1) Adaptations - need at least a box to choose for a "lacking information" such as "inappropriate sig." or "wrong instructions"

2) MM: We need to be able to reverse. The final save button is so close to the save draft that often we hit the final save instead when we are typing + moving at a fast pace. Or we get interrupted + think we are done but in fact would like to edit later. We can't do this unless it is the next day.

3) There should be a break between the final save button + the billing to be able to go back in to make changes ie. if you are billing for a follow-up but accidentally clicked full → it doesn't allow the change once final save is in motion.

4) Either we are doing it wrong, but only a few pt. charts have a reverse option on the billing button. make it easier!

5) 257: B325 - are made by clicking buttons on the EMR link boxes that don't seem to work. (*on chart*) I took those - resubmitted them + claimed them (on the days date I was working on them) by going back in a previous encounter - making it a new encounter + taking off the links + putting one that is similar (but I know works) + resubmitting with new parameters. - worked every time, except for some f/u's that had already been paid for by an adapt Rx(?). Others got corrupted by going into it again, others were $0.00 because I think I tried too many times (three days in a row to resubmit.

6) I tried resubmitting one that was a f/u and it said complete, but a complete was done in July was stuck on complete (instead of changing it) I, it too late after final save → pt $7-0 again in Aug ??

7) Unhandled exception comes up more often then not going into a new BPMH, saving anything when this box pops up is not guaranteed. Usually when we go back into once we have EXITED it, we see the verbal box is not ticked anymore.

8) In the EMR - we shouldn't have to bill something in order to Reverse it. Once we bill something we can't work on it the same day (we corrupt the file).

9) "Cancel billed???" ~~one~~ on email Dennis said we have this option - where is it?

10) Make a preview button between the final save & billing that the Ph. can go and view the work to be able to sign off on it with a box that has their initials, # in this document preview the ph. should be able to make changes, before putting their initials, it then should be sent back to the data entry electronically to be able to be billed. This will allow for accountability for the Ph. so that the entry level job of data entry is fulfilled. This preview button should be linked to the ph. Winrx sign in box, that has a box that alerts them that they have "mail" EMR's are done, they view it & once it is viewed it can go back to 3rd station to be billed. The sign in box will have another box that alerts the med. manage. dept. that billing needs to be done.

11) s.22 - Complete went through #60 London drugs did one ~ 1 mth ago.

- Corrupts file - minimizing, or double clicking
- Taking out the links will cause billing to go through after adapt was paid. (pd. for a complete when no links were chosen) code 43.
- Have to go back into encounters to Δ links to resubmitt billing (but can't backdate or reverse billing.)
- Can't reverse billing to change something or add something forgotten (or to correct spelling). Once final save is done it goes through to billing, there is no break. You can't make changes until the next day to rebill it. s.22
- 2 corrupt files:
- Submitted twice on same day. s.22 (one went through the other stonered).
  - Accidentally billed for a full when it should have been a f/u (full done in July) Aug 15/13 s.22
  - Rebilled on same day (1st didn't go through second did). s.22 s.22
  - Corrupt files: s.22 } -D went through once cleaned up.
- Still getting - Code 43 - for follow-ups. s.22
  - some go through as completes.
- Still got $0.00 for s.22

1) Goals: - use from "The Assurance Prepopulated Goals Therapy Manual" already linked into appropriate problems on list in the EMR - so that we can choose one or adapt it to make it more personal. And it will allow the Pharmacist to choose a # from this manual for us → which lessens the time on both ends.

2) Problem List: The same problems in the "Assurance Pre populated Goals Therapy Manual" to choose from - which are linked with Goals already (#1)

3) Nothing in the assessment box (this will always be different)

4) Move the final save button to the bottom (so we don't accidentally hit it when we save draft)

5) Move the billing button with the final save button (keep consistency with final save button)

*Billing button make it one function rather than clicking several boxes "yes" you want to submit "yes" you want to bill etc. - redundant.

6) Pop down box for History of Influenza (yes/no), Pneumococcal Shot (yes/no), Current on all immunizations (yes/no) all childhood immunizations (yes/no)

7) A separate box for allergies in the history section.

UNEC - Unnecessary drug *
INEF - Ineffective drug
LOW - Dosage too low *
HIGH - Dosage too high *
ADR - Adverse drug reaction
ADD - Needs additional drug
PTSM - Patient self-management (make it work) *

What we need:
- Untreated condition
- Synergistic therapy
- Preventitive therapy
- Cannot afford drug product

- Non-drug therapy more appropriate
- Patient doesn't understand directions
- Duplicate therapy
- Treating avoidable adverse reaction

*CHGD - Dosage change
*CHGF - Form Change
*CHGR - Regimen change
*SUB - Therapeutic substitution
*RNEW - Renewal * make this one work
*PUIM - Administer injection for immunization (publicly funded vaccine)
**NPIM - Administer injection for immunization (not publicly funded vaccine)
*AOIM - Administer injection (all others, not for immunization)
PCHA - Contact prescriber to change, stop, or start medication
NCHA - Change, stop or start medication (non-prescription)
CDED - Provide chronic disease education
EDUC - Provide education
MONI - Initiate monitoring
*RMED - Refer patient to medical physician
*RHCP - Refer patient to health care professional (other than medical physician)
* ELIM - Eliminate patient barrier
* RECO - Provide other recommendation

PERSONAL CARE ASSESSMENT

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HOWE SOUND PHARMACY

1 BASIC INFORMATION – Please attach MAR or PNET print out and lab values

Client Name (Surname / First Name) | Assessed by | License #

Address | Gender ☐ Female ☐ Male | DOB: (YYYY/MM/DD)

City & Postal Code | Province | PHN #

Age | Weight | Height | BMI

Cell Number: | Home Number: | Email Address

Pregnant: ☐ No ☐ Yes | Breastfeeding: ☐ No ☐ Yes | Due date: (if applicable)

Occupation: | Living Arrangements: | Health Insurance:

GP: Tel. | Specialist Following Client: Tel. | Other HCP? Tel.

Blood Pressure, Heart Rates, Respiration Rate				
Date				
Date				

What is the client's general attitude toward taking medication?

What does the client want/expect from drug therapy?

Who looks after client's meds?
☐ Client ☐ Other:

What compliance aide does client use?
☐ B.P. ☐ Strip pack ☐ Vials ☐ Other

To what extent are the client's medications understood?
☐ Very well ☐ Well ☐ Average ☐ Lacking some information ☐ Poor

Tobacco Use:
☐ None/not applicable
☐ 0–1 packs/day
☐ More than 1 packs/day
☐ Previous smoking history
Ex smoker: quit date?
If smoker, motivated to quit?
☐ No ☐ Yes

Alcohol Use:
☐ None/not applicable
☐ Less than 2 drinks/week
☐ 2–6 drinks/week
☐ More than 2–6 drinks/week
Date stopped drinking:

Caffeine Use (coffee, tea, soft drinks):
☐ None/not applicable
☐ Less than 2 cups/day
☐ 2-6 cups/day
☐ More than 6 drinks/day
☐ History of caffeine dependence

Other Recreational Drugs:
☐ Marijuana ☐ Cocaine
☐ Other (please specify):

Diet? | Activity Level?

Issues: ☐ Dexterity ☐ Hearing aids ☐ Walking ☐ Opening vials ☐ Vision

2 IMMUNIZATION HISTORY AND OTHER MEDICATIONS

Influenza Shot ☐ No ☐ Yes Booster Schedule: _____

Pneumococcal Shot ☐ No ☐ Yes Booster Schedule: _____

Other _____ Booster Schedule: _____

Currently on all adult immunizations? ☐ No ☐ Yes ☐ Childhood (yes) Booster Schedule: _____

ALLERGY INFORMATION

Drug/product		Type of reaction	Date of reaction

INTOLERANCE INFORMATION

Drug/product		Type of reaction	Date of reaction

2A RELEVANT FAMILY HISTORY

PRESENT MEDICAL CONDITIONS AND DRUG THERAPY (Includes Prescription, OTC and alternative medicines)

Medical Condition	Drug Therapy (drug, dose, route and instructions of use)	Duration of Therapy	Could condition be drug-induced/ aggravated?	Is therapy: • Appropriate • Necessary • Effective • Safe	Client's Response to Therapy (R, C, I, NC, W, SE)*
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	
			☐ No ☐ Yes	☐ No ☐ Yes	

*Response: R – Resolved, C – Control, I – Improved, NC – No Change, W – Worse, SE – Side Effects.

3 DRUG-THERAPY PROBLEMS AND RESOLUTION ACTIONS 1

Drug	Strength
Directions	
SMART Goal	
Intervention	

This drug is: ☐ 1st time use ☐ a change ☐ D/C'd | Follow-up: ☐ 1 day ☐ 7 days ☐ 14 days ☐ 30 days

Specify follow-up:

To claim a DTP, you need to select a DTP Type.

DRUG-THERAPY PROBLEMS AND RESOLUTION ACTIONS 2

Drug	Strength
Directions	
SMART Goal	
Intervention	

This drug is: ☐ 1st time use ☐ a change ☐ D/C'd | Follow-up: ☐ 1 day ☐ 7 days ☐ 14 days ☐ 30 days

Specify follow-up:

To claim a DTP, you need to select a DTP-Type.

DRUG-THERAPY PROBLEMS AND RESOLUTION ACTIONS 3

Drug | Strength

Directions

SMART Goal

Intervention

This drug is: ☐ 1st time use ☐ a change ☐ D/C'd | Follow-up: ☐ 1 day ☐ 7 days ☐ 14 days ☐ 30 days

Specify follow-up:

To claim a DTP, you need to select a DTP-Type.

DRUG-THERAPY PROBLEMS AND RESOLUTION ACTIONS 4

Drug | Strength

Directions

SMART Goal

Intervention

This drug is: ☐ 1st time use ☐ a change ☐ D/C'd | Follow-up: ☐ 1 day ☐ 7 days ☐ 14 days ☐ 30 days

Specify follow-up:

To claim a DTP, you need to select a DTP-Type.

5 OTHER RELEVANT CONDITIONS – Only needed if not entered with drugs

Condition		Comment

6 CHOOSE DTP TYPE AND RESOLUTION ACTIONS

Unnecessary Drug Therapy

- ☐ No medical indication
- ☐ Addiction/recreational drug use
- ☐ Non-drug therapy more appropriate
- ☐ Duplicate therapy
- ☐ Treating avoidable adverse reaction

Dosage Too Low

- ☐ Ineffective dose
- ☐ Frequency inappropriate
- ☐ Duration inappropriate
- ☐ Incorrect storage
- ☐ Incorrect administration
- ☐ Drug interaction
- ☐ Needs additional monitoring

Needs Additional Therapy

- ☐ Untreated condition
- ☐ Synergistic therapy
- ☐ Preventive therapy

Different Drug Needed

- ☐ Dosage form inappropriate
- ☐ Contraindication present
- ☐ Condition refractory to drug
- ☐ Drug not indicated for condition
- ☐ More effective drug available

Dosage Too High

- ☐ Dose too high
- ☐ Frequency too short
- ☐ Duration too long
- ☐ Drug interaction
- ☐ Needs additional monitoring

Adverse Drug Reaction

- ☐ Unsafe drug for client
- ☐ Allergic reaction
- ☐ Incorrect administration
- ☐ Drug interaction
- ☐ Dosage increase/decrease too fast
- ☐ Undesirable effect

Compliance

- ☐ Drug product not available
- ☐ Cannot afford drug product
- ☐ More affordable product available
- ☐ Cannot swallow/administer drug
- ☐ Does not understand instructions
- ☐ Client prefers not to take
- ☐ Client forgets to take

Please write DTP # beside the pertaining DTP-type.

ACTIONS TAKEN

	Client	Caregiver	Prescriber	
Initiate Drug				
Initiate RX therapy				
Initiate OTC therapy				
Change Drug				
Change product				
Change dose				
Change dosage form				
Change quantity				
Change interval				
Discontinue/Substitute Drug				
Discontinue drug				
Generic substitution				
Therapeutic substitution				
Formulary substitution				
Drug-Related Education				
Drug/device use education				
Chronic disease education				
Provide reminder device				
Monitor Drug				
Initiate lab monitoring				
Initiate non-lab monitoring				
Other				
Eliminate Client Barrier				
Recommendation not taken				
Problem not resolved				

90-DAY IMPACT

	Savings	Referral/ Prevention
Medical		
Office visit		
Multiple office visits		
Specialist office visit		
Multiple specialist visits		
Home Health Care visit		
Nurse/other provider visit		
Urgent Care visit		
Emergency department visit		
Long term care admission		
Hospital admission		
Monitoring		
Lab monitoring services		
Non-lab monitoring services		
Work		
Employee day		
Multiple employee days		
Drugs (90-day supply)		
< = $10		
$11 – 25		
$26 – 50		
$51 – 100		
$101 – 200		
$201 – 400		
> $400		

Proposed to leave a the meeting to view screens for clinical discussion - Sept 2013

Discussion Topics – Friday August 16 – Howe Sound Pharmacy

1. Prescription adaptation – workflow required to enable the two categories identified in previous discussions ("stand alone" and "part of solving DTPs")

Adaption system is not user and time friendly	2013-07-10: These are issues on POS that will be referred to ARI 2013-07-09: s.22 "Adaption system is not user and time friendly. It can take you 15 mins to run an adaption with all the documentation being typed and re written.....having to pof and F8 from there. And if you dare have to reverse an adaption.....it removes from our local system, you then have to pull it from the cloud and are forced to fill it on our local system, but that adaption is no good now!! you then have to reverse the adaption make it obsolete. Then you get to start from scratch and there is a good change you have corrupted the original pof you started with...if that happened you have error after error. Safest bet is to start all the way from the beginning and this is not time friendly you start looking at 15 20 or even 30 mins to work your way through the system
Larger than expected amounts being paid for adaptations	2013-07-10: s.22 to recommend configuration change as per Sorin suggested changes. 2013-07-10: ACTION: Sorin, s.22 and John C. And Mira to review configuration for adaptations. Define new CS codes? Rob to schedule 1/2 hour meeting. 2013-05-14: Issue raised by Dennis. ACTION: s.22 is currently looking into PNet configs on this
Adaptation Failure creates MMF claim rejection	2013-07-10: Rob to follow up with s.22 on status 2013-06-19: s.22 pharmacy has adaptation process split into two resources: 1. Adapting and Dispensing and 2. Claim submission. Currently staff submitting claims are attempting to submit claims for adaptations that have failed. ACTION: s.22 to review logs to determine what is causing adaptations to fail.

2. Follow up encounters when there is no DTP identified – any remaining concerns? Any MMF / DTP services that cannot be billed and were previously available in the pre-ePrescribing system?
3. ARI suggested that there is a need for assigning prescriptions from physicians to a particular pharmacy? Why? – not seeing reasonably
4. Reversal of electronic prescriptions when an associated dispense is reversed (i.e. code RE) – workflow discussion; impact of behind the scenes rules in PNet + discussion around Plan B and issue reported by ARI with changes in prescriber requiring a new prescription be created.

I would like the new IA for each transaction

Work w/ Heart Clinic - DT → (code)

↳ patients w/ chronic disease

(A) Adaptation (standard)

- understanding of the case (patient)
- considers that a reward is appropriate } → $ to fee for adaptation

(B)

Changing doctors being disallowed

2013-07-09: Rob requested an update from CPBC on the status of PPP-20. s.22 response: This is the reply I rec'd from one of our Inspectors. "Our old policy never allowed changing the doctor on re-fills, it just allowed adding refills onto the old prescription number if the doctor didn't change". So even though we will be amending the policy (for various reasons), it appears that this practice was never allowed in the first place.

2013-04-25: College confirms that a new eRx must be created and sent to PharmaNet. **ACTION:** Dennis to update ARI software to submit a new local prescription identifier.

2013-04-18: May be operational impact to LTC facilities. There is documentation from College (PPP20 that permits refill authorizations added to the original prescription instead of creating a new prescription. s.22 states the college is revoking this PPP.

2013-04-16: Rob discussed with s.22 explained that there are two cases: 1. If a new doc is doing a renewal, then this is a new prescription, not a change to existing. 2. A pharmacist may enter the wrong prescriber ID when recording the prescription and dispense data. This should result in revoking the original prescription, and reversing the dispense (it it was successful). While ARI software revokes the prescription, it creates a new one with the same local prescription ID. PharmaNet will not accept another eRx with the same local prescription ID again. **ACTION:** Dennis to update ARI software to submit a new local prescription identifier.

