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Patient and Provider Discharge Summary Implementation Toolkit

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Summary

The purpose of this Patient and Provider Discharge Summary toolkit is to support hospitals across Ontario in enhancing patient and provider discharge summaries from inpatient settings in accordance with standardized key principles. This initiative is part of Evidence2Practice (E2P) Ontario, a cross-sector collaborative in partnership with North York General Hospital, the Centre for Effective Practice, and the eHealth Centre of Excellence. E2P aims to improve provider experience and enhance patient care through digital interventions that integrate evidence and quality standards into frontline clinical systems, beginning with heart failure.

This toolkit provides a complete process for reviewing current patient- and provider discharge summaries against the key principles of a quality discharge summary. The Patient and Provider Discharge Summary Toolkit contains a fulsome guide for identifying key principles and implementing new features in Health Information Systems. At the end of the toolkit are sample discharge summaries from North York General Hospital (NYGH) and St. Mary's General Hospital, and change management materials for enabling behaviour change of staff involved.

Before You Start

Depending on the organization, this guide will be useful to Clinical Informaticians, and/or Project Managers who are involved in the design and implementation of patient and provider discharge summaries.

The implementation timeframe may vary across hospitals depending on available resources and state of readiness. The hospitals that implemented enhanced patient and provider discharge summaries went live within 5 months of initiation. Final discharge summaries at the end of this toolkit differ due to clinical workflows and localization, although both incorporate the key principles of a quality patient and provider discharge summary. Hospitals utilizing this toolkit may observe the same result.

