

Optimizing EMRs to Support Effective Patient Discharge from the ED

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This work was conducted on the traditional and unceded territories of the Musqueam, Squamish, and Tsleil-Waututh peoples (Vancouver), as well as on the territories of the Syilx / Okanagan peoples (Kelowna)

Purpose

- To conduct a brief environmental scan of the ED discharge resources available in BC EMRs
- To obtain preliminary feedback following the implementation of PEPIRs into Cerner
- To collect feedback from partners to guide next steps for optimizing the implementation of PEPIRs into EMRs

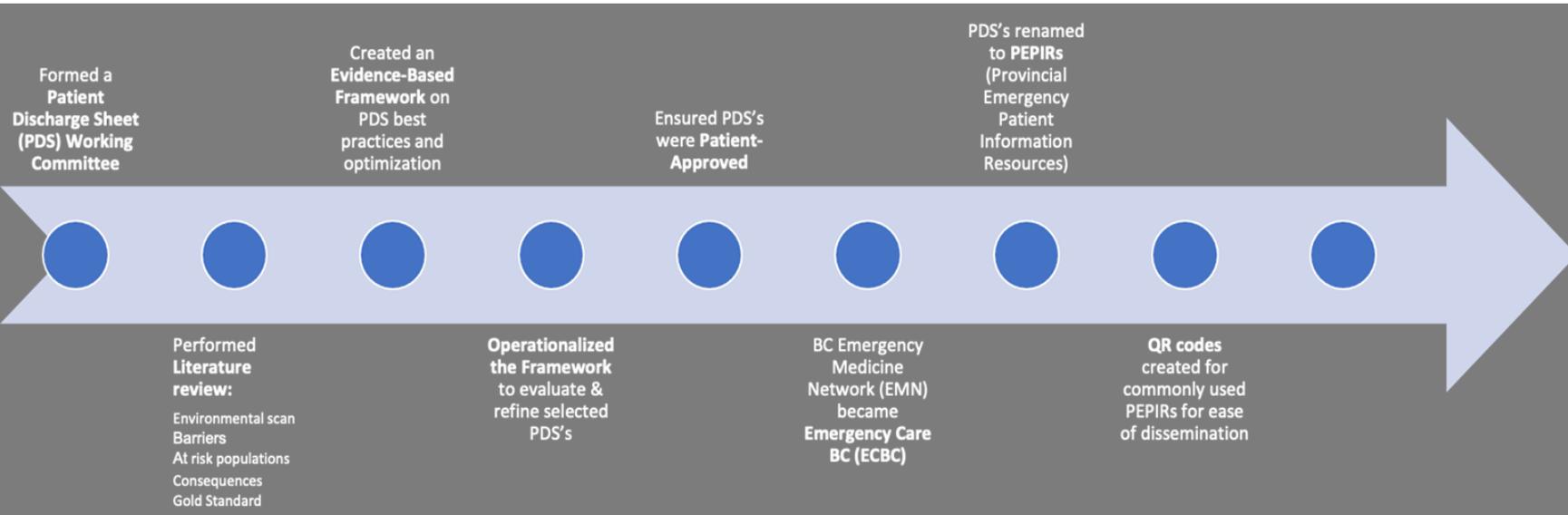


Background: Gaps in Care

- Many patients do not understand their ED discharge instructions
 - Contributes to:
 - Negative health consequences
 - Increased RTED
 - Increased utilization of healthcare resources
- No standardized process for ED discharge instructions
- Patient-centered, evidence-based resources are not readily accessible to patients or practitioners



A Work in Progress



- ECBC has been working towards developing standardized patient resource sheets (PEPIRs)

PEPIRs

Content	Delivery and Format	Comprehension
<input type="checkbox"/> Green <input type="checkbox"/> Yellow <input type="checkbox"/> Red	<input type="checkbox"/> Green <input type="checkbox"/> Yellow <input type="checkbox"/> Red	<input type="checkbox"/> Green <input type="checkbox"/> Yellow <input type="checkbox"/> Red
Diagnosis with brief explanation	Single one-page sheet	Simple sentences and language
Frequent but non-exhaustive symptom trajectory to expect	Standardized, structured template	Avoid medical jargon and complex terminology
Post-discharge home care instructions	Allows space for personalization / individualization with patient-specific instructions	Includes graphics / visual aids / illustrations
Medications changes or starts	Videos can be helpful additions if appropriate	Logical flow of information
Follow up instructions / appointments	Can distribute to patient's mobile device	Versions translated into other languages
Return to ED indications / red flags included (in perspective of post-ED assessment status)	Icons for topics (e.g., pill for medications, calendar for follow up visits, red flag for reasons to return) (1)	Reviewed / approved by patient partners to ensure language is at appropriate level