2013-04-15: Dennis Brox Email Submitted to EA Support: s.22 *has a problem when he changes the doctor on a script. Pharmanet does not allow him to refill it, saying the prescriber has changed. It is important he be able to do so without issuing a new X1 on pharmanet - - current bylaws allow us to document the change, create a hard copy reference to the original, and continue to use the same rx number on mars in the facility.*
ACTION: Rob to follow up with s.22 to determine issue. Done.

Email reference: sent by dennis@arirx.ca "RE: Doctor change issue - Howe Sound" 2013-04-15 to EA Support HLTH:EX

Issue: Adjudication
① Rx + dispense + clinical fee

② Reverse dispense (RE) (☐ not checked)

③ Local system removes dispense

④ PMP ——— as well

⑤ PMP shows Rx unfilled / active

⑦ is the clinical fee reversed as well?

Should be yes
Check

Sequence number — instead of skipping them — show that the ID was "cancelled" (revoked)

Inability to revoke X1 and X3 items completely

2013-07-09: Gibson's clinic has raised the issue that they have to "create a new prescription from scratch" when they have data entry error. We do not have conformance standards requirements for this other than requiring a new local prescription number. PMP recommended ARI update software with new prescription fields pre-populated ready for editing. ARI is resistant to creating new local prescription numbers as it "creates gaps in sequence numbers", and is problematic for audit. PharmaNet allows re-use of local prescription numbers when reversing dispense records, but not prescription records. **ACTION:** Rob has requested further details from Dennis to present issue for review.

2013-05-14: Issue raised by Dennis. ARI software is submitting the same local prescription identifier in the new prescription as was submitted in the original prescription after a revoke. PharmaNet will not accept re-submitting the same local prescription identifier. **ACTION:** Dennis to update POS.

5. Problems relating to quantity – any further issues?
   a. ~~**2013-06-06:**~~ s.22 provided "Quantity Prescribed.doc" Recommendation:
   Update the conformance specifications to:
   1. Provide examples of how Total Quantity should be calculated and interpreted by a POS System (something similar to the table above).
   2. Tighten up display standards and provide some rules or guidelines on the difference between prescriptions and dispenses.
   ACTION: Rob to request s.22 to update conformance docs and display standards
6. Other:
   a. ARI report: Some situations where completely new scripts are disallowed because they are for the same drug, date, and doctor as one just previously refilled.
   b. ARI report: Missing is an appropriate method to transfer prescriptions while retaining the original X1 data.
   c. Logged prescriptions – how is that working in the new system? Any issues / concerns?
7. For discussion during conference call

Need additional MMIs

2013-07-10: PSD to review and consider for later update
2013-07-09: s.22 Gibson's clinic would like to add Untreated condition, Synergistic Therapy, Preventative Therapy, Cannot afford drug product, N-n-drug therapy more appropriate; Patient doesn't understand directions, Duplicate therapy, Treating avoidable adverse reaction. Also requesting PTSM "Make it work". Also Clinical Service Code RNEW "Make it work"

* Clinical info — for ex: stuff as allergies (but related to treatment failures)

good to have in PMH.

Can redo (recreate) the same steps that earlier led to failure → waste

Effectiveness of BPMH	2013-07-10: PSD to review 2013-07-09: s.22 "The medication, best possible medication history are a great tool to solve problems. However they do very little to solve drug therapy problems. I have just seen another patient who has done a medication review and then when it did nothing to solve their problems they came to see us. It is a waste of government money."
Need additional med management codes for adaptations	2013-07-10: PSD to consider user guidelines for DTP. 2013-07-09: s.22 "On the electronic adaption form when we choose the options why we are doing the adaption we need more options listed. the codes we chose should match the med management codes used so we should have the same lists to pick from, right now we dont. Running adaptations we only have 2 sets of 4 to pick from.....was thinking s.22 might have some good ideas on examples that should be added" Refer to issue 11 above.
Printing adaptation details on adaptation paper work	2013-07-10: Robust solution for Adaptation Notifications for future consideration. POS software should allow printing of details for faxing to prescriber. 2013-07-09: s.22 "We need the electronic adaption for we fill out, with all the reasons, goals, etc to print out on the adaption paper work so we do not have to re write everything we just typed.....one reason the wording should match and you can't always get it bang on.....also it is a waste of time redoing work we have just done."
PharmaNet report for payment services lumped together	2013-07-10: Noted for future PSD consideration. 2013-07-09: s.22 "The pharmanet report for payment should itemize separately the professional services that we are being paid for instead of lumping this together
Logged Rxs creating confusion in the ~~network profile~~	2013-05-14: Issue raised by ARI. s.22 requested Dennis ~~provide clarifications / details and suggestions on this issue. Dennis has not responded.~~ ACTION: Rob to follow up with s.22
Moving scripts between patients	2013-07-09: ARI requests the ability to move scripts between patients when there is a PHN mix up or a PHN is generated for a patient who has a previously issued PHN. (Net effect = the dispenses are recorded on the wrong PHN). Sorin requests conformance review.
Larger amounts being paid for adaptations	2013-07-10: s.22 to recommend configuration change as per Sorin suggested changes. 2013-07-10: ACTION: Sorin, s.22 and John C. And Mira to ~~review configuration~~ for adaptations. Define new CS codes? Rob to ~~schedule 1/2 hour~~ meeting. 2013-05-14: ~~Issue raised by~~ Dennis. ACTION: s.22 is currently looking into PNet configs on this

s.22

See live

to provide suggested changes

See previous note

resolved on site

leads to importance of education training before go live. PBRs

agreement that local / PNet are synchronised

Controls for Clinical Services – discussed

– documentation (consistent, complete, "useful")
must be available to all practitioners

↑
access to the "cloud"

discussed about value of certain services

PDF – workflow tweaked for pharmacist

Pharm gathers info ⟹ data entry + billing

Local Win Rx assumes that Pharm does all the work in one setting ⟹ problem.

End User Assessment Questions for the Gibsons Medical Clinic

Gibsons Clinic:	**Ministry:**
Jackie Cockriell (Supervisor) Crystal Cooney (MOA) Dr. Andrea Stinson Dr. Daren Spithoff	Anita DiMaio Howard Herzog Rob Broadbent

General/Workflow

1. How did the new functionalities affect your relationships with patients?

The system was not as helpful or usable as they would like to see it. Using the new system slowed down the pace of work. It required excessive scanning through medications. They needed to remove "external" medications from the list in order to print.

Front desk processes were also affected, due to Client Registry requirements, and time lag while the PNet profile is built. Physicians stated that they could see potential, but the issues overshadowed the possible benefits. A significant issue for the front desk was that none of the addresses were able to be matched with Client Registry.

2. Did patients or other health professionals provide you with any feedback related to the new functionalities, e.g., complaints, praise, increased or decreased satisfaction? Please explain.

Initial technical problems required calls to pharmacists at first. The concepts of medication download and ePrescribing are good. The functionality implemented created a lot more work for the clinic with extra prescription records appearing. They would prefer to not automatically go into a patient's PNet profile, but would prefer to be prompted. The system may work better if the duplicate medication for external prescriptions problem was solved. Prescriptions created at the clinic are coming back from PharmaNet as external and not matching.

a) Health profession: pharmacist, did not get prescriptions for the first few days (this was related to technical issues with communication between the EMR and PharmaNet),

b) Patients noticed the delays during their visits

c) Patients liked the general idea, and that it made sense and were understanding about challenges related to the pilot.

d) Functionality created slow downs and extra work (re: extra/dozens of prescriptions in the med list)

e) Pharmanet data automatically added to the EMR. The physicians would have preferred to have selected this information for inclusion, rather than have it integrated automatically. (Note that these comments were focused on adverse reactions and clinical conditions, as well as the prescriptions which seemed to be inappropriately flagged as 'external (most likely clinic generated prescriptions, which were created just prior to the start of the pilot period)

f) With the medication profile, items in the EMR often not recognized, which lead to many duplicates (i.e. clinic generated prescriptions erroneously showing as 'external' prescriptions. Physicians would have preferred an option to accept or reject external medications in order to eliminate the duplicates. E.g. Phentyl prescribed, phentynl ratio pharm (brand name) dispensed.

g) As it was, created a large amount of extra work, and would not be worth adopting.

h) Consider having physicians 'accept' dispense information, especially at the time that a POS goes live.

3. What benefits have you noticed?

The system provided prescription information for patients that received prescriptions from other doctors or from visiting patients. The system also notified of changes or adaptations that had been made to the prescriptions created by the users.

4. What would you change?

The Med Access system completely slowed down with this implementation. Switching between online and offline slowed things way down. Patient name verification was difficult particularly when nicknames were entered into the Med Access database (which was common).

a) Fewer or no duplicates in the prescription information.

b) Not having PNet automatically update patient history (clinical conditions/adverse effects).

c) Significant slowness to the system: a) every activity, not just PharmaNet related, b) the process for reconciling demographics.

d) Must be mandatory for all patients to participate (because of having to maintain 2 systems for online and offline).

e) Addresses didn't show during offline access

f) Better preparation for handling patient names (nicknames, 'goes by', etc).

5. Did the new functionality (Client Registry and PharmaNet) require any changes to your usual clinic workflow?

There was a lot more checking and synchronizing in advance of the patient being seen by the doctor. Large medication profile downloads were particularly time consuming. It is felt that more training is needed on what to do when things go wrong such as during updating of patient information or when the system is down. It was particularly difficult to figure out if the system was online to the EHR or offline.

Q: Why did patients opt out of participating in the pilot?

A: Some said that they did not wish to be monitored more closely. However, if the doctor explained that the information was already in PharmaNet, the patients were usually satisfied.

a) Physicians would have to explain pharmanet to the patients,

b) Most patients were accepting of the pnet access

c) When the system worked as designed it was fine. A number of times, the physician would have to follow up with the pharmacy, due to technical problems, or not being confident that information had been transmitted to the pharmacy.

6. Being able to validate that the correct patient has been identified in the Client Registry is critical to maintain patient safety when sharing information, such as with PharmaNet. Did you receive many prompts that there was a demographic difference between your MedAccess system and the Client Registry? Were you able to resolve them so that both systems ended up with the same

information? Did the physicians see the prompt that there were differences in demographics between the two systems?

At the front desk the system only showed the address from the Client Registry and it was difficult to find the local address to compare and validate. Most of the Client Registry addresses were out of date, however the clinic did not have time to update the Registry with the current address. The Registry did not have name changes or birthday changes. It was also challenging to match when nicknames were used in the local system (a frequent occurrence, as the clinic was following a previous vendor supplied best practice, which recommended they store preferred name within the First Name field). The instructions provided by Med Access to correct nick names in the local system did not work. Requisitions printed from the local system showed the nickname instead of the legal name. Having a data cleanup exercise prior to the pilot could help avoid mismatches between the systems. The length of the pilot seemed too short, as they were just getting over the learning curve.

7. Before rolling this new functionality out to the rest of the medical practices, what would you suggest we could do to better prepare them?

More on-site training is recommended. Training over a teleconference did not go as planned due to early system troubles. A dedicated training environment would be desirable, as otherwise, staff have to 'guess' at which of their patients could be used to show key concepts. Running the system on and off line throughout the day slowed workflow down considerably due to the need to get patient consent. The amount of paperwork for registration was challenging and one of the key staff was not successfully registered. A data clean up process should be undertaken so that key data standards (i.e. legal name, address type, format of phone numbers) matches the Client Registry and PharmaNet, prior to going live with the new functionality. The users need a better understanding of how to engage End User Support (in particular when they shold contact their software vendor and when they shold contact the Ministry).

Training

8. Did the training received prepare you adequately for the new functionality?

Question answered above.

9. How much time would be reasonable for a clinician or staff member to spend on this functionality?

Recommend a full day of on-site training. Preferably for all staff rather than going with a train-the-trainer approach – at least initially. Super users from the MOA staff should understand how the clinical functionality works. A locum would require about one hour of training if they were already familiar with the Med Access system.

10. Since it is not possible to complete clinic workflows during training using real patient information, would you find value in participating in training with special training patient data?

Yes.

Education

11. Did you find the education materials helpful?

Super user perspective: The material was very wordy and the content was more difficult to understand when read prior to having access to the system.

Regular MOA perspective: Did not read the material – relied on the supervisor.

Without good training, the education material is not very useful with the exception of the privacy material. However, much of the material was difficult to understand, especially in the privacy and security checklist.

12. How much time did you spend reading the education materials? More than 2 hours per person (lead MOAs and Physicians)
13. How much time do you think is reasonable for a clinician or staff member to spend learning the education materials? Between 2 and 4 hours. The users saw the content as necessary, but stated that it would be difficult to fit in the reading, during a work day.
14. Thinking back, what would you nominate as the best topic in the education materials and what would you say was the worst? Variable responses. Privacy and Security was identified by one user as the best topic and another said it was the worst. Everyone agreed that the content does not mean much without system access.
15. Would the education materials be improved if delivered by a different method such as video, webinar or in class? Video would be helpful, but classroom would be preferred, because it shows the importance of the material and forces users to schedule time to learn the content.

A classroom setting would have been preferable. Videos would likely result in poor attendance. Classrooms would result in near 100% attendance.

Privacy and Security Checklist

16. Were the questions understandable?

Not all questions were understandable. Even the clinic's computer technician found some of the questions to be vague.

17. Were you able to answer the questions without any assistance?

No, there were calls to the computer technician, the vendor, the physicians and the Ministry.

18. How long did it take to complete?

At least two hours.

19. Was this a duplication of effort with other tools? E.g., PITO Privacy /Security checklist?

Yes, there was duplication from the PITO and Med Access materials.

20. Did your understanding of privacy and security requirements change as a result of filling in the questionnaire?

Yes.

EHR User Enrolment

21. Was the process clear and workable?
    a) Not really. Needed to assign staff members to specific doctors, which was difficult.
    b) Not all users authorized (i.e. Jacquie never did receive access, even though she was a superuser),
22. Were the forms clear and easy to use?

a) Roles were confusing. Ended up with just physicians and MOAs.

23. If you have a new team member coming on board, would you know how to get them access to the EHR?

a) Call Anita. (note that this is not the approved process)

24. How much lead time could you give when requesting EHR access for:

a) new permanent staff: 2 days.

b) a temporary MOA or locum: more lead time for a locum as these are typically used for planned vacation and sabbatical time.

Tryan, Derek N HLTH:EX

From: Moulton, Kimberly HLTH:EX
Sent: Wednesday, August 05, 2015 10:24 AM
To: Bruce Jones (bruce.jones@maximusbc.ca); Kelly Asuncion (C); Pardo, Libni HLTH:EX
Cc: Mynen, Mieke HLTH:EX; Halisheff, Marlline HLTH:EX; Moulton, Kimberly HLTH:EX
Subject: FW: July 31 MedAccess Functional Verification Test UPDATE

Hi Bruce,

It appears this is not necessarily work related to eRx project activity but production activity. I would like to confirm the hours we discussed (30 IT and 15 BAT) would be used specifically for eRx pilot work.

Thanks

Kimberly Moulton
Business Analyst, PharmaNet, Business Management, Suppliers Relations and Systems
Email: Kimberly.Moulton@gov.bc.ca | Office: 250.952.3174 |FAX: 250.952.2790
Medical Beneficiary & Pharmaceutical Services Division, BC Ministry of Health | 3rd Floor -1515 Blanshard Street |PO BOX 9652 STN PROV GOVT |Victoria, BC, V8W 9P4

From: Pardo, Libni HLTH:EX
Sent: Tuesday, August 4, 2015 4:52 PM
To: 'Dare, Steven'; Broadbent, Rob HLTH:EX; Cassidy, Al E HLTH:EX; 'Bruce Jones(C)'; 'Kelly Asuncion'; Herzog, Howard HLTH:EX; Murdock, Dean HLTH:EX; Stehle, Tony HLTH:EX; Razal, Manuel HLTH:EX; Nesbitt, Carmell HLTH:EX; Zaidi, Shaji; 'Marsland, Donna'; 'Olga Jubran'; Zemliak, Muriel HLTH:EX; Reynolds, Michael; Davis, Tristan W HLTH:EX; Barr, Andrew
Cc: Squires, Paul E HLTH:EX; Pop, Sorin HLTH:EX; Moulton, Kimberly HLTH:EX; Ng, Bernard; Dulovic, Gordana; Abanto, Elaine HLTH:EX
Subject: RE: July 31 MedAccess Functional Verification Test UPDATE

Hi Steven and thanks for the update,
If we had EMRs on-boarded, this issue could pose serious clinical/patient risks due to the physician inability to see the patient's medication profile. During the previous pilot with MedAccess in Gibsons, the physician was able to view the patient's medication profile; perhaps something has changed between 2013 and now.