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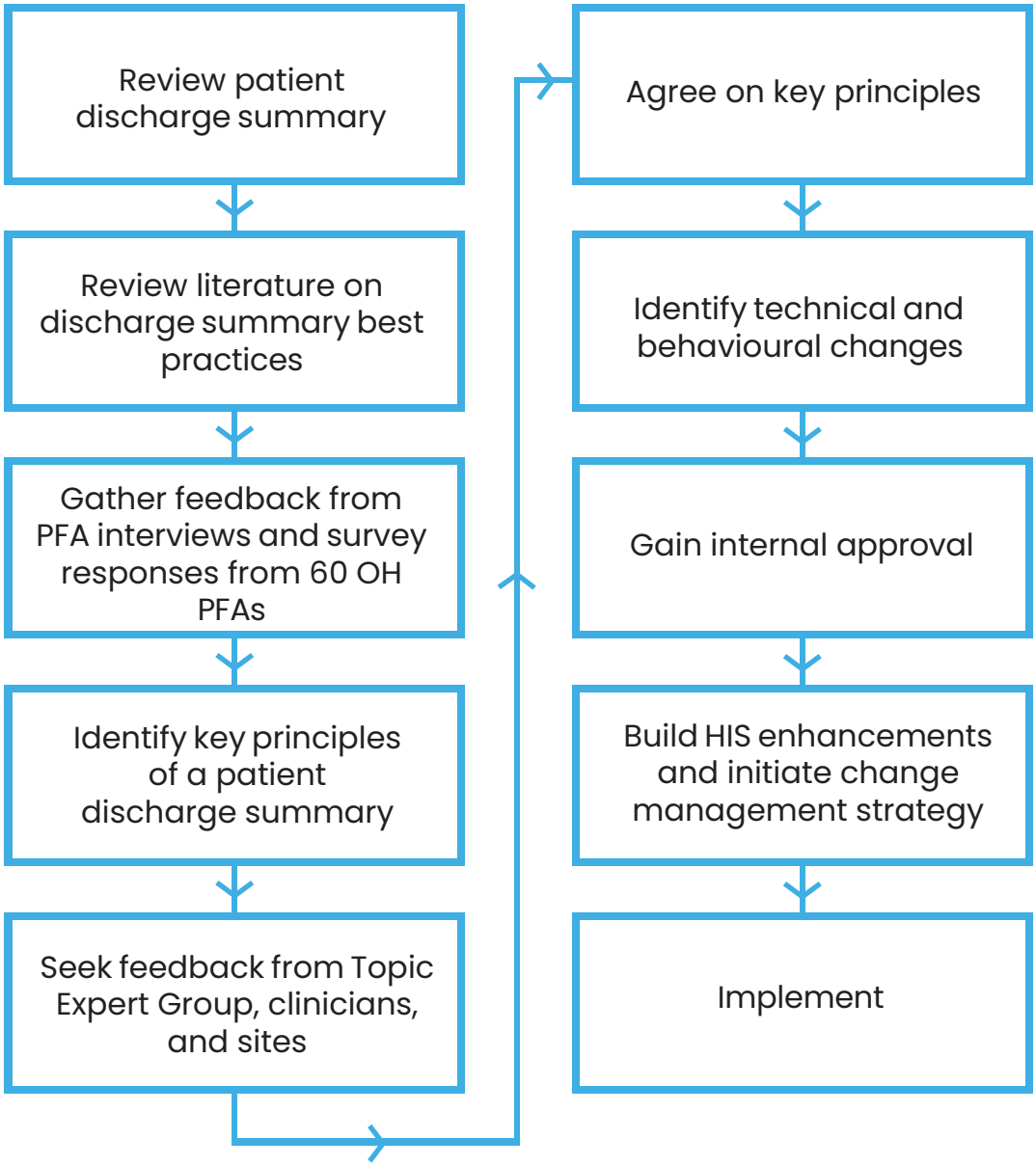
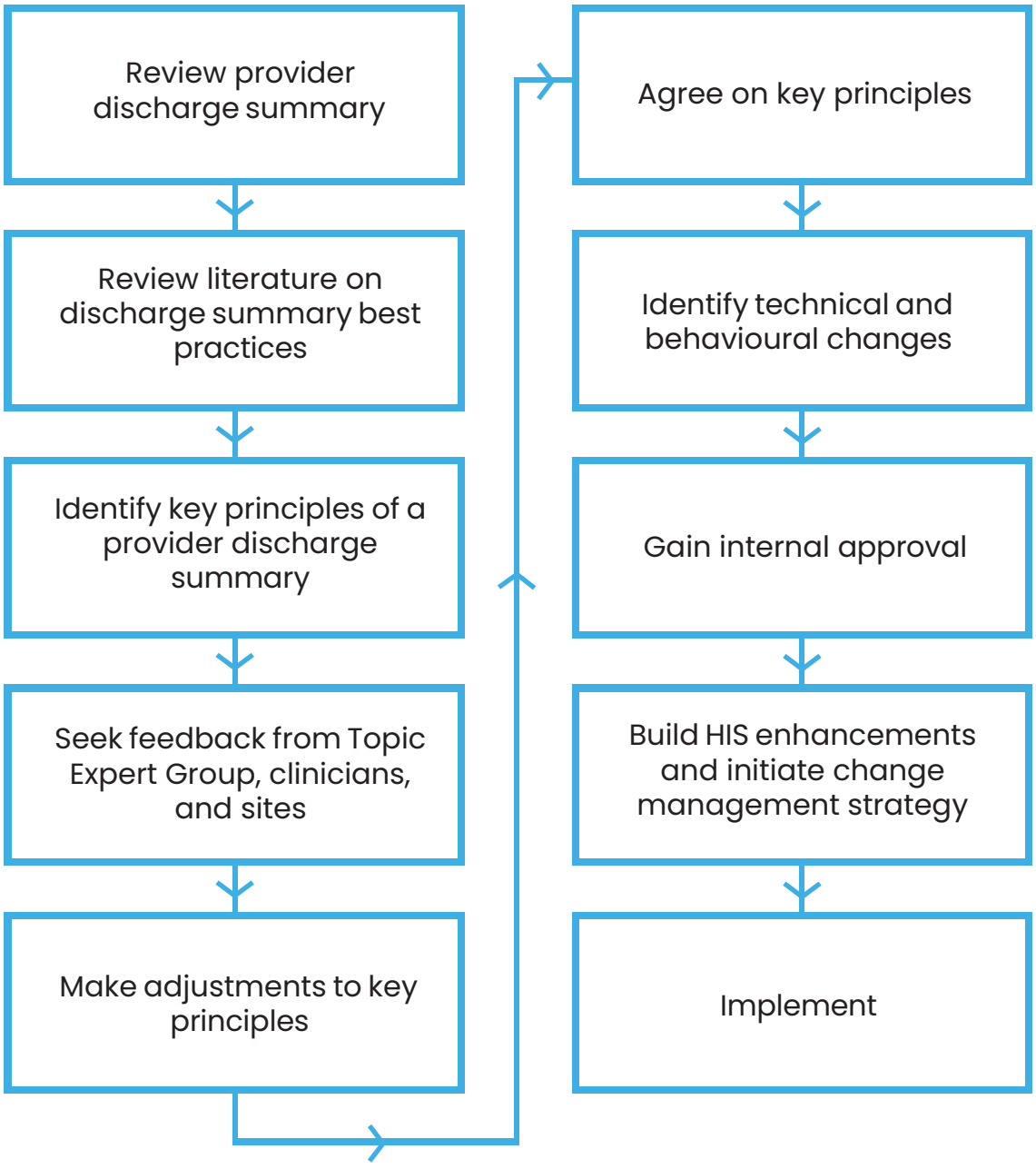
Process to Outline Key Principles