Content, format, and language comprehension are all ideally endorsed by patient focus group

- Green** = Patient-approved, includes category elements, no revisions recommended
- Yellow** = Further discussion required, missing some category elements, minor revisions recommended
- Red** = Not ready, missing important category elements, major revisions recommended

Gallstones

Gallstones are hard, stone-like deposits that form in the gallbladder. Gallstones can be as small as a grain of sand or as big as a golf ball.

Your gallbladder is a small sac in your abdomen between your stomach and your liver. This small sac stores bile made by your liver. Bile helps your body digest fats.

When you eat fatty foods, the gallbladder squeezes bile out into your small bowel (small intestine). Most gallstones pass through the small bowel without you noticing. Larger gallstones can block the flow of bile if they move from the gallbladder and get stuck along its way to the small intestine. Really large gallstones get stuck in the gallbladder.

When a gallstone gets stuck, it hurts.



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What to Expect

How do you know you have gallstones?

Signs of gallstones often come on suddenly, usually after eating fatty food.

Because it comes on quickly, we call it a "gallbladder attack". Sometimes an attack comes on in the middle of the night.

The most common sign of gallstones is **pain**.

You might feel pain in any of these areas:

- Your stomach.
- In the upper right part of your abdomen, under the ribs.
- In the back between your shoulder blades.
- Under your right shoulder.

The pain can come and go or be constant. It can feel sharp, dull, or like cramps. The pain can last from minutes to several hours.

You might also feel sick to your stomach and throw up.

Recommended Follow-Up

- Follow up in __ days.

Name of Provider
Reason
Date/Time
Location
Contact Info

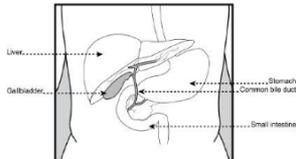
- _____
- _____

The information in this document is intended solely for the person to whom it was given by the health care team. This information does not replace the advice given to you by your health care provider.



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If the gallbladder gets inflamed or infected, you can also have a fever and not feel like eating.



Notes:



When to Get Help

Go to the nearest Emergency Department or Urgent Care if:

- Your pain lasts more than 3 hours or does not get better with pain medicine.
- You cannot stop throwing up (vomiting).
- You have chills or a fever over 38.0 °C (100.4 °F).
- Your poo becomes pale, or pee becomes dark.
- You feel lightheaded or you faint.

Go see your family doctor or go to walk-in clinic if:

- You have an attack of steady pain lasting from 30 minutes to a few hours.
- You have a yellowish color to your skin or whites of your eyes, with or without pain.

To Learn More:

- Ask your health care provider.
- Go to HealthLinkBC - call 8-1-1 (7-1-1 for deaf or hard of hearing) or go online to www.HealthLinkBC.ca



How to Care for Yourself at Home

Treatment at home is focused on easing pain and preventing further attacks.

To treat your pain

- Take medicine such as acetaminophen (Tylenol or store brand) or ibuprofen (Advil, Motrin, or store brand).
- Your doctor may give you other pain medication. Take this as directed.

To help prevent gallbladder attacks

- Eat small meals 3 to 4 times a day. Do not skip a meal.
- Choose foods that are low in fat and high in fibre. High fibre foods include vegetables, fruits, and whole grains. Lean proteins may also be eaten.
- When you eat dairy products, choose only low-fat dairy products such as low-fat yogurt, cheese, or milk.
- When you need cooking oil, choose canola, olive, or soybean oil.
- Instead of butter, choose non-hydrogenated margarine.
- Drink beverages that are free of margarine.
- If you choose to drink alcohol, drink no more than one alcoholic beverage a day.
- Drink plenty of water to stay hydrated.