With many thanks to Steven for the updates on this issue.
Libni Pardo

From: Dare, Steven [mailto:steven.dare@phsa.ca]
Sent: Tuesday, August 4, 2015 4:35 PM
To: Pardo, Libni HLTH:EX; Broadbent, Rob HLTH:EX; Cassidy, Al E HLTH:EX; 'Bruce Jones(C)'; 'Kelly Asuncion'; Herzog, Howard HLTH:EX; Murdock, Dean HLTH:EX; Stehle, Tony HLTH:EX; Razal, Manuel HLTH:EX; Nesbitt, Carmell HLTH:EX; Zaidi, Shaji; 'Marsland, Donna'; 'Olga Jubran'; Zemliak, Muriel HLTH:EX; Reynolds, Michael; Davis, Tristan W HLTH:EX; Barr, Andrew

Cc: Squires, Paul E HLTH:EX; Pop, Sorin HLTH:EX; Moulton, Kimberly HLTH:EX; Ng, Bernard; Dulovic, Gordana
Subject: RE: July 31 MedAccess Functional Verification Test UPDATE

Hi Everyone

I wanted to provide an update on the incident logged with PHSA on Friday July 31st.

Date/Time	Organization	Ticket #	Status/Comments
July 31 – 1253	PHSA	IN1014850	Incident Form logged by Medaccess and assigned to eHealth via VPP Service Desk
July 31 - 1333	Maximus	111288	Ticket logged with Maximus indicating possible connectivity issues with PNET
July 31 - 1551	Oracle - CGI	INC000000449257	Ticket logged with CGI to investigate HIAL PNET-DAL errors

Currently Maximus and Oracle-CGI are investigating the error. The detailed HIAL logs indicate an HTTP500 error in the Maximus' PharmaCareHIALService . Both teams are investigating and troubleshooting.

Please let me know if you had any questions

Steven

From: Pardo, Libni HLTH:EX [mailto:Libni.Pardo@gov.bc.ca]
Sent: Friday, July 31, 2015 2:53 PM
To: Broadbent, Rob HLTH:EX; Cassidy, Al E HLTH:EX; 'Bruce Jones(C)'; 'Kelly Asuncion'; Herzog, Howard HLTH:EX; Dean.Murdock@gov.bc.ca; Stehle, Tony HLTH:EX; Razal, Manuel HLTH:EX; Nesbitt, Carmell HLTH:EX; Zaidi, Shaji; Dare, Steven; 'Marsland, Donna'; 'Olga Jubran'; Zemliak, Muriel HLTH:EX; Reynolds, Michael; Davis, Tristan W HLTH:EX; Barr, Andrew
Cc: Squires, Paul E HLTH:EX; Pop, Sorin HLTH:EX; Moulton, Kimberly HLTH:EX
Subject: RE: July 31 MedAccess Functional Verification Test UPDATE

As discussed at the previous meeting, MedAccess has provided a birds-eye view of their logs from this morning Functional Verification Test, and it is attached here.
Thanks.
Libni Pardo

From: Pardo, Libni HLTH:EX
Sent: Friday, July 31, 2015 2:26 PM
To: Broadbent, Rob HLTH:EX; Cassidy, Al E HLTH:EX; 'Bruce Jones(C)'; Kelly Asuncion; Herzog, Howard HLTH:EX; Murdock, Dean HLTH:EX; Stehle, Tony HLTH:EX; Razal, Manuel HLTH:EX; Nesbitt, Carmell HLTH:EX; Zaidi, Shaji; Dare, Steven; Marsland, Donna; Olga Jubran; Zemliak, Muriel HLTH:EX; 'Reynolds, Michael'; Davis, Tristan W HLTH:EX; Barr, Andrew
Cc: Squires, Paul E HLTH:EX; Pop, Sorin HLTH:EX; Moulton, Kimberly HLTH:EX
Subject: July 31 MedAccess Functional Verification Test UPDATE
Importance: High

Hi Everyone, below is an update on this morning's functional verification test at s.22 office:

MedAccess confirmed, at a high level, that they encountered issues during the test:

1. The interaction with the Registries and HIAL appeared to have worked fine, as with previous tests.
2. When pulling up 3 charts, the system received an error. MedAccess described the error as coming (most likely) from PharmaNet as the MOA was not able to see the chars.
3. MedAccess is in the process of submitting a ticket for tier 1 support.
4. By next week, MedAccess will compile the details from their logs, for the transactions fired up during the test, with the corresponding status.

MAXIMUS confirmed this afternoon that an incident has been logged and MAXIMUS is investigating:

"Upon syncing or data with PharmaNet on a the patient chart, the following
EHR Error message was encountered: EHR Error: E10010: PNET-DAL: java.lang.NullPointerExceptionJAXBException

The test was conducted on three different patient charts, and the same error message appeared each time the PharmaNet syncing process was initiated. Please note that the test was able to interact, verify and sync Client Registry data without any visible problems."

Thank you.
Libni Pardo

BRITISH COLUMBIA | Ministry of Health

Point of Service System/Electronic Health Record Integration

Lessons Learned

Early Adopter Deployment at Gibsons B.C.

December 19, 2013 Version 1.1

DRAFT

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Date	Version	Editor Name	Short Description
10/29/2013	1.0	Howard Herzog	Initial Draft
12/19/2013	1.1	Howard Herzog	With Team Review Edits

Reviewers

Name	Position
Rob Broadbent	PharmaNet Modernization Project Senior Analyst
Libni Pardo	PharmaNet Modernization Project Manager
Anita DiMaio	EMR EHR Integration Project Senior Analyst

Table of Contents

1.0 Introduction

1.1 Purpose

This document describes the lessons learned in the Point of Service (POS) / Electronic Health Record (EHR) Early Adopter Deployment at the Gibsons Medical Clinic and at the Howe Sound Pharmacy in Gibsons. The objectives of the deployment were to:

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All patients of the clinic were processed using the new EMR system, but for participating patients of the two participating physicians, the system was connected to the Ministry EHR systems (HIAL, Client Registries and PharmaNet) and disconnected from the EHR systems for non-participating patients.

1.2 Evaluation Methodology

The Ministry of Health project team collected feedback from three different groups to assess the project and draw lessons learned from this implementation. The assessments included; the technical, user experience, support, and usability of systems stand points and were conducted with:

1. Clinic End users (the early adopter physicians and medical office assistants (MOAs)),
2. Med Access (the EMR vendor), and
3. Help Desk representatives.

2.0 Lessons Learned

2.1 Early Adopter Deployment at the Gibsons Medical Clinic

2.1.1 PROBLEMS ENCOUNTERED

1. Problem: A number of patients (approximately 15) opted out of Client Registry, which caused the users to work off line. This required users to switch between on-line and off-line modes to accommodate patients who do not provide consent. This action slows the pace of work considerably and should be avoided.
    - Planned Actions and estimated period to implement:
        - Reclassification of the Client Registry as a Health Information Bank will eliminate off-line processing as patient consent will be implied in all cases. <to be completed prior to General Deployment>
        - Conformance Services will review the alignment of Client Registry requirements to the requirement for accessing clinical data (i.e. the full CR profile vs. the 5 key fields), to ensure access to other data bases is not hampered by access to Client Registry.
2. Problem: Profile items (i.e. conditions) are used in the EMR as medical concerns. There were quite a few conditions received from PharmaNet which caused the profile to grow significantly with many items that were not currently relevant to the patient.
    - Planned Actions: Med Access plans to update their software to address the issue. <to be completed prior to General Deployment>
3. Problem: Display of prescriptions inferred by the system from dispense records caused confusion with users. When multiple dispenses for the same original prescription are inferred in the Med Access implementation, multiple prescriptions were created that users found confusing.
    - Planned Actions: Med Access plans to update their software to address the issue. <to be completed prior to General Deployment>
4. Problem: Workflow issues were encountered using the Med Access implementation.
    - Planned Actions: Provide feedback to the EMR vendor to support user interface improvements. <to be completed prior to General Deployment>
    - Planned Actions: Conduct an additional early adopter deployment following vendor software modifications to address workflow. <to be completed prior to General Deployment>
5. Problem: Physicians would like to provide updates in PharmaNet to clinical condition, adverse reactions and allergy information.
    - Planned Actions: Requirements for updating clinical conditions, adverse reactions and allergies will be considered for future PharmaNet releases. <to be completed prior to General Deployment>
6. Problem: The use of nick names in the EMR system caused confusion when the system was integrated with the Provincial Client Registry. Cleanup of patient data in advance of

implementation would improve the ease of implementation concerning the integration with Client Registry.

- Planned Actions: Med Access plans to update their software potentially addressing:
  - Incorrect names: a name query done prior to deployment will look for things like brackets in first name to find nicknames.
  - Address indicator: when there is one address (with no type indicator) it will select the 'home' address indicator. <to be completed prior to General Deployment>

7. Problem: The two week implementation was too short.
   - Planned Actions: Conduct a full deployment to the Early Adopter clinic.<to be completed prior to General Deployment>
8. Problem: Nick names in the EMR database are difficult to synchronize with the Client Registry.
   - Planned Actions: Recommend EMR client demographic data cleanup prior to future deployments.<to be completed prior to General Deployment>
9. Problem: Training "on the job" in production does not provide adequate or complete preparation.
   - Planned Actions: An integrated training environment and training data strategy for EMR vendors will be developed and implemented. <to be completed prior to General Deployment>
10. Problem: The Privacy and Security Checklist contained questions that were difficult to understand as well as some that duplicated other materials already completed by the users for PITO and Med Access.
    - Planned Actions: Review the Privacy and Security Checklist to improve clarity and remove duplication. <to be completed prior to General Deployment>
11. Problem: Users found the process and instructions for user enrolment needed clarification.
    - Planned Actions: Review the process and instructions for user enrolment to improve clarity for users. <to be completed prior to General Deployment>

2.1.2 WHAT WAS LACKING

12. Problem: Users did not feel adequately trained in functionality or in utilizing end user support.
    - Planned Actions: Vendors will be conformance tested to ensure compliance with training standards in Conformance Volume 6. <to be completed prior to General Deployment>

2.1.3 WHAT WENT WELL

USER EXPERIENCE – PHYSICIAN

13. The ability of the physician to see medications prescribed by other care providers.
14. The ability to see that a medication has or has not been dispensed, gives the physician a clearer picture of patient compliance as well as the full medication profile for that patient.

TECHNICAL INTEGRATION

15. Synchronizing demographics with the Client Registry lays the foundation for future benefits as this will make it easier to find a patient's electronic Lab or Diagnostic Imaging results as well as aligning with the new Service Card initiative.
16. Integration with the Client Registry improves workflow by importing data to the EMR when creating new patient charts.

2.2 Early Adopter Deployment at the Howe Sound Pharmacy in Gibsons

2.2.1 PROBLEMS ENCOUNTERED

17. Problem: Training for implementing the new ePrescribing and MMF functionality was not adequate resulting in errors due to initial incorrect system use.
    - Planned Actions: Ensure that vendors conform to the training standards (Conformance Standards, Volume 6b) prior to any further deployments. <to be completed prior to General Deployment>

2.2.2 WHAT WAS LACKING

18. Problem: The system does not support automated notifications to physicians of prescriptions that have been adapted.
    - Planned Actions: Consider developing functionality to support adoption notifications in PharmaNet. <to be completed prior to General Deployment>
19. Problem: Training in a training environment with training data was not provided by the vendor for this implementation.
    - Planned Actions: Ensure there is a training environment available for all vendors. <to be completed prior to General Deployment>
20. Problem: The PharmaNet Policy Manual is not generally referred to by the pharmacy. However, there are conformance rules that assume that the pharmacy utilizes the PharmaNet Policy Manual.
    - Planned Actions: Review the pharmacy conformance rules to ensure that there is no dependency on pharmacy review of the PharmaNet Policy Manual. <to be completed prior to General Deployment>

2.2.3 WHAT WENT WELL

21. Clients experienced a positive experience due to additional drug history information that was provided by the new system to the pharmacist. Adherence rate for patients (measuring patients following their prescriptions) increased from 60% to 80%. Number of prescriptions filled by the pharmacy has increased by 50%. The pharmacy attributes this to better medication management interactions with the pharmacist facilitated by the more comprehensive medication history provided by the system.
22. Efficiency at the pharmacy has improved. Fewer calls to physicians and other pharmacists are required.
23. There was no negative workflow impact on the pharmacy to create an electronic prescription for a prescription that arrives in the pharmacy on paper. It had been anticipated that creating an electronic prescription would impact workflow due to additional data entry burden.

24. The Health Authority has begun to send referrals to the pharmacy for Medication Management services.
    - Planned Actions: Develop communications plan for general deployment and engage stakeholders to inform pharmacists of benefits experienced. <to be completed prior to General Deployment>
25. Job satisfaction has improved at the pharmacy due to College and Ministry recognition as well as improved patient feedback and health outcomes.
    - Planned Actions: Ensure that recognition of successful early deployments continues and is expanded to include the EMR Early Adopters. <to be completed prior to General Deployment>

2.3 End User Support

2.3.1 PROBLEMS ENCOUNTERED

26. Problem: The EMR vendor's support team mistakenly triaged a Ministry system connectivity problem contacting the incorrect Ministry Tier 2 support team. This resulted in extra time to resolve the support issue.
    - Planned Actions: Implement a Ministry single point of contact for Electronic Health Record vendor support. <to be completed prior to General Deployment>

2.3.2 WHAT WAS LACKING

27. Problem: The support process is not clear regarding the handling of EMR vendor calls after hours calls to the PharmaNet Helpdesk.
    - Planned Actions: Review and update the Support Model for after hours calls to the PharmaNet Helpdesk.
28. Problem: Confusion was experienced at the Helpdesks at the end of the Gibsons Clinic pilot.
    - Planned Actions: In future pilots, contact all helpdesks upon completion.
29. Problem: The Support Model does not include changes to support for connectivity problems that have been implemented at PharmaCare Support.
    - Planned Actions: Update the Support Model for contacting PharmaNet Support to reflect new changes regarding connectivity.

2.3.3 WHAT WENT WELL

30. No problems with system functionality were encountered in the pilot. Those problems that did occur were due to technical connectivity challenges.

2.4 Major Project Issues

Below is a list of key issues identified in the deployment. A comprehensive issues log documenting every project issue including ongoing discussions and issue resolutions is being maintained separately for the project.

1. Issue: Inability to revoke X1 and X3 items completely.

Most fields in a PharmaNet prescription records cannot be changed once submitted. For example, if a pharmacist enters a prescription for the wrong doctor, or incorrect drug, the prescription record must be revoked, and a new prescription created. ARI software requires uses to reenter all data when correcting records. The early adopter pharmacy users find this approach inefficient.

The ARI proposal to fix this issue includes resubmitting the revoked local prescrition number with revised prescriptions. However, PharmaNet requires that a new local prescription number is submitted for every prescription record. If the prescription is successfully recorded in PharmaNet, a new PharmaNet prescription identifier is returned that the POS must store in the local record.

- Issue Status: Discussion is continuing between CPBC, ARI, MOH, and the Howe Sound Pharmacy to resolve the issue.

2. Issue: Problems relating to quantity specification in the X1

Prescriptions submitted by Gibsons's Clinic and pulled from PharmaNet are not displaying correctly in Pharmacy software. PharmaNet design for an electronic prescription's Total Quantity field is: The overall amount of amount medication to be dispensed under this prescription. This includes any first fills (trials, aligning quantities), the initial standard fill plus all refills.

- Issue Resolution: The conformance specifications will be updated to clarify the use of the field.

3. Inappropriate amounts being paid for adaptations

Intial Pharmacy software deployment has produced unexpected adjudication results in some senarios.

This is a result of a combination of issues:

a) The pharmacy software was not configured to send a a standalone adaptation claim for $15. All adaptations were submitted to PharmaNet with a Med Review claim for $60.
   - Issue Resolution: ARI has updated the software to enable sending standalone adaptations.

b) PharmaNet offline adjudication process was not updated to correctly exclude C35 from Med Review payments.
   - Issue Resolution: MAXIMUS is updating the offline adjudication process, and double payments are being recovered. Conformance specifications will be updated to document correct use of transactions for varius adaptation, immunization and medication review scenarios.