Through a review of the literature (e.g., Patient Oriented Discharge Summary Checklist) and consultation with the Evidence2Practice (E2P) Topic Expert Group, St. Mary's General Hospital, North York General Hospital, and Patient Family Advisors (PFAs), key principles of a patient and provider discharge summary were identified.[1]

Patient Discharge Summary Process - Identifying and Implementing Key Principles



Provider Discharge Summary – Identifying and Implementing Key Principles



Key Principles

The following key principles of a quality patient and provider discharge summary outline the crucial components of both documents. These elements should be incorporated in the enhanced patient and provider discharge summary in order to improve communication with patients and receiving clinicians, and enable seamless transitions in care. Note that the following key principles and recommendations were developed through the approach outlined above; hospitals may connect with local PFAs to ensure that enhancements are appropriate.

Patient Discharge Summary Key Principles

The patient discharge summary must be a comprehensive document with literacy appropriate instructions and patient education materials. A completed patient discharge summary helps patients successfully transition from the hospital. The following elements will need to be incorporated in the patient discharge summary:

Reason for Visit/Chief Complaint/Diagnosis
At the time of discharge, the patient should be provided with a document that explains why they were in the hospital.[2] The hospital stay can be an overwhelming time for patients, and having a clear description of the main problem and why the patient was in the hospital is important.

Medication Reconciliation
Including an updated list on new, changed, and discontinued medications with a rationale on what these medications are for and/or why they were changed is important for the patient to know upon transitioning home.[3] This is consistent with what is being highlighted in the Patient Oriented Discharge Summary practice guide.[1]

Follow Up Appointments
Follow up appointments including location, date, time, and a contact number if the patient has any questions about the appointment enables a seamless transition in care[4]. In a survey, patients reported that often times it is unclear whether they are to call the clinic and book the appointment, or if the clinic will contact them. Sites are encouraged to make this distinction clear in the discharge summary and also during the discharge process.

Guidance on How to Manage Heart Failure at Home
When being discharged from the hospital with heart failure, there are many signs and symptoms that a patient needs to look out for. This education can be incorporated within the discharge summary, or as a separate pamphlet. According to the American College of Cardiology,[7] some key items on their discharge checklist to include in your discharge documentation and to discuss with the patient are:

- Activity level
- Dietary sodium restriction
- Fluid restriction
- Daily weight monitoring
- Assessment of peripheral edema
- List of worsening signs for decompensation
- Rationale for the change or indication of new/changed medications
- Who to call for increased weight/worsening symptoms

Provider Discharge Summary Key Principles

The primary function of a provider discharge summary is to provide a complete summary of a patient's visit and enable transitions in care by providing a discharge plan to receiving clinicians. This must be distributed in a timely manner in order to ensure a seamless transition to providers outside the hospital. The following elements must be incorporated in the provider discharge summary:

Date of Admission and Discharge
According to the primary care provider representatives in the E2P Topic Expert Group, University Health Network (UHN), and a systematic review that looked at optimizing the quality of hospital discharge summaries, an admission date and discharge date are key information to include in the provider discharge summary.[8] This helps inform the receiving clinician on how long the patient's length of stay was and also when the patient was discharged from the hospital so that subsequent follow up can be arranged in a timely manner.

Primary Discharge Diagnosis
The E2P Topic Expert Group identified that it is helpful to have one primary discharge diagnosis or most responsible diagnosis clearly highlighted on the discharge document. This is in accordance with suggestions and evidence from UHN and HIM.[5, 8] As per feedback from primary care providers, it is important to have the main discharge diagnosis clearly indicated in the beginning of the provider discharge summary.

Medication Reconciliation

Literature consistently suggested that a full medication reconciliation is essential to include in the discharge summary[1]. CPSO encourages physicians to include any changes to ongoing medications and the rationale for these changes[7]. This was also echoed by the E2P Topic Expert Group.