People who are overweight are more likely to get gallstones. Maintain a healthy weight by exercising regularly and eating healthy foods.

People who lose weight rapidly over a short period are more likely to get gallstones. Stay away from fad diets or crash diets.

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Find this information sheet on the ECBC website:

https://emergencycarebc.ca/clinical_resource/patient-information-sheet/gallstones/

Notes:

Additional Information

Tell Us What You Think!
Have feedback about this document? Use the form at: bit.ly/pdsfeedback



Our Patient-Centered Goals

01

Standardize PEPiRs for
emergency patients
across BC

02

Optimize PEPiRs
accessibility & clinical
relevance

Improve discharge
process

03

Increase awareness of
PEPiRs

Increase provider &
patient use of PEPiRs

04

Improve patient,
provider and system
experience

Reduce ED recidivism

- Reduce barriers to accessibility
- Work towards updating ED discharge policies



QR Codes

Single QR Code

- Can be emailed or texted to patients
- Includes common discharge diagnoses
- Currently exploring ways to best disseminate this to patients directly from EMRs

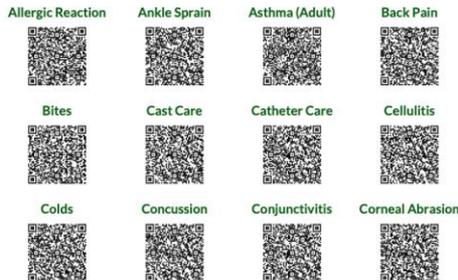
Patient Information Resources - ED Rapid Discharge

Scan the QR code(s) circled below by your physician/nurse for more information on diagnosis, symptoms, at-home care and recommended follow-up instructions.

To scan a QR code: Open the camera app on your mobile phone, center the QR code you want to scan, hold your phone steady and tap the notification that pops up to open the link.

You can view the document directly on your phone or click on the "Email Or Text this Resource To" button to send it as an email or text message and save it for future reference.

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Patient Information Resource - ED Rapid Discharge (continued)

Epistaxis



Influenza



Migraine



Pain Control (Adult)



Shoulder Sprain



Sore Throat



Vertigo



Wrist Sprain



Wound Care - Non Sutured



Wound Care - Sutures



For more information and to find other patient information resources, visit the ECBC website at [emergencycarebc.ca/pds](https://www.emergencycarebc.ca/pds). Have feedback? Fill out our survey at bit.ly/pdsfeedback.

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An Environmental Scan of EMRs used in BC EDs

Meditech

- Built-in discharge instructions are outdated, limited in selection, and non-modifiable
- Can use resources developed by Fraser Health
 - Patient Education Catalogue
 - Not directly linked into Meditech
 - Printed QR codes

refer to associated video for a demo



An Environmental Scan of EMRs used in BC EDs

Meditech Expanse

- No discharge instructions built into Expanse
- Can click off to a link to the ECBC PEPIRs
 - Opens a separate tab
 - Takes the user to the main page, and they need to search for the right topic
 - Takes time and a few clicks

refer to associated video for a demo



An Environmental Scan of EMRs used in BC EDs

Cerner

- Recently implemented a short-cut to auto-fill the ECBC PEPiR QR codes
- Embeds a QR code to the general PEPiR library, and to the specific PEPiR topic
- Requires user knowledge of correct key terms
- Can be printed and referred to at a later time

refer to associated video for a demo



PEPIRs and Cerner – Preliminary Feedback

- Current use is low; ~5-10% by practitioners in SPH ED
- Most useful with simple diagnoses that require straightforward instructions
 - Less useful with complicated diagnoses that require detailed and personalized instructions
- Use is probably limited in a fee-for-service model
 - Due to time required for personalization
- An AI approach to develop personalized discharge instructions has been suggested
 - EM Chat



Feedback from Partners for Future Direction

- Expand search terms on the ECBC PEPiR library
 - Include synonyms and lay terms
- Option to automatically autofill or suggest PEPiRs within an EMR, according to patient diagnoses
 - Automatically hyperlink
 - The shorthand code for the PEPiRs is a barrier to some practitioners
- Option to print PEPiRs instead of printing the QR code
- Future direction
 - How does the implementation of PEPiRs affect:
 - Patient health outcomes
 - Patient and practitioner satisfaction
 - RTED



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