4. Need additional MMIs

Gibson's clinic would like to add additional codes for Medication Management Issues. Currently only seven have been defined for a PharmaNet Med Review.

- Issue Status: PSD will plan discussions regarding the need for additional codes.

2.5 Summary

Based on the lessons learned the following actions will be conducted prior to going forward with General Deployment to ensure that the problems encountered and areas lacking in the Early Adopter Deployment do not reoccur:

- The Client Registry will be reclassified as a Health Information Bank.
- Conformance Services will review the alignment of Client Registry requirements to the requirement for accessing clinical data (i.e. the full CR profile vs. the 5 key fields), to ensure access to other data bases is not hampered by access to Client Registry.
- Med Access will update their software to address identified workflow issues.
- Med Access will conduct a full early adopter deployment (in production long term) prior to General Deployment.
- Update conformance standards to recommend EMR client demographic data cleanup prior to future deployments.
- Develop and implement an integrated training environment and training data strategy for EMR vendors.
- The Privacy and Security Checklist will be reviewed to improve clarity and remove duplication.
- The process and instructions for user enrolment will be reviewed to improve clarity for users.
- All future conformance testing will ensure compliance with training standards in Conformance Volume 6.
- Pharmacy conformance rules will be reviewed to ensure that there is no dependency on pharmacy review of the PharmaNet Policy Manual.
- A Ministry single point of contact for Electronic Health Record vendor support will be implemented for General Deployment.
- The Support Model will be updated to reflect changes in the support organizations that have occurred.

- A communications plan will be developed for general deployment and stakeholders engaged to inform pharmacists and clinicians of benefits experienced in the early adopter deployments.
- Successful EMR early deployments will continue to be recognized by the Ministry.

2.6 Glossary of Acronyms

CR : Client Registry

EHR : Electronic Health Record

EMR : Electronic Medical Record

HIAL : Health Information Access Layer

MOA : Medical Office Assistant

MSP : Medical Services Plan

POS : Point of Service

BRITISH COLUMBIA | Ministry of Health

Point of Service System/Electronic Health Record Integration

Lessons Learned

Early Adopter Deployment at Gibsons B.C.

January 24, 2014 Version 1.2

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10/29/2013	1.0	Howard Herzog	Initial Draft
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01/**2x**/2014	1.2	Howard Herzog	With Reviewer Edits

Reviewers

Name	Position
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Libni Pardo	PharmaNet Modernization Project Manager
Paul Squires	PharmaNet Modernization Project Director
Anita DiMaio	EMR EHR Integration Project Senior Analyst
Jeff Aitken	EMR EHR Integration Project Director
Pam Swift	EMR EHR Integration Project Manager
Vance Hansen	Ministry of Health Project Benefits Evaluation Director
Pat Allen	Infoway
Anne Baldwin	Infoway
Sorin Pop	Medical Beneficiary & Pharmaceuticals Division Director
Kimberly Moulton	Medical Beneficiary & Pharmaceuticals Division Business Analyst

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1. Problem: A number of patients (approximately 15) opted out of Client Registry, which caused the users to work off line. This required users to switch between on-line and off-line modes to accommodate patients who do not provide consent. This action slows the pace of work considerably and should be avoided.
    - Planned Actions and estimated period to implement:
        - Reclassification of the Client Registry as a Health Information Bank will eliminate off-line processing as patient consent will be implied in all cases. <to be completed prior to General Deployment>
        - Conformance Services will review the alignment of Client Registry requirements to the requirement for accessing clinical data (i.e. the full CR profile vs. the 5 key fields), to ensure access to other data bases is not hampered by access to Client Registry.
2. Problem: Profile items (i.e. conditions) are used in the EMR as medical concerns. There were quite a few conditions received from PharmaNet which caused the profile to grow significantly with many items that were not currently relevant to the patient.
    - Planned Actions: Med Access plans to update their software to address the issue. <to be completed prior to General Deployment>
3. Problem: Display of prescriptions inferred by the system from dispense records caused confusion with users. When multiple dispenses for the same original prescription are inferred in the Med Access implementation, multiple prescriptions were created that users found confusing.
    - Planned Actions: Med Access plans to update their software to address the issue. <to be completed prior to General Deployment>
4. Problem: Workflow issues were encountered using the Med Access implementation.
    - Planned Actions: Provide feedback to the EMR vendor to support user interface improvements. <to be completed prior to General Deployment>
    - Planned Actions: Conduct an additional early adopter deployment following vendor software modifications to address workflow. <to be completed prior to General Deployment>
5. Problem: Physicians would like to provide updates in PharmaNet to clinical condition, adverse reactions and allergy information.
    - Planned Actions: Requirements for updating clinical conditions, adverse reactions and allergies will be considered for future PharmaNet releases. <to be completed prior to General Deployment>
6. Problem: The use of nick names in the EMR system caused confusion when the system was integrated with the Provincial Client Registry. Cleanup of patient data in advance of

implementation would improve the ease of implementation concerning the integration with Client Registry.

- Planned Actions: Med Access plans to update their software potentially addressing:
  - Incorrect names: a name query done prior to deployment will look for things like brackets in first name to find nicknames.
  - Address indicator: when there is one address (with no type indicator) it will select the 'home' address indicator. <to be completed prior to General Deployment>

7. Problem: The two week implementation was too short.
   - Planned Actions: Conduct a full deployment to the Early Adopter clinic.<to be completed prior to General Deployment>
8. Problem: Nick names in the EMR database are difficult to synchronize with the Client Registry.
   - Planned Actions: Recommend EMR client demographic data cleanup prior to future deployments.<to be completed prior to General Deployment>
9. Problem: Training "on the job" in production does not provide adequate or complete preparation.
   - Planned Actions: An integrated training environment and training data strategy for EMR vendors will be developed and implemented. <to be completed prior to General Deployment>
10. Problem: The Privacy and Security Checklist contained questions that were difficult to understand as well as some that duplicated other materials already completed by the users for PITO and Med Access.
    - Planned Actions: Review the Privacy and Security Checklist to improve clarity and remove duplication. <to be completed prior to General Deployment>
11. Problem: Users found the process and instructions for user enrolment needed clarification.
    - Planned Actions: Review the process and instructions for user enrolment to improve clarity for users. <to be completed prior to General Deployment>

2.1.2 WHAT WAS LACKING

12. Problem: Users did not feel adequately trained in functionality or in utilizing end user support.
    - Planned Actions: Vendors will be conformance tested to ensure compliance with training standards in Conformance Volume 6. <to be completed prior to General Deployment>

2.1.3 WHAT WENT WELL

USER EXPERIENCE – PHYSICIAN

13. The ability of the physician to see medications prescribed by other care providers.
14. The ability to see that a medication has or has not been dispensed, gives the physician a clearer picture of patient compliance as well as the full medication profile for that patient.

TECHNICAL INTEGRATION

15. Synchronizing demographics with the Client Registry lays the foundation for future benefits as this will make it easier to find a patient's electronic Lab or Diagnostic Imaging results as well as aligning with the new Service Card initiative.
16. Integration with the Client Registry improves workflow by importing data to the EMR when creating new patient charts.

2.2 Early Adopter Deployment at the Howe Sound Pharmacy in Gibsons

2.2.1 PROBLEMS ENCOUNTERED

17. Problem: Training for implementing the new ePrescribing and MMF functionality was not adequate resulting in errors due to initial incorrect system use.
    - Planned Actions: Ensure that vendors conform to the training standards (Conformance Standards, Volume 6b) prior to any further deployments. <to be completed prior to General Deployment>

2.2.2 WHAT WAS LACKING

18. Problem: The system does not support automated notifications to physicians of prescriptions that have been adapted.
    - Planned Actions: Consider developing functionality to support adoption notifications in PharmaNet. <to be completed prior to General Deployment>
19. Problem: Training in a training environment with training data was not provided by the vendor for this implementation.
    - Planned Actions: Ensure there is a training environment available for all vendors. <to be completed prior to General Deployment>
20. Problem: The PharmaNet Policy Manual is not generally referred to by the pharmacy. However, there are conformance rules that assume that the pharmacy utilizes the PharmaNet Policy Manual.
    - Planned Actions: Review the pharmacy conformance rules to ensure that there is no dependency on pharmacy review of the PharmaNet Policy Manual. <to be completed prior to General Deployment>

2.2.3 WHAT WENT WELL

21. Clients experienced a positive experience due to additional drug history information that was provided by the new system to the pharmacist. Adherence rate for patients (measuring patients following their prescriptions) increased from 60% to 80%. Number of prescriptions filled by the pharmacy has increased by 50%. The pharmacy attributes this to better medication management interactions with the pharmacist facilitated by the more comprehensive medication history provided by the system.
22. Efficiency at the pharmacy has improved. Fewer calls to physicians and other pharmacists are required.
23. There was no negative workflow impact on the pharmacy to create an electronic prescription for a prescription that arrives in the pharmacy on paper. It had been anticipated that creating an electronic prescription would impact workflow due to additional data entry burden.
24. The Health Authority has begun to send referrals to the pharmacy for Medication Management services.

- Planned Actions: Develop communications plan for general deployment and engage stakeholders to inform pharmacists of benefits experienced. <to be completed prior to General Deployment>

25. Job satisfaction has improved at the pharmacy due to College and Ministry recognition as well as improved patient feedback and health outcomes.
    - Planned Actions: Ensure that recognition of successful early deployments continues and is expanded to include the EMR Early Adopters. <to be completed prior to General Deployment>

2.3 End User Support

2.3.1 PROBLEMS ENCOUNTERED

26. Problem: The EMR vendor's support team mistakenly triaged a Ministry system connectivity problem contacting the incorrect Ministry Tier 2 support team. This resulted in extra time to resolve the support issue.
    - Planned Actions: Implement a Ministry single point of contact for Electronic Health Record vendor support. <to be completed prior to General Deployment>

2.3.2 WHAT WAS LACKING

27. Problem: The support process is not clear regarding the handling of EMR vendor calls after hours calls to the PharmaNet Helpdesk.
    - Planned Actions: Review and update the Support Model for after hours calls to the PharmaNet Helpdesk.
28. Problem: Confusion was experienced at the Helpdesks at the end of the Gibsons Clinic pilot.
    - Planned Actions: In future pilots, contact all helpdesks upon completion.
29. Problem: The Support Model does not include changes to support for connectivity problems that have been implemented at PharmaCare Support.
    - Planned Actions: Update the Support Model for contacting PharmaNet Support to reflect new changes regarding connectivity.

2.3.3 WHAT WENT WELL

30. No problems with system functionality were encountered in the pilot. Those problems that did occur were due to technical connectivity challenges.

2.4 Major Project Issues

Below is a list of key issues identified in the deployment. A comprehensive issues log documenting every project issue including ongoing discussions and issue resolutions is being maintained separately for the project.

1. Issue: Inability to revoke X1 and X3 items completely.

Most fields in a PharmaNet prescription records cannot be changed once submitted. For example, if a pharmacist enters a prescription for the wrong doctor, or incorrect drug, the prescription record must be revoked, and a new prescription created. ARI software requires uses to reenter all data when correcting records. The early adopter pharmacy users find this approach inefficient.

The ARI proposal to fix this issue includes resubmitting the revoked local prescrition number with revised prescriptions. However, PharmaNet requires that a new local prescription number is submitted for every prescription record. If the prescription is successfully recorded in PharmaNet, a new PharmaNet prescription identifier is returned that the POS must store in the local record.

- Issue Status: Discussion is continuing between CPBC, ARI, MOH, and the Howe Sound Pharmacy to resolve the issue.

2. Issue: Problems relating to quantity specification in the X1

Prescriptions submitted by Gibsons's Clinic and pulled from PharmaNet are not displaying correctly in Pharmacy software. PharmaNet design for an electronic prescription's Total Quantity field is: The overall amount of amount medication to be dispensed under this prescription. This includes any first fills (trials, aligning quantities), the initial standard fill plus all refills.

- Issue Resolution: The conformance specifications will be updated to clarify the use of the field.

3. Inappropriate amounts being paid for adaptations

Intial Pharmacy software deployment has produced unexpected adjudication results in some senarios.

This is a result of a combination of issues:

a) The pharmacy software was not configured to send a a standalone adaptation claim for $15. All adaptations were submitted to PharmaNet with a Med Review claim for $60.
   - Issue Resolution: ARI has updated the software to enable sending standalone adaptations.

b) PharmaNet offline adjudication process was not updated to correctly exclude C35 from Med Review payments.
   - Issue Resolution: MAXIMUS is updating the offline adjudication process, and double payments are being recovered. Conformance specifications will be updated to document correct use of transactions for varius adaptation, immunization and medication review scenarios.

4. Need additional MMIs

Gibson's clinic would like to add additional codes for Medication Management Issues. Currently only seven have been defined for a PharmaNet Med Review.

- Issue Status: PSD will plan discussions regarding the need for additional codes.

2.5 Summary

Based on the lessons learned the following actions will be conducted prior to going forward with General Deployment to ensure that the problems encountered and areas lacking in the Early Adopter Deployment do not reoccur:

- The Client Registry will be reclassified as a Health Information Bank.
- Conformance Services will review the alignment of Client Registry requirements to the requirement for accessing clinical data (i.e. the full CR profile vs. the 5 key fields), to ensure access to other data bases is not hampered by access to Client Registry.
- Med Access will update their software to address identified workflow issues.
- Med Access will conduct a full early adopter deployment (in production long term) prior to General Deployment.
- Update conformance standards to recommend EMR client demographic data cleanup prior to future deployments.
- Develop and implement an integrated training environment and training data strategy for EMR vendors.
- The Privacy and Security Checklist will be reviewed to improve clarity and remove duplication.
- The process and instructions for user enrolment will be reviewed to improve clarity for users.
- All future conformance testing will ensure compliance with training standards in Conformance Volume 6.
- Pharmacy conformance rules will be reviewed to ensure that there is no dependency on pharmacy review of the PharmaNet Policy Manual.
- A Ministry single point of contact for Electronic Health Record vendor support will be implemented for General Deployment.
- The Support Model will be updated to reflect changes in the support organizations that have occurred.
- A communications plan will be developed for general deployment and stakeholders engaged to inform pharmacists and clinicians of benefits experienced in the early adopter deployments.
- Successful EMR early deployments will continue to be recognized by the Ministry.

2.6 Glossary of Acronyms

CR : Client Registry

EHR : Electronic Health Record

EMR : Electronic Medical Record

HIAL : Health Information Access Layer

MOA : Medical Office Assistant

MSP : Medical Services Plan

POS : Point of Service

BRITISH COLUMBIA | Ministry of Health

Point of Service System/Electronic Health Record Integration

Lessons Learned

Early Adopter Implementation Phase 1

March 6, 2013 Version 1.4

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Table of Contents

1.0 Introduction

1.1 Purpose

This document describes the lessons learned in the Point of Service (POS) / Electronic Health Record (EHR) Early Adopter Implementation Phase 1. The objectives of the Phase 1 Implementation were to:

- production test the electronic prescribing as well as the medication history download from PharmaNet functionality,
- test the integration of the Med Access Electronic Medical Record (EMR) point of service system with the Health Information Access Layer (HIAL), PharmaNet and Client Registry,
- minimize risk to the Ministry of Health production systems, and
- minimize interruption to critical clinic operational processes.

During the Phase 1 deployment, early adopter participants utilized two EMR systems: their current Med Access EMR system Release 4.3, as the primary system used by all clinic staff as per their usual workflow; and the new Release 4.4, which was integrated with the production Client Registry and PharmaNet environments and reserved solely for early adopter participants.

All patients of the clinic were processed using the current EMR system, but for participating patients, actions related to demographics checking and the creation/review of prescriptions were repeated in the parallel system.

1.2 Phase 1 Deployment Project Results Summary

The Phase 1 deployment was conducted over a two week period. Daily war room meetings to support the deployment and address issues were conducted with the Ministry of Health project teams and members of all the help desks providing support to the project. Weekly business meetings with Directors of the project and major stakeholder organizations were also conducted to communicate status and ensure that escalated issues were being addressed.

The following is a list of the services/functionality exercised during the deployment and the frequency of use during deployment.