Follow up Plan

Having a clear follow up plan for the receiving clinician is crucial for a seamless transition in care. UHN suggests an itemized follow up plan with instructions for the receiving clinician, as well as a list of follow up arrangements and referrals scheduled/ to be scheduled.[1] This is echoed by the HIM key principles and CPSO.[5,6]

Significant Lab, Diagnostic Imaging, and Pertinent Results

Including labs, diagnostic imaging, and pertinent results that are related to the patient's heart failure diagnosis and stay in the hospital can help the receiving clinician better understand the admission, care provided, and patient's post discharge needs.[6] As per the E2P Ontario Topic Expert Group, labs relating to renal function, potassium, sodium, and the patient's weight upon discharge are key indicators of a patient's condition upon discharge.

It is beneficial for the follow up care providers to be aware of relevant lab, DI, and pertinent results for a seamless transition to home. The recommendation is to only include the significant content from these reports to reduce content fatigue.

Implementing Changes to a Patient and Provider Discharge Summary in Cerner

Modifications were made to NYGH's patient and provider discharge summaries to better align with the key principles. See below for guides on how different elements of the patient and/or provider discharge summaries were modified in Cerner to incorporate the key principles and other feedback. Please note, you may find that your organization already has certain key principles embedded within your discharge summary templates.

Design Changes to Reference Templates

The Reference Templates were reconfigured based on feedback from consultations with topic experts, providers, and Patient Family Advisors.

Modifications to the Patient Discharge Summary

Reason for Visit/Chief Complaint/Diagnosis
- Existing – no changes were implemented

Medication Reconciliation
- Populated discharge medications in a table format, which is printed out on a separate page for patient use
    - Added page break before and after the medication table in the HTML reference template

Follow Up Appointments
- Existing – no changes were implemented

Guidance on How to Manage Heart Failure at Home
- Added discharge weight using a Bedrock smart template that pulls last charted weight within the last 72 hours
- Using Knowledge Editor (SCDKE.exe), a congestive heart failure discharge instructions dot phrase was created to support clinicians in providing standardized discharge instructions

Modifications to the Provider Discharge Summary

Date of Admission and Discharge
- Included a section that displays the anticipated discharge date/time using a Bedrock smart template that pulls the Discharge Patient order

Primary Discharge Diagnosis
- Added a free-text Primary Discharge Diagnosis section to clearly indicate the main discharge diagnosis for receiving providers

Medication Reconciliation
- Existing – no changes were implemented

Follow Up Plan
- Re-labelled post discharge follow up title to clearly indicate follow up plan

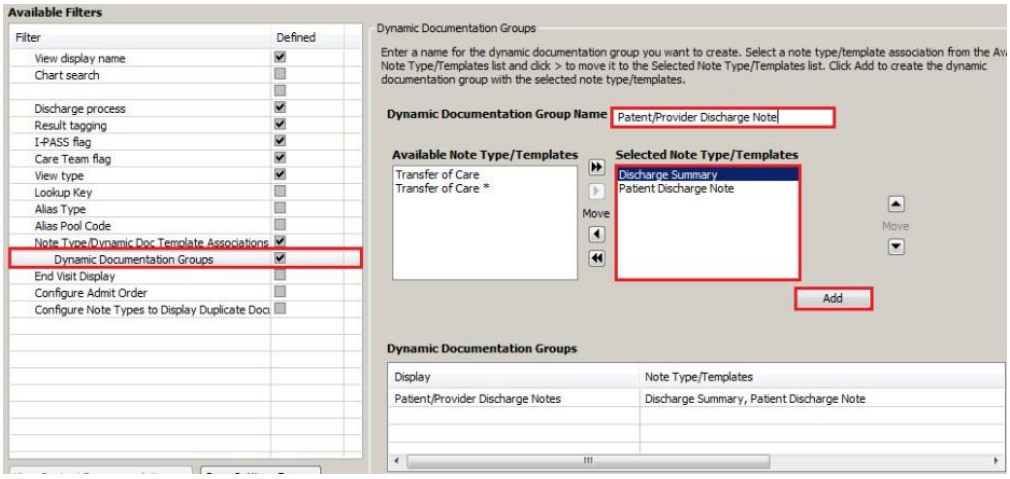
Significant Lab, Diagnostic Imaging and Pertinent Results
- Added discharge weight using a Bedrock smart template that pulls last charted weight within the last 72 hours

Use of Cerner Smart Templates and Custom CCL Script

In addition to ensuring that the patient and provider discharge summaries include the key principles, the clinical informatics team also made other enhancements based on feedback from stakeholders engaged, such as patients, primary care providers, and the Topic Expert Group.

