THE SECOND DATA EXTRACT

Once your practice has a feel for the data migration positives and negatives through testing, the next step is to validate a second data extract. Continue to engage clinical and administrative staff throughout the different phases.

- Request an extract of 5 to 30 complex patients (depending on the size of your practice) for data validation from your old EMR vendor. In some cases, a sample of 20 patient files per clinician will provide an even better understanding of the requirements for data migration.
- These patient records should include artefacts from different parts of the EMR, including documents, reminders, stamps, templates and more.
- Provide this data set to the new EMR vendor. This extract will be tested iteratively, by the vendor, with the goal of obtaining a satisfactory final extract for the migration.
- A key validation activity is to have practice staff review the data using two views, preferably on two monitors.
 - The first view is to observe how a particular complex patient record looks in the old EMR
 - The second view illustrates how the same patient record looks in the new EMR
- Use the Issue Log to communicate and resolve data issues with the vendor. The log should be maintained even after the EMR migration is complete.

- Outline issues that the vendor cannot clear up, these can be placed in a ‘parking lot’ or may require workarounds.
- All physicians need to take responsibility for the review and approval of their patient data. Sign-off on the validation only when you are confident all issues and concerns have been addressed.
- Ensure that all data is backed up before the beginning of the final data migration in the next step.

To learn more, please refer to the sample Issue Log within the EMR & Data Migration Project Plan available at <http://bit.ly/1QpxiFi>.

Once the validation is complete, it may become evident that not all data elements, patient records or data artefacts can be migrated to the new EMR. The Issue Log should be updated with what worked, what did not work, and a checklist of items that need to be corrected or resolved, on an ongoing basis.

BEST PRACTICE

- Maintain the Issue Log. An Issue Log will serve as a point of reference for handling data challenges in the future.
- Assign validation tasks to staff. Administrative staff should validate administrative data (e.g., demographic data) and clinical staff should validate the clinical data (e.g., medications, immunizations, etc.).
- Allocate physical space. Set aside a work area along with equipment such as spare monitors, keyboards and other equipment if you are validating data within the practice.
- Learn from your patient records, those with a high level of data quality. Attempt to make these a standard for other patient records in the EMR going forward.

3.5 MIGRATE THE FINAL DATA EXTRACT (GO-LIVE)

Goal:

Migrate a fully tested EMR data extract into the new EMR on the Go-Live date.

Outcome:

An EMR migration that meets practice expectations

You are ready to migrate the final extract, and at this point, your new EMR and patient data should have been tested and validated extensively. All stakeholders should have a common understanding of the data that can and cannot be migrated, as well as the workarounds necessary to deal with missing data and other EMR migration issues. About one to two weeks before the actual data migration, schedule a meeting with practice staff and vendors to discuss what is working well and what isn't.

STEP 1: BEFORE THE FINAL MIGRATION

- Review the Issue Log and your Transition Plan, are there any critical items remaining?
- Request the final full data extract from your old EMR vendor to begin.
- Allocate sufficient time for the final migration as the process may take anywhere from a few hours to several days (you would have been informed of the time needed after first data extract).
- Ensure that on the cut-off date for data migration, patient records are complete, current and are reflected in the latest back-up of the old EMR.
- Prior to the Go-Live date, print or extract the EMR patient records required for patient appointments on the day of the migration.
- A trainer and/or an implementer(s) from the vendor must be present for the migration on the Go-Live date.

STEP 2: DURING THE MIGRATION

- If necessary, switch to using paper or a word processor such as Microsoft Word to record patient data on the day before the Go-Live date. This will ensure that the data is captured efficiently and can be reentered electronically into the new EMR.
- The new EMR vendor will begin importing data into the new EMR.
- Once the migration is complete, summarize what went well, what did not go well, and a checklist of items that need to be addressed.
- Once all parties are satisfied, organize a close-out meeting to discuss the outcomes.
- Some practices choose to keep both EMRs active, migrating data in batches. This approach may require additional effort from practice staff to toggle between two different systems.
- Maintain a record of the total number of records extracted from the old EMR and the number records imported into the new EMR. Did all the exported patient records get imported into the new EMR?

STEP 3: AFTER THE MIGRATION

- Continue to validate and cross-reference the data in the new EMR with the data in the old EMR. Record any issues within the Issue Log. There are two approaches you can use, depending on the agreement with your new EMR vendor:
 - Keep using the old EMR for reference only until data such as billing data is up-to-date in the new EMR.
 - Keep both EMRs active after the data migration. This way staff can gradually get accustomed to the new EMR. If some data is missing or if the staff is unfamiliar with a workflow, they can easily revert to the old EMR to verify. This prevents frustration with the new system immediately after the implementation.

- In the period immediately after the new EMR is active, consider setting aside time before the practice opens for staff to get comfortable with logging in, looking at charts and handling incoming calls.