EHR System	Transaction/Functionality	Frequency of Use
Client Registry	FindCandidates	13
Client Registry	GetDemographics	322
Client Registry	RevisedPerson	67
PharmaNet	TRX Retrieve Prescriptions	78
PharmaNet	TRP Patient Profile Request	93
PharmaNet	TIL Get Location Details	86

EHR System	Transaction/Functionality	Frequency of Use
PharmaNet	TRX Record Prescription	95
PharmaNet	TMU Medication Update	5
PharmaNet	TRX Update Prescription Status	3
PharmaNet	TMU Medication Update Reversal	2
PharmaNet	TPI Patient Med Profile Update	1
PharmaNet	TRX Retrieve Prescriber Prescrip	9

1.3 Evaluation Methodology

The Ministry of Health project team conducted three meetings to assess the project, collect feedback and draw lessons learned from this implementation. The assessments included; the technical, user experience, support, and usability of systems stand points. There were three evaluation meetings:

1. with the end users (the early adopter physician and medial office assistant (MOA)),
2. with Med Access (the EMR vendor), and
3. with Help Desk representatives.

2.0 Lessons Learned

2.1 Early Adopter Deployment

2.1.1 PROBLEMS ENCOUNTERED

1. Problem: Physicians were prompted to synchronize with Client Registry when patient demographic information had not been synchronized during the Medical Office Assistants initial interaction with the patient chart.
   - Planned Actions and estimated period to implement:
     - Review with Vital Statistics and potentially update the requirements for synchronizing with the Client Registry.
       Resolution: The client registry conformance requirements have been revised after discussion with Vital Statistics and the vendor.
     - Provide education material on the benefit of data quality for accessing health information and to address the on-boarding of the new BC Service Card.<to be completed prior to Phase 2 Deployment>

2. Problem: No response from the Client Registry caused workflow issues due to the synchronization requirement.
    - Planned Actions: Meet with EMR vendor to clarify requirements and reduce the tight coupling issue encountered in the initial EMR implementation. <currently in development at Med Access>
3. Problem: Coupling requirements of EMR with the Client Registry prevents access to PharmaNet when Client Registry is unavailable. While verification of the client is required prior to accessing EHR data, a POS system cannot determine when the HIAL/EHR services become available.
    - Planned Actions: Work with HIAL administrators to establish a technical solution to transmit notifications of EHR service availability so that the POS system will know when services are restored.
    - <to be completed prior to General Deployment>
4. Problem: Requiring patient consent before accessing the Client Registry from the EMR system presents a problem for workflow as well as what to do if consent is withheld.
    - Planned Actions: Review an "implied consent" model with the Ministry Privacy and Security office. <to be completed prior to Phase 2 Deployment>
5. Problem: Users are hesitant to send updates to the Client Registry thinking that it may modify the patients' other provincial demographics incorrectly.
    - Planned Actions: Update education material to clarify what provincial information is updated the value of updating the client registry demographics.<to be completed prior to Phase 2 Deployment>
6. Problem: Many of the addresses in the Client Registry were not current requiring excessive workload on the clinic to provide updates.
    - Planned Actions: Develop key messages to provide education on the transition period required to update patient demographics. The high frequency of non-current demographics will be a problem encountered throughout the initial deployments because addresses in the client registry often do not get updated following registration for the Medical Services Plan (MSP). <to be completed prior to Phase 2 Deployment>
7. Problem: Initially downloading the Med Profile for a patient whose profile has never been synchronized with PharmaNet is a time consuming process that negatively impacted workflow.
    - Planned Actions: Discuss potential workflow and training improvements with the vendor. Update the education material to address transitional activities including the initial downloading of Medication Profiles. <to be completed prior to Phase 2 Deployment>
8. Problem: Users would like Medication Profiles to be synchronized and downloaded more frequently. In Med Access' implementation, the Medication Profile was synchronized between PharmaNet and the local database when the medication tab was accessed if synchronization had not taken place in the previous two hours.
    - Planned Actions: Revise the conformance rule and educate users to perform ad hoc requests to receive current EHR data. <to be completed prior to Phase 2 Deployment>

9. Problem: The expected end date of a prescription was not provided for prescriptions inferred by the EMR from dispense records (i.e. 30 pills, taken twice a day will have an expected end date of 15 days after the dispense date). This is a transitional problem where, to accommodate PharmaNet dispenses that do not have a related prescription, the EMR creates an inferred prescription to link to a PharmaNet dispense.
    - Planned Actions:
        - Request a vendor demonstration to fully understand the issue. Ensure the vendor understands the impact this had on the user and that additional training by them is required.<to be completed prior to Phase 2 Deployment>
10. Problem: The users found the privacy and security checklist for the organization (clinic) to be confusing to fill out.
    - Planned Actions: Review and update the checklist <to be completed prior to General Deployment>
11. Problem: The end user enrolment process was confusing.
    - Planned Actions: Review and update the end user enrolment form and supporting education materials. <to be completed prior to General Deployment>
12. Problem: The user agreement was long and difficult to understand for a non-legal person.
    - Planned Actions: Review and update the user agreement to add subheadings to provide additional context. <to be completed prior to General Deployment>
    - Investigate whether an impartial 3rd party, such as the College, will review and create a communications item to assist physicians in their understanding of the document. <to be completed prior to General Deployment>

2.1.2 WHAT WAS LACKING

13. The display of message success or failure in the EMR (such as a record being updated in PharmaNet) was not always seen by the users because the user moved too quickly from the screen.
    - Planned Actions: Review and potentially update conformance rules. <to be completed prior to General Deployment>
14. Have medications dispensed categorized by the type of drug (e.g., opiates, steroids, etc.) to assist in being able to identify drug seeking.
    - Planned Actions: Because this is not an EHR integration requirement, relay the requested enhancement to the EMR vendor. <to be completed prior to Phase 2 Deployment >
15. The new system enables the creation of a new PHN for a patient in the clinic, but since there were no new PHNs at the practice during the trial, this was not tested.
    - Planned Actions: Test PHN creating in future implementations. <to be completed prior to General Deployment>

16. The Canada Health Infoway Benefit Evaluation Indicators for Drug Information Systems and ePrescribing were not captured in this implementation. Note: This was deliberate given this was a production pilot in a medical practice with no Pharmacy deployment.
    - Planned Actions: Make plans with Infoway and the Ministry Benefit Evaluation team to include baseline metrics that will be measured before and after subsequent end-to-end deployments. <to be completed prior to General Deployment>
17. End-to-end workflow information was not captured prior to deployment as a baseline to compare the changes from the user perspective.
    - Planned Actions: Capture medical practice and pharmacy baseline workflow information in future deployments. <to be completed prior to General Deployment>

2.1.3 WHAT WENT WELL

USER EXPERIENCE – PHYSICIAN

18. The ability of the physician to see medications prescribed by other care providers.
19. The ability to see if a prescription has been filled helps the physician understand if there is possible drug seeking taking place.
20. The ability to see that a medication has or has not been dispensed, gives the physician a clearer picture of patient compliance as well as the full medication profile for that patient.

TECHNICAL INTEGRATION

21. Synchronizing demographics with the Client Registry lays the foundation for future benefits as this will make it easier to find a patient's electronic Lab or Diagnostic Imaging results as well as aligning with the new Service Card initiative.
22. Synchronizing with the Client Registry alleviates data entry errors (especially for Date of Birth) that may occur during patient registration.
23. Integration with the Client Registry improves workflow by importing data to the EMR when creating new patient charts.
24. Integration with the Client Registry provides an opportunity to create a new PHN for a patient.

2.2 End User Support

2.2.1 PROBLEMS ENCOUNTERED

25. Problem: Having encountered a technical problem, Med Access called the Registries Help desk which is a group that usually deals with Client Registry business support. This resulted in a delay in response.
    - Planned Actions: The Client Registries Help Desk number will continue to be used and training will be provided for the help desk in advance of implementation so that technical problems will be referred on to the technical team. A call sheet or sticker will be produced

for the POS vendors with information regarding who to call for different problem types. <to be completed prior to Phase 2 Deployment>

26. Problem: Problems involving the HIAL and Client Registries were difficult for the POS vendor to triage.
    - Planned Actions: Technical CR issues will be immediately escalated to both HIAL and Client Registry Tier 2 help desks for triage and diagnosis. <to be completed prior to Phase 2 Deployment>
27. Problem: The resolution of a technical problem regarding Client Registry was not immediately communicated to the POS vendor resulting in a prolonged service outage.
    - Planned Actions:
        - Document ticket tracking integration in the Support Model. <to be completed prior to Phase 2 Deployment>
        - Update the Support Model with a list of error messages with instructions for the help desks. <to be completed prior to Phase 2 Deployment>
        - Run support fire drills using predefined scenarios prior to go live. <to be completed prior to Phase 2 Deployment>

2.2.2 WHAT WAS LACKING

28. Clear expectations regarding response time on Level 2 issues were not communicated.
    - Planned Actions: Update the Support Model with clear response time expectations for issues. <to be completed prior to Phase 2 Deployment>
29. Ensure that PharmaNet issues without incident numbers are triaged.
    - Planned Actions: Review and update Support Model to determine triage actions when PharmaNet incident numbers are not provided. <to be completed prior to Phase 2 Deployment>
30. There was no after-hours emergency PharmaNet support number provided.
    - Planned Actions: Update the Support Model to provide the PharmaNet support number for afterhours emergencies. <to be completed prior to Phase 2 Deployment>

WHAT WENT WELL

31. The daily war room meetings were effective and critical.
    - Planned Actions: The daily war is not sustainable in the later deployment phases. The Support Model will be further revised without the war room and tested with early adopters. <to be completed prior to General Deployment>
32. When the support model was used correctly, the communications between help desks was effective.

2.3 Training and Education

2.3.1 PROBLEMS ENCOUNTERED

33. Problem: Although the education material was helpful it lacked meaning when read without the EMR system.
    - Planned Actions: Education material will provide vendors with 'Speakers Notes' which will give them key phrases to link training materials back to the education as the users are training with the EMR system. A 'cheat sheet' for physicians will be recommended in the Conformance Standards for vendor training and education materials making the education materials more accessible when using the EMR system. <to be completed prior to Phase 2 Deployment>
34. Problem: Working through the MOA education materials for Client Registries is too time consuming.
    - Planned Actions: Complete the 'speakers note' extract of current education. Investigate option of implementing the super-user model where only one user in a clinic receives the comprehensive training and education. <to be completed prior to General Deployment>
35. Problem: When searching for patients using the Client Registry, the users found the search rankings were not helpful.
    - Planned Actions: Investigate options to enhance training to better prepare users to understand the wide search parameters used by Client Registry and the potential results. <to be completed prior to Phase 2 Deployment>
36. Problem: Users had difficulty understanding what they should do to record a new baby without a PHN.
    - Planned Actions: The education materials will be updated to clarify this topic. <to be completed prior to Phase 2 Deployment>
37. Problem: Users had difficulty understanding the "stop and revoke a prescription" section of the education materials.
    - Planned Actions: Update conformance material for users and clarify in the education materials . <to be completed prior to Phase 2 Deployment>

2.3.2 WHAT WENT WELL

38. Training taking place close in time to using the system was beneficial.
39. The address standards section in the education materials was helpful.
40. The PharmaNet and Client Registries 'Overview' sections in the education materials were good.

2.4 Major Project Issues

Below is a list of key issues identified in the deployment. A comprehensive issues log documenting every project issue including ongoing discussions and issue resolutions is being maintained separately for the project.

1. Response time for uploading and downloading Client Registry data takes too long. <to be completed prior to Phase 2 Deployment>
2. The Client Registry "times out" quickly, heavily impacting workflow. <to be completed prior to Phase 2 Deployment>
3. Decimal dose is not accepted by PharmaNet
   - This is being addressed with a PharmaNet fix in the future. <to be completed prior to General Deployment>
4. In the clinic, the Nurse and the LPN enter certain prescriptions (such as refills or continuous blister pack medications) which are not supported in the PharmaNet integration.
   - Investigate the addition of a new conformance rule to provide physicians with the ability to sign off draft prescriptions by other care providers (e.g., nurse drafts medication renewal for physician sign-off). <to be completed prior to General Deployment>

2.5 Summary

Based on the lessons learned the following actions will be conducted prior to going forward with the Phase 2 Deployment to ensure that the problems encountered and areas lacking in Phase 1 do not reoccur:

- Debriefing sessions will be conducted with Med Access to clarify and identify changes that will be required for Phase 2 Deployment.<complete>
- Conformance Rules will be updated and republished for all Phase 2 POS vendors.
- Education materials will be updated and republished prior to Phase 2 Deployment.
- The support model will be reviewed and updated.
- Support processes during deployment will be reviewed and updated.

Based on the lessons learned the following actions will be conducted prior to going forward with the General Deployment to ensure that the problems encountered and areas lacking in Phase 1 do not reoccur:

- The Privacy and Security checklist will be reviewed and updated.
- The end user enrolment form and supporting education materials will be reviewed and updated.
- The user agreement will be reviewed and updated.
- Implementation of an implied patient consent model for accessing information in the EHR in the EMR system.
- HIAL services availability notifications functionality.

2.6 Glossary of Acronyms

CR : Client Registry

EHR : Electronic Health Record

EMR : Electronic Medical Record

HIAL : Health Information Access Layer

MOA : Medical Office Assistant

MSP : Medical Services Plan

POS : Point of Service

EEIP and PMP
Lessons Learned

JOC - April 25, 2013

Jeff Aitken

BRITISH COLUMBIA | Ministry of Health

Purpose

- To provide an overview of important lessons learned in the course of the PharmaNet Modernization and EMR Integration Projects:
  - Development, Testing and Early Adopter Deployment Phases.

Background

- This document presents a list of the primary lessons learned and translates them into EHR functional and non-functional requirements that should be in place for future deployment of eHealth.
- Additional discussion with all parties is necessary to confirm the issues and proposed solutions.
- It is recognized work is already underway on several fronts.

Functional Requirements

EHR Service Availability Functionality

- BACKGROUND: Difficult for connected systems to know the availability of the HIAL.
- ISSUE: Points-of-Service (POS) is not warned of EHR service outage and service resumption.
- IMPACT: Users are not aware if service is online or not.
- REQUIREMENT: HIAL requires an "EHR availability" service for a connected POS to query.

PNET Adaptation and Change Notifications

- BACKGROUND: PharmaNet requires a reliable change notification solution for prescription adaptations.
- ISSUE: The current solution requires EMR systems to constantly poll PNET.
- IMPACT: The project is unable to automate adaptation and change notifications for end users.
- REQUIREMENT: Leverage the HIAL Subscription Services to enable reliable Adaptation and Change Notifications.

Pre-Production Testing

- BACKGROUND: Connecting an EMR in production with the HIAL and PNET requires smoke testing prior to go-live.
- ISSUE: P&S rules do not allow testing in a production environment. Using a bad WSDL message is not conclusive enough.
- IMPACT: Cost and time impacts due to project delays.
- REQUIREMENT: Capability to functionally pre-test connectivity and service access in Production.

Test Harness In SAND, CONF and PROD

- BACKGROUND: There is no official test harness that can be used in the sandbox, training and conformance environments for troubleshooting and testing.
- ISSUE: Requesting POS vendors to retry a transaction is not ideal and sustainable.
- IMPACT: Cost and time impacts due to delays.
- REQUIREMENT: Test harness that can be used in the sandbox, training, conformance and production environments for troubleshooting and testing.

Non-functional Requirements

Diagnostic, Tuning Tools and Support

- BACKGROUND: HIAL support organizations have limited tools to troubleshoot problems in a timely manner.
- ISSUE: Performance slowdown experienced during early adopter deployment. Disappearing transactions.
- IMPACT: Slow performance and issue resolution weakens user and vendor confidence.
- REQUIREMENT:
  - Cross-platform, cross-provider diagnostics capability
  - Improved coordination and hand-offs between service delivery partners.

Expansion of eHOPS

- BACKGROUND:
  - eHOPS scope of work was initially to run the PLIS, eViewer and HIAL. Now EMRs, pharmacies and other POS systems are on-boarding.
- ISSUE:
  - There is limited overall service management of the EHR, mostly separate system and environment management.
- IMPACT:
  - The current situation puts the successful deployment, operation and adoption of eHealth at risk.

Expansion of eHOPS

- REQUIREMENT:
  - Comprehensive environment management
  - Centralized incident management ("one-stop-shop") service desk
  - Comprehensive release management
  - Production network change coordination

SLO Definitions for EHR Message Services

- BACKGROUND:
  - POS software vendors require optimal and predictable performance from the HIAL and its surrounding backend systems.
- ISSUE:
  - No coherence in the service levels across the systems.
  - Service levels are not properly enunciated for POS vendors.
  - No congruence in the configurations, e.g., timeouts, across each connected application system.