The addition of a "Dynamic Documentation Group" allows providers to generate patient and provider discharge summaries with one-click. As a result, it enables efficient clinical workflows. This one-click feature creates two versions of the discharge summaries, which offer an overview of the hospital visit and pertinent instructions.

Here is how to configure it:
- Create "Dynamic Documentation Groups" from within Bedrock
- Please note: To populate data into both notes using documentation components within the mPage workflows, the provider discharge summary should always be populated first.



Increase font size

This modification helps ensure that the patient discharge summary meets accessibility requirements.

- Increased font size in the patient discharge summary from within the HTML reference template

```
<body>
    <div style="font-family: tahoma,arial; font-size: 11pt;">
```

Rearrange content within the HTML reference templates

Rearranged the patient discharge summary content to ensure that all post-discharge related information is populated first.

Replace Cerner “Care Team” with custom CCL

Replaced original Cerner “Care Team” EMR content codes with custom CCL to only pull family physician and attending physician names in both patient and provider discharge summaries.

Two column view for the Provider Discharge Summary

Reduced the number of pages as a response to feedback received from the topic expert group

Use of Cerner smart templates and Custom CCL Scripts

Existing patient information can be pulled into the discharge summaries using Cerner smart templates and custom CCL scripts, thereby facilitating provider workflow. Cerner smart templates can be created from within Bedrock, which is a standard Cerner build tool. In contrast, patient information that is not available through Bedrock, or any specific display of data will require custom CCL scripts to be developed locally.

Bedrock Smart Templates:

1. Goals of Care – pulls goals of care discussion, illness understanding and wishes, and care team treatment plan recommendation from Goals of Care PowerForm
2. Anticipated Discharge Date and Disposition – pulls in details from "Discharge Patient" order
3. Last Charted Weight from Last 72 Hours
4. Specific Labs from Last 24 Hours

Patient Discharge Summary

Content Type	Technical Content for HTML Reference Templates
Patient Discharge Instructions	
Follow Up Appointment(s)	
NYGH Scheduled Appointment(s)	
Medications	
Reason for Your VIsit	

Your Diagnosis	
Chronic Problems	
Procedures Performed	
Allergies	
Immunization this Visit	
Additional Pertinent Results	
Education Materials	

Provider Discharge Summary

Content Type	Technical Content for HTML Reference Templates
Problems	
Procedure(s)	
Allergies	

Immunization This Visit	
Last Charted Vitals & Measurement	
Additional Pertinent Lab Results	
Medications	
Patient Discharge Instructions	
Follow Up Instructions	
Scheduled Appointments	
Education Materials	

Local Customizations

These CCL Scripts can be downloaded, and will require a programmer to configure. Note: If you are viewing this document on Adobe Acrobat, open the Attachments tab to download the .txt files of the CCL scripts.

The following custom CCL can be utilized to pull the below:

click to download txt files

1. Age: nygh_pfs_age_10068196
2. Family Physician Name: nygh_pfs_famdoc_122809069
3. Admission Date (month/date/time/format): nygh_pfs_admit_date_time_100378816
4. Encounter Type: znygh_pfs_end_type_10068421
5. Attending Physician Name: nygh_mrd_attending_doc_128137255
6. Wound Care and Dressing Change Order: mrd_woundcare_dresschange_st_153737803
7. Resuscitation Order: mrd_resus_status_st_158518127

Patient and Provider Discharge Summary Samples – Change Management Tools

The following section contains change management tools that can be used to support implementation and initiate behaviour change. These include a guide to the key principles, and annotated sample discharge summaries from NYGH and St. Mary's General Hospital. These materials encapsulate the full scope of the work involved in enhancing the patient and provider discharge summary. Along with incorporating the key principles and feedback from the consultations directly into the HIS, certain enhancements made were non-technical in nature. These include readability and accessibility assessments to ensure that the discharge summaries effectively improve patient and provider experience.

Please note that these are only sample documents included for reference. Hospital sites undertaking this work may produce different versions of patient and provider discharge summaries due to clinical workflows and localization.

- Key Principles of a Patient and Provider Discharge Summary
- NYGH Annotated Patient and Provider Discharge Summaries
- St. Mary's General Hospital Annotated Provider Discharge Summary

In addition to the patient and provider discharge summary, the following discharge materials are provided to patients prior to leaving the hospital. These materials provide patients with instructions for managing heart failure at home, and indicate the patient's weight prior to discharge.