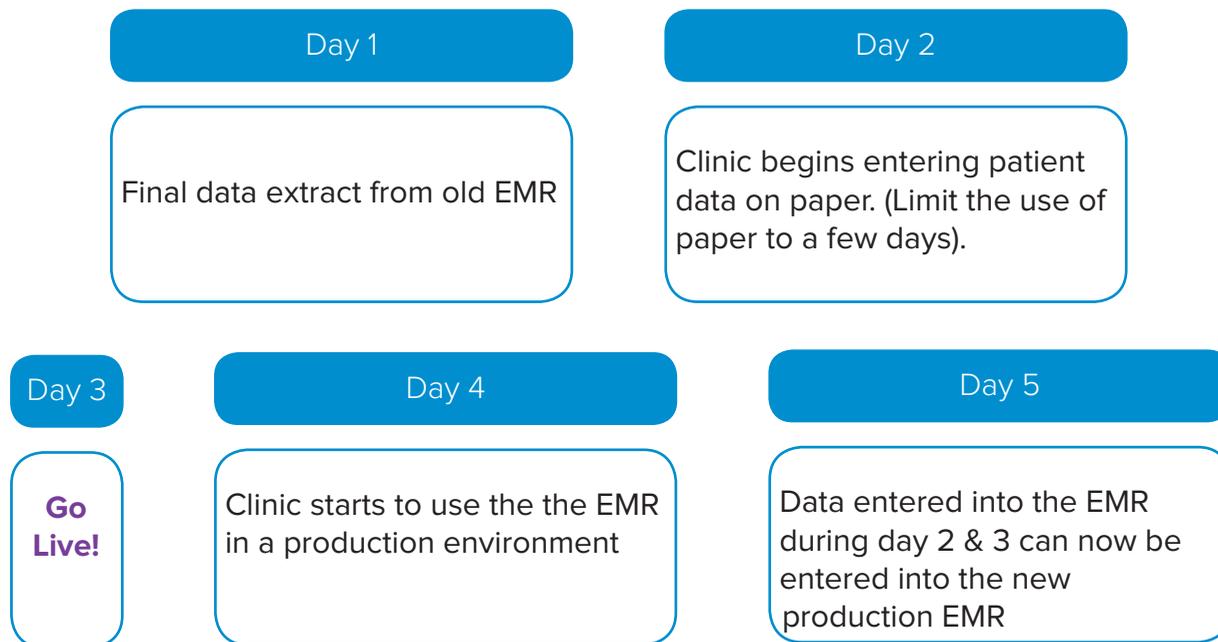
STEP 4: SIGN-OFF

- Organize a conference call or an in person meeting with all stakeholders (staff, vendor, third parties) to discuss the outcome of the EMR migration. Discuss what went well as well as what didn't.
- The final step will be to obtain sign-off from all practice staff once satisfied with the results acceptance of the final migration.

BEST PRACTICE

- Communicate before, during and after the migration. It is important to the success of the migration that communication flows freely between the vendor and the practice. Your practice and the vendor should each designate a point person to facilitate regular and frequent information exchange.
- Consider a partial extract, manual data entry and other data corrections post-migration. If all data cannot be successfully migrated for Go-Live, or the cost is too high, it may be easier to finish the migration by doing a partial extract, manually performing data entry and other post-migration data corrections.
- Maintain back-up copies of the electronic and paper data files. Keep electronic files (e.g., PDFs) from the old EMR prior to the migration date for any future data queries.
- Limit the amount of time spent capturing data on paper. While the EMR migration is in progress, limit the time you and your staff spend on capturing data on paper to only a few days for a migration happening mid-week. If the migration is happening over the weekend, you may be able to skip capturing data on paper.

Sample schedule for an EMR migration:



Post Go-Live Support



An EMR migration is a lengthy procedure that involves multiple processes, stakeholders, challenges and time commitments from your practice. Following a plan, such as the one outlined in this guide, will contribute to the successful transition of your practice and its patient data over to the new EMR. Once the migration is complete, it may take weeks or months for your practice to become accustomed to, and proficient with, the new EMR.

Goal:

Ease the transition of your practice into the new EMR system. Get the practice used to the new system as soon as possible and ensure the sustainability and viability of the new EMR in the long term.

Outcome:

Your practice will be better positioned to achieve enhanced use of the new EMR.

When:

Ongoing.

4.1 POST EMR MIGRATION ISSUES

After an EMR has been implemented, a practice may face challenges in terms of workflow changes, new and potentially unfamiliar functionality, as well as the need to reenter and recreate some settings such as alerts, favourites and workflows. Continue to use the Issue Log to gather the concerns from the clinical and administrative staff and to prioritize them by severity, urgency and sensitivity. This will ensure that the most important issues are addressed first as they happen.

- For the first few days after the new EMR is active, consider setting aside time before the practice opens for staff to get comfortable with logging in, looking at charts and handling incoming calls.
- Consider operating the practice at 50% of usual patient/practice capacity for a few days after Go-Live.
- Review a triage process with EMR/IT vendors to handle issues that may occur within the EMR or with the network.

To learn more, please refer to the sample Issue Log within the EMR & Data Migration Project Plan available at <http://bit.ly/1QpxiFi>.