SLO Definitions for EHR Message Services

- IMPACT:
  - Experience of transaction slowdowns in the recent early adopter go-live activities.
- REQUIREMENT:
  - Documented SLOs for every EHR service offering and reporting against these SLOs.
  - Coordinated and documented rules for time-out and retry across all services.

Conformance Documentation for EHR Message Services

- BACKGROUND:
  - Having a consistent means to connect to the HIAL requires maintaining a set of artifacts, e.g., specs, sample messages, WSDLs, etc.
- ISSUE:
  - No comprehensive and POS appropriate set of documentation for all HIAL interfaces and environments.
  - No established processes to maintain conformance materials.

Conformance Documentation for EHR Message Services

- IMPACT:
  - On-boarding is difficult and time consuming.
  - Risk to existing and future eHealth projects in terms of overall delivery, schedule and budget.
- REQUIREMENT:
  - A concerted effort between the MOH, eHOPS and Oracle must be undertaken to build the documentation framework.
  - A shared understanding of the services and deliverables must be established and committed to in relevant agreements between the organizations.

Questions?

EEIP and PMP Lessons Learned

The phase 1 implementation of EMR integration with provincial eHealth systems (i.e. PharmaNet, Client Registry and the HIAL) through an early adopter project provided an opportunity for the project teams and all stakeholders to identify important lessons learned.

This document presents a list of the primary lessons learned and translates them into EHR functional and non-functional requirements that should be in place for future deployment of eHealth. The general deployment of this integration is anticipated to occur in Q2 of fiscal 2013-14.

The EMR integration and PharmaNet modernization projects recognize several organizations need to be involved in provisioning the HIAL requirements discussed in this paper and that additional discussion with all parties is necessary to confirm the issues and proposed solutions. As well, it is recognized work is already underway on several fronts, in particular release management and environments, and that budget, change requests and new statements of work may be required to move forward on every requirement.

FUNCTIONAL REQUIREMENTS

1. EHR Service Availability Functionality

Background

Currently, when any HIAL provided EHR service (Registries, PharmaNet or PLIS) experiences an outage, the HIAL returns a service exception error to the user at a POS requesting the service. In this scenario the user has the choice to either wait and attempt the transaction again or disconnect from the HIAL (and possibly batch the transaction for later transmission).

Issue

Two issues with this current state are:

a. The POS may experience an EHR service outage at any time without warning

b. The HIAL has no means to notify the POS if an EHR service is available

Impact:

As a result of “a”, the users workflow is interrupted without notice. To maintain business continuity at the point of care, the user is required to manually intervene and put the POS into “offline mode”.

As a result of “b”, the user may not attempt to put the POS into “online mode” again, and may continue to work offline for an extended period of time. This presents a patient safety issue as a care provider may make clinical decisions based on data that is out of date with the EHR.

Solution/Requirement:

To remediate these issues, the HIAL requires an “EHR availability” service for a connected POS to query.

This should:

a. Provide all EHR connected POS system with a warning that a service interruption is imminent. This would enable the POS to go into offline mode gracefully, without user intervention. Furthermore, it adds capability for points of service to determine service availability – typically through heartbeats or pings.

   The key attributes are:

   1. Coverage: Covers all services (PNet, CR, PR, PLIS and others as added)
   2. Deep: determines functional availability deeply (without touching production data) enough to assure a high probability of service availability

b. Provide information on the status of EHR services available through the HIAL. This would enable the POS to gracefully come back online as soon as possible without requiring user intervention.

c. Send notification (electronically) to points of service that the HIAL is going out of service or resuming service. This feature would enable POS applications to gracefully notify their users and disconnect / re-connect.

d. Eliminate dropped or missed transactions which occur with unacceptable frequency.

2. Adaptation and Change Notifications

Background:

PharmaNet requires integration with the HIAL subscription service to enable reliable adaptation and change notifications. Pharmacists are required to notify the original prescriber when they choose to adapt a prescription in PharmaNet. Currently, pharmacists are required to manually fill out and fax Adaptation Notice Forms to the original prescriber.

Issue:

The original proposal was to require an EMR to poll PharmaNet on a daily basis for a prescriber's adapted prescriptions. It was determined that since this required a user to be logged onto the POS to function, it was not reliable enough.

A second option was to allow the POS to poll PharmaNet using a system process, however it was determined that the HIAL should not allow an EHR request from a POS running under a system process.

Impact:

The project is unable to automate adaptation and change notifications for end users. Pharmacists must continue to use the existing manual faxing process.

Solution/Requirement:

The most robust solution is to leverage the HIAL Subscription Services to enable reliable Adaptation and Change Notifications from PharmaNet.

3. Pre-prod Testing

Background:

Configuration of a point of service system (e.g., EMR) to the HIAL involves a number of moving parts as well as points of failure. The work alone to configure a POS entails navigating through multiple networks, interfacing different platforms and application systems, and involving different service providers and stakeholders.

To be able to check if all configurations – physical and logical – are working requires end-to-end testing.

Issue:

- Privacy and security rules do not allow testing in a production environment.
- The current option of a POS issuing a bad WSDL message is not conclusive enough that an end-to-end good connectivity is achieved.

Impact:

- Cost and time impacts due to project delays.

Solution/Requirement:

We need the capability to functionally pre-test connectivity and service access in Production.

This may be met by the requirement for "service availability" service (Req #1 and Req #4). However, further analyses and out-of-the box thinking should happen among our service providers to come up with the best and cost-effective way of being able to do pre-prod testing.

4. Test harness in Sand, Conf and Prod

Background:

There is no official test harness that can be used in the sandbox, training and conformance environments for troubleshooting and testing. MAXIMUS has a test harness that can be used for PharmaNet, however it has not been properly configured to be immediately available for troubleshooting PharmaNet issues through the HIAL.

Issue:

Currently, Early Adopter vendors have been requested to re-send transactions to determine if issues have been resolved. This model is not ideal and cannot be sustained in operations.

Impact:

- Cost and time impacts due to project delays.

Solution/Requirement:

Test harness that can be used in the sandbox, training, conformance and Prod environments for troubleshooting and testing

NON-FUNCTIONAL REQUIREMENTS

5. Diagnostics and Support

Background:

The HIAL support personnel have limited diagnostic and tuning tools that will enable them to efficiently troubleshoot problems in a timely manner.

Diagnostics are required for monitoring HIAL performance and throughput and identifying the source of bottlenecks.

Issue:

- Slowdown in performance was experienced during the phase 1 early adopter deployment.
- The current means of measuring transaction timing is inadequate.
- There have been transactions that have "disappeared" without apparent capability to diagnose effectively.
- The current model puts the POS vendor in this testing role which is not sustainable.

Impact:

If the EHR (e.g. HIAL, PNET, PLIS, CR/PR) performance is not properly monitored, measure and tuned, slowdowns in performance can cause user and vendor dissatisfaction.

Weak confidence can lead to low uptake of the EHR services from EMR users and future POS software vendors connecting to the HIAL.

Solution/Requirement:

A better cross-platform, cross-provider technical diagnostic capability is required. This has to exist especially between and among the service provider interfaces.

We need much improved diagnostic process coordination between service delivery partners. Problem hand offs have not been effective or coordinated.

6. Expansion And Rationalization Of The Operational Responsibility For eHOPS

Background:

The scope of work for e-Health Operations (eHOPS) is expanding due to the on-boarding of EMRs, pharmacies and other POS systems. eHOPS scope of work was initially to run the PLIS, eViewer and the HIAL.

Issue:

- There is no single point of entry to perform inter-agency coordination, resolution and support for the HIAL, PharmaNet, Registries, or PLIS for external customers (e.g., EMRs, PNET or SSOs).

- The existing agreement/scope of work with PHSA covers eHOPS only and the HIAL, eViewer and PLIS systems. There is no overarching agreement that includes HSSBC as a critical service delivery partner for eHealth.

- There are no mechanisms to efficiently conduct changes that span multiple service delivery organizations. A recent example is the re-routing of production HIAL to PNet connectivity (i.e. SOA adapter). There is no identified coordinating agency.

- eHOPS operations currently does not include the non-production POS environments (e.g. Sandbox, conformance, training) as part of their managed services. Without coverage, this can impact conformance services in the future. Sustained operations will be required to support multiple and cycles of EMR integration work and conformance/UAT testing, e.g., server upgrades and tuning, test data loads and database refresh. In the future there should be a capability for sustained support of multiple streams of integration and conformance testing work.

- Release management does not include the corresponding downstream updates to documentation, e.g., messaging specifications, release notes or conformance volumes. For instance, a change order is required to get Oracle to revise a HIAL-related technical conformance document.

Impact:

The current situation puts the successful deployment, operation and adoption of eHealth at risk.

Solution/Requirement:

Revision and expansion of eHOPS statement of work (SOW) and provision of additional funding to expand the responsibility of eHOPS along the following areas:

a) **Environment management** – include the POS environments (aka PMP) within the change and release management processes so they remain current with production systems (e.g. software upgrade/updates, tuning, etc.).

b) **Centralized incident management handling and expanded "one-stop-shop" service desk** - This support should include catering to external (non-health authority) customers like EMR vendor and other POS vendors connecting to the HIAL. The service desk will be the single point of entry for coordinating cross-agency work and service items like network change, issue resolution, etc.

c) Release Management

As the eHOPS scope increases, there is a need to expand and put out quality release management.

Release management should include update and availability of corresponding documentation, e.g., release notes accompanying each release, signing off revised messaging specs, updates of applicable conformance volumes.

d) Production network changes require organizational coordination

Vertical integration of activities will gain efficiencies. Putting eHOPS as single point for coordination or network changes (see also #b above) will facilitate EMR on-boarding as it ramps up in the next couple of years.

7. SLO Definitions For EHR Message Services

Background:

POS software vendors require optimal and predictable performance from the HIAL and its surrounding backend systems (e.g. PNET, PLIS, CR/PR).

Issue:

- No coherence in the service levels from each of the systems.
- Service levels are not properly enunciated by each of the connecting systems and service providers for POS software vendors.
- No mechanism to put in effect these enunciated SLAs across the HIAL ecosystem.
- No congruence in the configurations, e.g., timeouts, across each connected application system.

Impact:

- Experience of transaction slowdowns in the recent early adopter go-live activities.

Solution/Requirement:

- We require SLO's for every EHR message service offering and reporting against these SLOs. These may (should?) be aligned with existing SLOs – the point is they need documentation (e.g. what are the CR SLOs for the HIAL CR service?) and measurement / reporting.

- We need coordinated and documented rules for time-out and retry across all services. Current rules are inconsistent with operating real time point of service systems (e.g. multi-minute timeout values). Current rules have been built in isolation, not considering that now service is delivered by an integrated chain of responsible applications.

8. Conformance Documentation for EHR Message Services

Background:

POS software vendors require a variety of documentation (e.g. HL7 message specs, message schemas, governance header schemas, WSDLs, sample messages) to connect to EHR message services offered through the HIAL.

Issue:

- There is no comprehensive and appropriate set of documentation for POS software vendors for all external HIAL interfaces (e.g. Client Registry, Provider Registry, PharmaNet, PLIS) and for all environments.
- There are no established processes to maintain this material to ensure changes to production systems are reflected in conformance packages (e.g. documentation and technical files).

Impact:

- The result is that on-boarding and reliable operation of POS systems with provincial eHealth systems is difficult and time consuming.
- The Ministry's strategic priority to complete existing eHealth project and launch new ones is at risk in terms of overall delivery, schedule and budget.

Solution/Requirement:

- The MOH, eHOPS and Oracle must build a framework to support eHealth integration including the processes/repositories to maintain the accuracy of the documentation over time. A shared understanding of the services and deliverables must be established and committed to in relevant agreements between the organizations.

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Point of Service System/Electronic Health Record Integration

Lessons Learned

Early Adopter Implementation Phase 1

January 31, 2013 Version 1.1

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Table of Contents

1.0 Introduction

1.1 Purpose

This document describes the lessons learned in the Point of Service (POS) / Electronic Health Record (EHR) Early Adopter Implementation Phase 1. The objectives of the Phase 1 Implementation were to:

- production test the electronic prescribing as well as the medication history download from PharmaNet functionality,
- test the integration of Med Access's Electronic Medical Record (EMR) point of service system with the Health Information Access Layer (HIAL), PharmaNet and Client Registry,
- minimize risk to the Ministry of Health production system, and
- minimize interruption to critical clinic processes.

During the Phase 1 deployment, early adopter participants utilized two EMR systems: their current Med Access EMR Version, Rel 4.3, which was used as the primary system by all clinic staff as per their usual workflow; and Rel 4.4, which was integrated with the production Client Registry and PharmaNet environments and reserved solely for early adopter participants.

All patients of the clinic were processed using the primary EMR system (demographics checked, clinical decisions documented, etc), but for participating patients, these actions related to demographics checking and the creation/review of prescriptions were repeated in the parallel system.

1.2 Phase 1 Deployment Project Results Summary

The Phase 1 deployment was conducted over a two week period. Daily war room meetings to support the deployment and address issues were conducted with the Ministry of Health project team and members of all the help desks providing support to the project. Weekly business meetings with Directors of the project and major stakeholder organizations were also conducted to communicate status and ensure that escalated issues were being addressed.

The following is a list of the frequencies of all the transactions that were tested during the deployment.

Program Area	Type/Count
FindCandidates	13
GetDemographics	322
RevisedPerson	67
TRX Retrieve Prescriptions	78
TRP Patient Profile Request	93
TIL Get Location Details	86
TRX Record Prescription	95
TMU Medication Update	5

Program Area	Type/Count
TRX Update Prescription Status	3
TMU Medication Update Reversal	2
TPI Patient Med Profile Update	1
TRX Retrieve Prescriber Prescrip	9

1.3 Evaluation Methodology

The Ministry of Health deployment team conducted three meetings to collect feedback and lessons learned:

1. Meeting with the end users (the early adopter physician and medial office assistant (MOA)),
2. Meeting with Med Access (the EMR vendor), and
3. Meeting with Help Desk representatives.

2.0 Lessons Learned

2.1 Early Adopter Deployment

PROBLEMS ENCOUNTERED

- Problem: Tight synchronizing with the Client Registry places heavy workload on the clinic particularly to synchronize demographics with each access.
    - Planned Actions:
        - Review and potentially update the requirements for synchronizing with the Client Registry in the conformance specifications. <to be completed prior to Phase 2 Deployment>
        - Add recommendation in the conformance specifications that vendors recommend that end users conduct a data clean-up effort in their local EMR databases to conform to Canada Post standards prior to go-live, and if not done, the end users should be informed of the workload that they can expect upon conversion (percentage of records that will need updating and the amount of time it will take to do so). <to be completed prior to Phase 2 Deployment>
        - Include in the education is a statement about the benefits of data maintenance, and words of encouragement for early adopters, showing them how the data quality will improve as more participants take part. <to be completed prior to Phase 2 Deployment>
- Problem: Tight coupling of EMR with the Client Registry forces unnecessary queries to the Client Registry when accessing patient charts.

- Planned Actions: Meet with EMR vendor to clarify requirements and reduce the tight coupling in the initial EMR implementation. <currently in development at Med Access>

- Problem: Minimum required coupling of EMR with the Client Registry prevents access to PharmaNet access when Client Registry is unavailable.
  - Planned Actions: Research will be undertaken regarding system enhancements to support HIAL services availability notifications. <to be completed prior to General Deployment>
- Problem: Requiring patient consent before accessing the EHR in the EMR system presents a problem for workflow as well as what to do if consent is withheld.
  - Planned Actions: Move to an "implied consent" model. <to be completed prior to General Deployment>
- Problem: Users are hesitant to send updates to the Client Registry thinking that it may modify the patient's provincial demographics incorrectly.
  - Planned Actions: Further education material updates will be made to clarify updating the client registry demographics. In addition, investigation will be made regarding the ability to select specific fields for demographic updates. <to be completed prior to Phase 2 Deployment>
- Problem: Many of the addresses in the Client Registry are out of date requiring excessive workload on the clinic to provide updates.
  - Planned Actions: This will be a problem encountered throughout initial deployments. Key messages will be developed and included in the education materials. <to be completed prior to Phase 2 Deployment>
- Problem: Users would like the Medication Profile to be synchronized more frequently.
  - Planned Actions: Update conformance rules to require EMR to provide functionality to synchronize with PharmaNet on demand. <to be completed prior to General Deployment>
- Problem: Creating the Med Profile is a time consuming process that impacted workflow negatively.
  - Planned Actions: Investigate updates to education material to address transitional activities and make workflow recommendations. <to be completed prior to Phase 2 Deployment>
- Problem: The expected end date of a prescription was not provided for prescriptions inferred by the EMR from dispense records (i.e. 30 pills, taken twice a day will have an expected end date of 15 days after the dispense date). This is a temporary transitional problem where the EMR creates an inferred prescription from a dispense record in PharmaNet that does not have a related prescription record.
  - Planned Actions:
    - Review the EMR conformance rules for potential modifications. <to be completed prior to Phase 2 Deployment>
    - Education materials will be updated to clarify the issue of inferred prescriptions and how to find needed information in this interim period. <to be completed prior to Phase 2 Deployment>

- Problem: The privacy and security checklist was confusing.
  - Planned Actions: Review and update the checklist <to be completed prior to Phase 2 Deployment>
- Problem: The end user enrolment process was confusing.
  - Planned Actions: The end user enrolment form and supporting education materials will be reviewed and updated. <to be completed prior to Phase 2 Deployment>
- Problem: The user agreement was long and difficult to understand for a non-legal person.
  - Planned Actions: The user agreement will be reviewed and updated to add subheadings to provide additional context. <to be completed prior to Phase 2 Deployment>
  - Investigate whether an impartial 3rd party, such as the College, will review and create a communications item to assist physicians in their understanding of the document. <to be completed prior to General Deployment>

WHAT WAS LACKING

- The display of message success or failure in the EMR (such as a record being updated in PharmaNet) was not always seen by the users.
  - Planned Actions: Conformance rules will be modified. <to be completed prior to General Deployment>
- Have medications dispensed categorized by the type of drug (e.g., opiates, steroids, etc.) to assist in being able to identify drug seeking.
  - Planned Actions: This enhancement recommendation has been communicated to the EMR vendor and is outside the scope of the EHR. <currently completed>

WHAT WENT WELL

- The ability of the physician to see medications prescribed by other care providers.
- The ability to see if a prescription has been filled helps the physician understand if there is possible drug seeking taking place.
- The ability to see that a medication has or has not been dispensed, gives the physician a clearer picture of patient compliance as well as the full medication profile for that patient.
- Synchronizing demographics with the Client Registry in the EMR will make it easier to find a patient's electronic Lab or Diagnostic Imaging results.
- A newborn's PHN in now available sooner than previously available.
- Synchronizing with the Client Registry helps to catch and correct data entry errors (especially for Date of Birth) that occur during patient registration.
- Integration with the Client Registry improves workflow by importing data to the EMR when setting up new patients.
- Integration with the Client Registry provides an opportunity to create a new PHN for a patient in the clinic.

2.2 End User Support

PROBLEMS ENCOUNTERED

- Problem: A direct phone number was used for Client Registry support. This resulted in unacceptable response times.
  - Planned Actions: The Client Registries Help Desk number will be used and training will be provided for the help desk in advance of implementation. <to be completed prior to Phase 2 Deployment>
- Problem: Triage for problems involving the HIAL and Client Registries was difficult.
  - Planned Actions: Technical CR issues will be immediately escalated to both HIAL and Client Registry Tier 2 help desks for triage and diagnosis. <to be completed prior to Phase 2 Deployment>
- Problem: Help desks had difficulties at first logging and coordinating problems.
  - Planned Actions:
    - Run support fire drills using predefined scenarios prior to go live. <to be completed prior to Phase 2 Deployment>
    - Update the Support Model with a list of error messages with instructions for the help desks. <to be completed prior to Phase 2 Deployment>
    - Document ticket tracking integration in the Support Model. <to be completed prior to Phase 2 Deployment>

WHAT WAS LACKING

- Clear expectations regarding response time on Level 2 issues were not communicated.
  - Planned Actions: Update the Support Model with clear response time expectations for issues. <to be completed prior to Phase 2 Deployment>
- Ensure that PNet issues without incident numbers are triaged.
  - Planned Actions: Review and update Support Model to determine triage actions when PharmaNet incident numbers are not provided. <to be completed prior to Phase 2 Deployment>
- There was no afterhours emergency PNet support number provided.
  - Planned Actions: Update the Support Model to provide the PNet support number for afterhours emergencies. <to be completed prior to Phase 2 Deployment>

WHAT WENT WELL

- The daily war room meetings were effective and critical.
- Communications between help desks was effective.

2.3 Training and Education

PROBLEMS ENCOUNTERED

- Problem: The education material was helpful but it lacked meaning when read without the EMR system.

- Planned Actions: Education material will provide vendors with 'Speakers Notes' which will give them key phrases to link training materials back to the education. <to be completed prior to Phase 2 Deployment>

- Problem: Working through the MOA education materials for Client Registries is too time consuming.
  - Planned Actions: Complete the 'speakers note' extract of current education. Investigate option of implementing the super-user model where only one user in a clinic receives the comprehensive training and education. <to be completed prior to General Deployment>
- Problem: When searching for patients using the Client Registry, the users found the search rankings were not helpful.
  - Planned Actions: Investigate options to enhance training to better prepare users to effectively search the Client Registry and understand the results. <to be completed prior to Phase 2 Deployment>
  - Provide training in a training environment, where the search criteria and results could be controlled. <to be completed prior to General Deployment>
- Problem: Users had difficulty understanding what they should do to record a new baby without a PHN.
  - Planned Actions: The education materials will be updated to clarify this topic. <to be completed prior to Phase 2 Deployment>
- Problem: Users had difficulty understanding the "stop and revoke a prescription" section of the education materials.
  - Planned Actions: The education materials will be revised to clarify this section. <to be completed prior to Phase 2 Deployment>

WHAT WENT WELL

- Training close in time to using the system worked well and is very important as the material is easily forgotten.
- The address standards section in the education materials was helpful.
- The PharmaNet and Client Registries 'Overview' sections in the education materials were good.

2.4 Major Project Issues

Below is a list of key issues identified in the deployment. A comprehensive issues log documenting every project issue including ongoing discussions and issue resolutions is being maintained separately for the project.

- Response time for uploading and downloading Client Registry data takes too long. <to be completed prior to Phase 2 Deployment>
- The Client Registry "times out" quickly, heavily impacting workflow. <to be completed prior to Phase 2 Deployment>
- Decimal dose is not accepted by PharmaNet

- This is being addressed with a PharmaNet fix in the future. <to be completed prior to General Deployment>

- In the clinic, the Nurse and the LPN enter certain prescriptions (such as refills or continuous blister pack medications) which are not supported in the PharmaNet integration.
  - Investigate the addition of a new conformance rule to provide physicians with the ability to sign off draft prescriptions by other care providers (e.g., nurse drafts medication renewal for physician sign-off). <to be completed prior to General Deployment>

2.5 Summary

Based on the lessons learned the following actions will be conducted prior to going forward with the Phase 2 Deployment to ensure that the problems encountered and areas lacking in Phase 1 do not reoccur:

- Debriefing sessions have been conducted with Med Access to clarify and identify changes that will be required for Phase 2 Deployment.
- Conformance Rules will be updated and republished for all Phase 2 POS vendors.
- Education materials will be updated and republished prior to Phase 2 Deployment.
- The Privacy and Security checklist will be reviewed and updated.
- The end user enrolment form and supporting education materials will be reviewed and updated.
- The user agreement will be reviewed and updated.
- The support model will be reviewed and updated.
- Support processes during deployment will be reviewed and updated.

Based on the lessons learned the following actions will be conducted prior to going forward with the General Deployment to ensure that the problems encountered and areas lacking in Phase 1 do not reoccur:

- Implementation of an implied patient consent model for accessing information in the EHR in the EMR system.
- HIAL services availablity notifications functionality.

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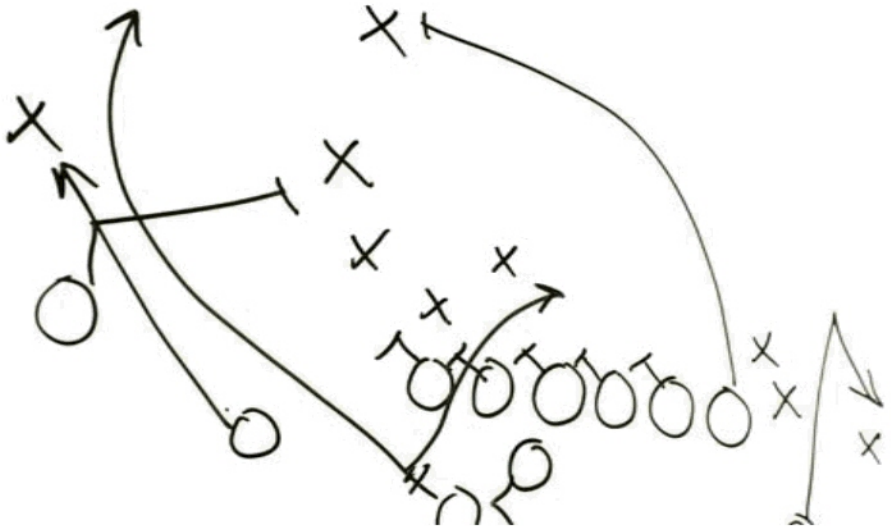
Financial Risk & Control Review
PharmaNet Modernization Project – Early Adopters Deployment phase 2

March 27, 2013



Overview

Early Adopters Phase 1 deployment

- In November 2012, the Early Adopter EMR vendor, Med Access successfully completed conformance testing for PMP functionality and conducted a two week deployment in production with a physician's office. This deployment resulted in the successful download to a physician's EMR system of the Medication Profile from PharmaNet as well as the successful creation of prescription records in PharmaNet from that physician.

Early Adopters Phase 2 deployment

- In March 2013, the Early Adopter Pharmacy Systems vendor, Applied Robotics (ARI) plans to complete development of PMP compliant functionality then conformance test and deploy in production to a single pharmacy in Gibsons, B.C. This will enable the pharmacy to utilize the new Solution to Manage Drug Problems as well as electronic prescribing functionality.

Source: PMP Draft Communications Plan V2.0 last updated March 20, 2013

Confirmation of scope and timing

- The EA pharmacy POS vendor is still anticipating deployment to a single pharmacy in Gibsons, B.C. by end of March 2013; however, the EMR POS vendor deployment at the same site will be delayed until April 2013.
- Our understanding is that this delay of the EMR POS deployment will not affect the exercising of functionality in the pharmacy POS system. All of the functions of the EMR POS (e.g. ePrescribing) can be performed in the pharmacy POS system since the EMR POS implements a subset of the functionality of the pharmacy POS.
- The EMR POS solution will remain unchanged from the version which had undergone conformance testing for the phase one EA deployment in November 2012 thus is not required to undergo conformance testing again for the upcoming phase two EA deployment.

Approach

Background

- The FRCRs conducted for earlier phases of the PMP were carried out under requirements of the Ministry of Finance's Core Policy and Procedures Manual (CPPM) which were in effect at the time of the reviews but have since been superseded. In December 2012, the Ministry of Finance published amendments to the CPPM which involved re-writing the Financial Systems and Controls chapter.

Scoping phase

- Evaluated risks and controls identified in earlier FRCRs for relevance under the new CPPM guidance to minimize duplication of work where possible
- Assessed the impact of the CPPM changes to the upcoming deployments
- Conducted interviews with project stakeholders to identify relevant risks and controls for the upcoming deployments

Release 1B phase two

- Focusing on the risks and controls identified in the scoping phase specific to the Release 1B phase two deployment, reviewed key project documentation and conducted interviews with project stakeholders
- To the extent possible we referred to documentation generated by the project team to identify controls that address the control objectives/risks.
- We took a time-boxed approach, focusing on high-risk areas as agreed with the Ministry

Approach (continued)

For the engagement we reviewed key project documentation, and interviewed the following project team members:

- MAXIMUS:
  - Janine Roy
  - Patricia Wells
  - Jeannette Eason
- Ministry of Health:
  - Zachy Olorunojowon
  - Libni Pardo
  - Jeff Aitken
  - Pam Swift

Approach (continued)

We identified the following areas as the most relevant for this deployment phase (see medium / high):

Domain	Control Objective Description	Relevance (i.e. inherent risk)
General Computer Controls		
Access controls	Logical security procedures are established to ensure only authorized users, and IT support can access the system functions in accordance with their roles.	Low
Change Management	Formal change management procedures are in place for application maintenance, and changes implanted do not jeopardize the security and integrity of the data.	High
Organization	To ensure that defined functions, related resources and segregation of duties are established.	High
Policy & Procedures	To determine whether senior management has established and updated an adequate policy framework and related processes to accommodate the changes.	High
Business Process Controls		
Application Controls	To ensure automated controls together with manual /procedural controls provide reasonable assurance that recorded transactions are processed in a valid, authorized, complete, accurate, and timely manner.	High
Interface to CAS Financials System	To ensure whether information transmitted to CAS is recorded and processed completely and accurately in a timely manner.	High
Reconciliation to CAS Financials System	To ensure that reconciliations are completely and accurately performed and exceptions cleared in a timely manner.	Medium
Queries and Reports	To ensure that applicable queries and reports are updated to accommodate the implementation.	Low
Management Trail / Compliance	To ensure they exist, are reviewed, monitored and exceptions are followed up.	Low

Review constraints

We recognize the following context and constraints of the phase two deployment:

- The PharmaNet team is working under time pressure, executing on several components simultaneously
- Documentation is continually being drafted and revised, requiring multiple iterations to produce information for review
- This is a point in time report and observations are based on information available at time of review
- The results summarized here are based on documentation received by noon of March 25th with follow-up questions and responses received by noon of March 26th

Concluding comments

- The timing for this deployment appears to be highly compressed
- During this compressed time frame, there appears to be a lack of formality with respect to the application of project management processes such as project planning, decision making and staging of key project activities
- The overall inherent risk is reduced due to the fact that this is a single location pilot deployment
- Based on management's assessment of the overall risk key decisions have been made with respect to scope and the conformance testing approach to ensure timelines are met
- Management plans to mitigate any residual risk by monitoring and managing the deployment closely
- As the Ministry moves towards full deployment, it is important a more formal approach with supporting evidence be followed to manage the risk and demonstrate with the Core Policy requirements

Results summary

The following are observations resulting from information received at end of day on March 21st:

Domain	Relative risk	Observations
General Computer Controls		
Access controls	Low	5. Conformance volume 8 - information security
Change Management	Low	2. Conformance volume 6 - change management and training
Organization	Medium	2. Conformance volume 6 - change management and training 4. Deployment plan and deployment schedule
Policy & Procedures	Medium	1. Training plan 3. Communications plan 9. Conformance volume 7 – privacy (EMR) 10. Conformance volume 7 – privacy (pharmacy)
Business Process Controls		
Application Controls	High	**Pervasive observations** 6. Conformance requirement waivers (EMR) 7. Phase one lessons learned (EMR) 8. Conformance standards compliance (pharmacy)
Interface to CAS Financials System	Low	
Reconciliation to CAS Financials System	Low	
Queries and Reports	Low	
Management Trail / Compliance	Low	

Observations and recommendations

1. Training plan activities schedule

Risk: Low

Basis for risk rating: We assume a process was undertaken involving the appropriate stakeholders to confirm required training activities.

Observation

- At the time of sign-off, the Training Plan did not include dates for all training activities for Release 1.1 dates and remained marked as “TBD” at the time of our review. We understand from discussion with the PharmaNet project team that appropriate Ministry stakeholders have assessed the reasonability of training required and have agreed that training can be scaled back from the activities outlined in the plan.

Mitigation:

- An end user support model exists which describes the responsibilities and protocols for the identification, escalation and resolution of issues encountered during the early adopters implementation.

Recommendation

- We recommend that the review and approval of updated training requirements, subsequent to the sign-off of the Training Plan, by Ministry stakeholders be documented to confirm that the training activities carried out are sufficient for the EA phase two deployment.

Observations and recommendations (cont'd)

2. Conformance volume 6 - change management and training

Risk: Low

Basis for risk rating: We assume a process was undertaken involving the appropriate stakeholders to confirm required training activities.

Observation

Phase one observation (EMR only):

- We noted that no testing of training materials for adherence to Conformance Volume 6 was completed
- As a result, we are unable to conclude that all requirements defined in Conformance Volume 6 were met with the training material provided.

Phase two observation (Pharmacy and EMR):

- Conformance volume 6 is not in-scope of this phase of EA deployment. While we have not seen formal documentation of the decision we were informed that this was discussed with appropriate stakeholders. Mitigation:
- As part of the phase one deployment, MAXIMUS has published PowerPoint training presentations for the colleges, Ministry users and HIBC Operations users.
- Based on discussion with the PharmaNet team we understand that, similar to the phase one deployment, daily war room monitoring will be established for the phase two deployment involving all stakeholders in order to support rapid escalation and triage of issues.
- An end user support model exists which describes the responsibilities and protocols for the identification, escalation and resolution of issues encountered as a result of this deployment.