4.2 TECHNICAL AND IT SUPPORT

A new EMR may require changes to the configuration, hardware and networking infrastructure within your practice. These changes may create glitches in your practice set-up. As this is outside of the scope of work by the EMR vendor, you may have had to select an IT vendor in the planning phase of the EMR migration.

If your practice did not procure the services of an IT vendor before the EMR migration, consider such a service if you begin to face challenges with the hardware and networking peripherals.

- Revisit the Service Level Agreements, help desk support for incident management and escalations for problem management with vendors as well.
- Request a Schedule of Maintenance as well.

4.3 BUSINESS CONTINUITY AND DISASTER RECOVERY PROCESSES

Review your plan in effect for unexpected and disastrous interruptions to operations. The plan should have been defined at the beginning of the EMR migration. This is not only recommended for practices that have experienced an EMR migration, but for any health care practice equipped with an EMR. Interruptions may be caused by hardware failures, software errors, viruses and security breaches as well as natural disasters.

Some of the benefits of having a Business Continuity Plan in your practice are:

- Minimizes interruptions to normal operations and reduces the impact of the interruption.
- Establishes alternative means of operation well in advance.
- Educates staff on emergency procedures in the event of an emergency.
- Recovers information technology assets after a disastrous interruption.
- Enables the delivery of critical services to patients.

4.4 WORKFLOW CHANGES

Once your EMR is installed and your practice starts getting accustomed to it, observe the changes in workflows. For example, your practice may have set a goal to become completely paperless or to receive and send faxes electronically with the new EMR. Are these goals being met?

- A new EMR will not always match your practice workflow entirely. It will be necessary to understand the changes the EMR brings and to align your practice workflows with the new EMR.
- Post Go-Live is a time of intensive activity, requiring careful attention to detail to avoid workflow concerns later in the future.

4.5 DECOMMISSION THE OLD EMR

There are several options for decommissioning the old EMR. These options depend on your goals as a practice and on the agreement you have with the old EMR vendor:

- Deactivate the old EMR and start using the new one after the EMR migration.
- Maintain a readable (or read-only) copy of your old EMR data, until you are satisfied that the new EMR is operating properly and that all patient data has been migrated. Exercise caution with this option as there might be associated costs from your old vendor.
- In all cases, review the legal requirements and principles set out by the CPSO for storing and maintaining medical records.

APPENDIX A

SAMPLE ISSUES LOG

The table below illustrates a sample data validation Issue Log provided within the EMR and Data Migration Plan, a copy of which can be found here: <https://www.ontariomd.ca/iet/transition%20support/emr%20data%20migration%20project%20plan%20v1.4.docx>. Also see section 3.2 of this guide for additional information on the Issue Log.

Attribute	Issue
Health Number	101010101010
Previous EMR section	Immunizations
Data issue	Immunization details not imported
Old vendor screenshot of section (immunizations, allergies, etc.)	<image>
New vendor screenshot of section	<image>
Adjustment requested by the clinic	Immunization data should be imported to new EMR and should match data in previous
Screen capture included	<image>
Data analyst's response	Completed, immunizations are now in new EMR

Table 2 - Data Validation Issues Log

APPENDIX B

ROLES AND RESPONSIBILITIES

PHYSICIAN LEADER

- Engage other practice staff.
- Monitor the progress and success of the project.
- Encourage practice staff to support each other as they get a better understanding of the new EMR.
- Potentially play the role of a super-user or otherwise, select another physician to play that role.

EMR MIGRATION PROJECT TEAM

- The team consists of practice members who work on all aspects of the EMR migration.
- Each person on the team should devote sufficient time and effort to deal with the challenges of an EMR migration.

GLOSSARY**ARCHIVE**

An archive is a collection of data, packaged within a database for backup, transfer or for retrieval later. An archive may include a simple list of files or files organized under a directory or catalog structure.

DATA DICTIONARY

A data dictionary is a complete definition of the data objects in a database as well as their intended use. Maintaining a data dictionary helps a practice maintain data consistency and achieve better data quality.

DATA MAPPING

A data-mapping document is a mapping of data values in your current EMR to the corresponding data fields in the new EMR to determine which data will be moved over to the new system. The data-mapping document should be as specific as possible.

GO-LIVE

The point in time at which the EMR and other associated services are successfully implemented and are ready for use in your practice.

HEALTH INFORMATION CUSTODIAN (HIC)

Physicians are Health Information Custodians (HICs) under PHIPA. As a HIC, you must take reasonable steps to ensure the necessary privacy and security features are implemented before, during, and after the migration.

HOSPITAL REPORT MANAGER (HRM)

HRM is an eHealth solution that enables clinicians using a Specification 4.1A funding eligible EMR, to securely receive patient reports electronically from participating sending facilities.

IMPLEMENTATION PLAN

An implementation plan will help a project team move a project from the initiation phase to deployment and Go-Live.

SANDBOX

A non-production version of the EMR that gives your practice the opportunity to test drive the EMR with no risk of altering real patient records or otherwise affect the live EMR.