Observations and recommendations (cont'd)

2. Conformance volume 6 - change management and training (cont'd)

Risk: Low

Recommendation

Phase one recommendation:

- We recommend that prior to broader deployment of EMR POS, the training material be tested against Conformance Standards Volume 6 to ensure alignment with the criteria outlined therein.

Phase two recommendation:

- While we understand that the exclusion of Volume 6 for this deployment was discussed with stakeholders, we recommend keeping a decision log to document the consultation with stakeholders and agreement that the approach is acceptable based on the assessed impact of the decision.

Observations and recommendations (cont'd)

3. Communications plan

Risk: Low

Basis for risk rating: As the deployment date approaches certain communications activities are being carried out as outlined in the Communications Plan.

Observation

- We observed that the Communications Plan was updated during the course of our review for key messages, timing and approval responsibilities.
- Certain communications activities were carried in a less formal manner than initially outlined in the plan in terms of key messages and communications approvals.

Recommendation

- We recommend tracking all communications activities to confirm they have been completed as outlined in the plan, with the appropriate approvals.
- The communications plan should be finalized and approved by appropriate stakeholders prior to the phase two EA deployment.

Observations and recommendations

4. Deployment plan and deployment schedule

Risk: Medium

Basis for risk rating: As the deployment date approaches and key activities are clarified the deployment plan and schedule are being updated accordingly.

Observation

- We observed that the deployment plan and deployment schedule were compiled and updated during the course of our review for key pre-go-live activities, responsibilities, dates and statuses.
- Given the timing of the deployment the process for clarifying key deployment activities appears to be occurring at a late stage.

Mitigation:

- The PharmaNet project team has regular touch points internally and externally to understand status of activities.

Recommendation

- We recommend further defining responsibilities and refining timing for key pre-deployment activities, including the production support process involving daily monitoring and structure of war room sessions.
- The deployment plan should be finalized and approved by appropriate stakeholders prior to the phase two EA deployment.

Observations and recommendations

5. Conformance volume 8 – information security

Risk: Medium

Basis for risk rating: The exclusion of conformance volume 8 was discussed with HIPSL and as part of that consultation a qualified approval was obtained.

Observation

- Conformance Standards volume 8 (Information Security), which supersedes the legacy conformance volume 5 (Security), requires updating for relevance to the current environment and is not in scope of this phase of EA deployment.
- Concerns raised by HIPSL over the current state of volume 8 although the proposed approach was considered acceptable given the compressed timelines.

Mitigation:

- The user administration processes and access model is not anticipated to change with the EMR or Pharmacy EA deployment. This deployment phase only introduces additional transactions access to which will be managed similarly to existing functionality.

Recommendation

- Prior to broader deployment of the pharmacy POS, the solution should be tested against Conformance Standards volume 8 to ensure alignment with the criteria outlined therein.

Observations and recommendations

6. Conformance requirement waivers (EMR)

Risk: Low

Basis for risk rating: The PSD has confirmed that it is acceptable for the waivers granted for certain conformance requirements in phase one EA deployment to be extended to phase two.

Observation

- The EMR POS solution has not been modified since the phase one EA deployment in Oct 2012 thus is not required to undergo conformance testing prior to phase two deployment.
- While we were not able to obtain evidence of a formal process involving all impacted stakeholders to reconsider the conformance requirements in the context of the phase two deployment, we obtained confirmation from the PSD of agreement with the proposed approach as requested during this review.

Recommendation

- We recommend keeping a decision log to document the consultation with the PSD and other impacted stakeholders and agreement that the approach is acceptable based on the assessed impact of the decision.

Observations and recommendations

7. Phase one lessons learned (EMR)

Risk: Medium

Basis for risk rating: While the lessons learned from the phase one deployment do not suggest deviations from the relevant conformance requirements, the impact of certain items remains to be determined.

Observation

- Lessons learned for the EA phase one (EMR only) deployment were issued on Jan 11, 2013. We observed that an issues log was compiled and updated during the course of our review to track discussions and actions against the phase one lessons learned.
- The majority of actions appear to be in progress although it is our understanding based on discussion with the PharmaNet project team that remaining unresolved items are not critical to the phase two deployment.

Recommendation

- We recommend keeping a decision log to document the consultation with stakeholders on the prioritization of action items for resolution by phase deployment versus for general deployment.
- Closure of action items indicated for phase two should be confirmed prior to the phase two deployment of the EMR POS and prior to the phase two deployment of the pharmacy POS where applicable.

Observations and recommendations

8. Conformance standards compliance (pharmacy)

Risk: High

Basis for risk rating: The pharmacy POS software is required to demonstrate compliance with the relevant conformance standards prior to deployment.

Observation

- The pharmacy POS has begun the first round of conformance testing on Mar 18, 2013 and is incomplete at the time of this review.

Recommendation

- Conformance testing should be fully completed with no significant gaps and results approved prior to EA deployment of the pharmacy POS.

Observations and recommendations

9. Conformance volume 7 – privacy (EMR)

Risk: Low

Basis for risk rating: HIPSL has confirmed that it is acceptable for the exclusion of conformance volume 7 to be extended to the phase two EMR EA deployment.

Observation

Phase one observation (EMR only):

- For Section 2 of the conformance volume, we observed 22 requirements marked as “Compliant”, 15 requirements marked as “Gap” and 3 requirements marked as “N/A” (Not Applicable) in Round 2 conformance testing results
- We note that the Director, Information Privacy and Legislation, has approved these results, verifying that the vendor has met the necessary requirements described in Conformance Standard Volume 7 to allow for Early Adopter deployment.

We obtained confirmation from HIPSL of agreement with the proposed approach as requested during this review.

Recommendation

Phase one recommendation:

- Recognizing that final approval of testing results was provided and all items marked as “Gap” were indicated as either “in progress” for closure or “not applicable” to the vendor, we recommend that progress against gap remediation continue to be tracked and that closure be confirmed prior to broader deployment.

Observations and recommendations

10. Conformance volume 7 – privacy (pharmacy)

Risk: Low

Basis for risk rating: The exclusion of conformance volume 7 was discussed with HIPSL and as part of that consultation approval was obtained to proceed with the phase two pharmacy EA deployment.

Observation

- Conformance Standards volume 7 (Information Privacy) is not in scope of this phase of EA deployment. Current Privacy conformance compliance for the pharmacy vendor (ARI) is deemed to cover privacy requirements for this pilot.

Mitigation:

- A Privacy Impact Assessment (PIA) was undertaken in Dec 2011 to assess the privacy implications of physicians and pharmacists potentially gaining access to additional health information as a result of the Release 1A PharmaNet functionality upgrades. The PIA has identified two risks related to HIAL and EMPI as medium risks and all others as low risks. A separate PIA has been completed for HIAL and EMPI to address the related risks - these components are outside the scope of this deployment review.

Recommendation

- Prior to broader deployment of the pharmacy POS, the solution should be tested against Conformance Standards Volume 7 to ensure alignment with the criteria outlined therein.


Deloitte.

Tryan, Derek N HLTH:EX

From: Schmidt, Tracee HLTH:EX
Sent: Tuesday, December 01, 2015 5:51 PM
To: Uyeno, Kelly HLTH:EX; Squires, Paul E HLTH:EX; Shrimpton, Paul HLTH:EX; Frattaroli, Angela GCPE:EX; Pop, Sorin HLTH:EX
Cc: Plank, Sarah GCPE:EX; Heinze, Laura R GCPE:EX; May, Stephen GCPE:EX; Aitken, Jeff HLTH:EX; Pop, Sorin HLTH:EX
Subject: RE: For additional review: IN_e-prescribing_Nov 16_Draft
Attachments: IN_e-prescribing_Nov 16_Draft_SP.docx

I am not sure if this is the latest but if it is three highlights – one questions, one addition, and one error.

Cheers

Tracee

From: Uyeno, Kelly HLTH:EX
Sent: Tuesday, December 1, 2015 4:56 PM
To: Squires, Paul E HLTH:EX; Shrimpton, Paul HLTH:EX; Frattaroli, Angela GCPE:EX; Pop, Sorin HLTH:EX; Schmidt, Tracee HLTH:EX
Cc: Plank, Sarah GCPE:EX; Heinze, Laura R GCPE:EX; May, Stephen GCPE:EX; Aitken, Jeff HLTH:EX; Pop, Sorin HLTH:EX
Subject: RE: For additional review: IN_e-prescribing_Nov 16_Draft

In addition to what Paul Shrimpton and Paul Squires have suggested (we support their feedback), please find our additional input from MBPSD that I have reviewed with Sorin.

Let us know if you have any questions.

Thank you,

Kelly

From: Squires, Paul E HLTH:EX
Sent: Tuesday, December 1, 2015 3:36 PM
To: Shrimpton, Paul HLTH:EX; Frattaroli, Angela GCPE:EX; Pop, Sorin HLTH:EX; Uyeno, Kelly HLTH:EX; Schmidt, Tracee HLTH:EX
Cc: Plank, Sarah GCPE:EX; Heinze, Laura R GCPE:EX; May, Stephen GCPE:EX; Aitken, Jeff HLTH:EX
Subject: RE: For additional review: IN_e-prescribing_Nov 16_Draft

My comments attached. Please see my comment box about budget.

Paul Squires
Project Director
Ministry of Health
Office: 250-387-1549 | Mobile: 250-886-1582

From: Shrimpton, Paul HLTH:EX
Sent: Tuesday, December 1, 2015 2:59 PM
To: Frattaroli, Angela GCPE:EX; Pop, Sorin HLTH:EX; Uyeno, Kelly HLTH:EX; Squires, Paul E HLTH:EX; Schmidt, Tracee HLTH:EX
Cc: Plank, Sarah GCPE:EX; Heinze, Laura R GCPE:EX; May, Stephen GCPE:EX; Aitken, Jeff HLTH:EX
Subject: RE: For additional review: IN_e-prescribing_Nov 16_Draft

Hi, we've reviewed – a few items taken out that we thought were quite relevant. See changes from Jeff Aitken in attached.

A few points to make sure we share the same understanding.

1. The major IT investment in PharmaNet system to enable eRx is complete.
2. There was never a ePrescribing project per se, but rather a modernization project, which included ePrescribining within it's scope.
3. The planning underway is for a pilot, not a full production rollout
    a. Pilots are critical to ensuring the system is ready for prime-time, doesn't put patients / providers at risk etc

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From: Frattaroli, Angela GCPE:EX
Sent: Tuesday, December 1, 2015 11:35 AM
To: Shrimpton, Paul HLTH:EX; Pop, Sorin HLTH:EX; Uyeno, Kelly HLTH:EX; Squires, Paul E HLTH:EX; Schmidt, Tracee HLTH:EX
Cc: Plank, Sarah GCPE:EX; Heinze, Laura R GCPE:EX; May, Stephen GCPE:EX
Subject: For additional review: IN_e-prescribing_Nov 16_Draft
Importance: High

Good morning,

Sarah has made some edits to the IN attached. Please review and provide comments **by tomorrow morning**. Changes tracked for your reviewing ease.

As the FOI on this is going out imminently we NEED this note to reflect the current situation accurately so we can get sign off at the Associate DM level.

Thank you very much, have a lovely day,
Angela

Angela Frattaroli
Public Affairs Officer, Ministry of Health
Government Communications & Public Engagement
Government of British Columbia | 1515 Blanshard St.
T: 250-952-1688 I E: angela.frattaroli@gov.bc.ca

From: Plank, Sarah GCPE:EX
Sent: Tuesday, December 1, 2015 11:24 AM
To: Frattaroli, Angela GCPE:EX
Subject: IN_e-prescribing_Nov 16_Draft

ADVICE TO MINISTER

CONFIDENTIAL ISSUES NOTE **Ministry: Health** **Date: November 16, 2015** **Minister Responsible: Terry Lake**	**ePrescribing**

BACKGROUND REGARDING THE ISSUE:

- The most recent ePrescribing project was initiated in 2010 to enhance the existing PharmaNet system to allow physicians to electronically submit patients' prescriptions. These would then be able to be accessed by any community pharmacist in B.C. through PharmaNet
- The majority of foundational technical work for ePrescribing has been completed, but it is not currently operational in the province. To date the Ministry of Health has spent $64 million on the project.
- Information on ePrescribing will be released as part of the PharmaNet Modernization Project (PMP) under a Freedom of Information response on ehealth project status reports in early Dec. 2015. The PMP project is listed as complete as of Dec. 31, 2013, when PharmaNet received upgrades to support ePrescribing.
- In October 2012, a pilot phase of ePrescribing involving one medical practice in Summerland was completed. A second pilot between another medical practice and a pharmacy in Gibsons was completed in April 2013. Another brief test was conducted in a physician's office in Vernon in summer 2015.
- More engagement is required with end users and their software vendors to complete planning for the full roll out.
- A broader launch of ePrescribing has been on hold since the spring of 2015. There are several factors involved:
    - The project is complex and requires coordination of many other programs, systems and regulations across the Ministry. The Ministry needs to reach a consensus on the scope of the project.
    - Internally, the project is undergoing a strategic priorities realignment to better correspond to the Minister's recent commitment, priorities outlined in the ministry's recently published policy papers and regulatory requirements to protect patient privacy and security.
    - There have been budget pressures preventing the launch and implementation of the system.
- The ministry is working on a broader EMR Strategy that will include ePrescribing.
- The Doctors of BC, College of Physicians and Surgeons of BC, BC Pharmacy Association, and College of Pharmacists of BC wrote the ministry in April 2014 urging that roll-out of the project be expedited.
- The Ministry held focused stakeholder engagement with all four organizations in December of 2014.
- The implementation plans (communications, vendor engagement) have been completed however they have not yet been executed. There is currently no specific

timeline for roll-out.

- From within the overall eHealth Projects capital budget of $262.7 million, the eDrug/PharmaNet Modernization Project was approved at $64.3 million and had an actual spend of $64.4 million including both capital and operating expenses.
- To complete the adoption phase of the project, an estimated $11.4 million in new funding is required.

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- To implement e-Prescribing the following is necessary:
    - Further pilot testing is needed to ensure that the technology and support function properly and are user friendly. Additional changes to PharmaNet may emerge as a result of these pilots, which may impact the timeline and budget for the roll out.
    - The software vendors that supply community pharmacists and physicians with their practice's software must update it to allow ePrescribing.
        - Additional monthly software fees are expected to be incurred by physicians and pharmacists to implement ePrescribing.
        - Vendors are waiting for pressure from end users to make the change
        - Vendors have requested a project plan with timelines provided by the Ministry.
    - Physicians and pharmacists have indicated that they want additional compensation to adopt the new system. The project team will be working with the Doctors of BC to promote adoption of the new system.

DISCUSSION/ADVICE:

- At an October 15, 2015 Life Sciences event, the Minister announced that ePrescribing would be available in 6 months. Ministry staff are working to develop a plan for what can be accomplished by then.
- The Ministry of Health is responding to an FOI request from a political party for all eHealth quarterly status reports from 04/01/10 to 08/18/15. This includes the ePrescribing project.
- The ministry also received an FOI request for records related to all contracts (including both capital and operating related expenditures) awarded for work on the government's ePrescribe initiative. This request includes a summary chart with the year, name of contractor and value of contract, and staff have estimated that $50.3M million was spent within the requestors specified timeframe of 2008-present.

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ADVICE AND RECOMMENDED RESPONSE:

- **Providing British Columbians with safe, sustainable, high quality health care is a key priority for the province.**

ADVICE TO MINISTER

- **The ministry is working to implement ePrescribing, to allow physicians to electronically submit patients' prescriptions. These will then be able to be accessed by any community pharmacist in B.C. through PharmaNet.**
- **ePrescribing will help reduce the possibility of pharmacists misreading doctors' hand writing on prescription slips.**
- **The ministry is reviewing this project to ensure it aligns with our regulatory requirements and strategic priority documents released earlier this year.**
- **The work on the project so far has put in place the foundational technical elements required for rolling out ePrescribing. .**

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Communications Contact: Angela Frattaroli Reviewer: Stephen May
Program Area Contact: Paul Squires, Kelly Uyeno, Sorin Pop, Daryl Conner.
File Created: October 15, 2015
File Updated:

Minister's Office	Program Area	Deputy	HLTH Communications