- St. Mary's General Hospital Heart Failure Booklet

*Note: If you are viewing this document on Adobe Acrobat, open the Attachments tab to download the materials

Key Principles of a Patient and Provider Discharge Summary

This one-page guide to the key principles of a patient and provider discharge summary outlines enhancements to the discharge planning process. It contains a master list of the suggested modifications to the discharge summary based on the methodology presented above. Clinician leaders socializing enhancements to the discharge summary can distribute this guide to teams. In doing so, they can improve clinical workflows and transitions in care.

Please note that these key principles are presented as recommendations. Hospitals undertaking this process to enhance their patient and provider discharge summary can create a tailored version based on the specific enhancements adopted.

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Key Principles of a Patient Discharge Summary

Reason for Visit, Chief complaint, or Primary Diagnosis

Patient should know why they were in the hospital

Medication Reconciliation

Up-to-date list on new, changed, and discontinued medication

Follow up Appointments

Scheduled appointments, appointments to be scheduled, and contact information

Guidance on How to Manage Condition at Home

Activity level
Dietary sodium restriction
Fluid restriction
Daily weight monitoring
Assessment of peripheral edema
List of warning signs for decompensation
Rationale for the change and indication of
new or changed medications
Who to call for worsening symptoms

Key Principles of a Provider Discharge Summary

Date of Admission and Discharge

Primary Discharge Diagnosis

Medication Reconciliation

Up-to-date list on new, changed, and discontinued medication

Follow up Plan

Include follow up for patient and instructions for receiving clinician

Significant Lab, DI, and Pertinent Results

Renal function, sodium, potassium weight

General Reminders for All Teams

- Provider discharge summaries should be completed by the discharging clinician within 48h
- All patients should receive a patient discharge summary before leaving the hospital
- You can create a patient discharge summary and provider discharge summary at the same time

Annotated Patient and Provider Discharge Summaries

The following section contains sample discharge summaries from NYGH and St. Mary's General Hospital. The enhanced patient and provider discharge summaries implemented in both hospitals are a product of the methodology provided in this toolkit. Both sets of discharge summaries are annotated with directions for discharging clinicians.

Please note that these discharge summaries from NYGH and St. Mary's General Hospital are provided as samples. Hospitals enhancing their discharge summaries may produce tailored versions based on the specific functionalities of Health Information Systems in use, as well as clinical workflows.

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BEFORE YOU PROCEED

Step-by-step directions can be found in the Checklist for Creating Patient and Provider Discharge Summary. Access it on the NYGH clinician portal.

Click here (NYGH staff only)

NORTH YORK GENERAL

General Site
4001 Leslie Street
Toronto, ON M2K 1E1
T 416.756.6000
nygh.on.ca

Use the .cardo_CHF Instructions dot phrase to add general instructions for patients and attach them to the discharge summary.

SHIN, Mr. DEMO

DOB: 08/22/1975
MRN: 8074525
Visit Date: 09/20/2022

Patient Discharge Instructions - What to do next

1) **Please call your family doctor/primary care provider** as soon as possible to schedule a follow-up appointment within 7 days of going home from the hospital.

2) If you have been referred to Home and Community Care Support Services and if you have not heard from them within 24 hours of going home from the hospital, **please call 416-229-8637.**

3) **Measure and record your weight** every morning after using the washroom but before eating (at the same time, wearing the same clothes, on the same scale).

4) **It is not normal for your weight to change more than 1 kg (2.5 lbs) over 24 hours or within a day.** Consult your cardiologist to determine if you need to adjust your dose of Furosemide (Lasix).
- *Last Charted Weight (within 72 Hrs):* Weight: 71 kg (09/27/22 08:44:00)

5) Do not drink more than **6-8 cups (1500 - 2000 mL) of fluids** daily.

6) Do not eat more than **2-3 g (2000 - 3000 mg) of salt** daily.

7) **Maintain physical activity** as tolerated.

Follow Up Appointment(s)

Below is a list of your follow up appointments that have not been booked yet. See "Additional Instructions" for which clinics you will need to contact to book an appointment. If you are unsure, ask your care team which clinics you need to call before leaving the hospital.

With	When	Contact Information
Velshi, Nash	In 1 week	708-6A-49 The Donway West Toronto M3C 2E8 (416) 709-0697
Additional Instructions: Patient to call to arrange appointment. Will need blood work and blood pressure check.		
General - Heart Function Clinic	In 4 weeks	

Use the Follow Up Widget to add all follow up appointments to the discharge summary. Add the purpose of each appointment in the comment field.

With	When	Contact Information
		4001 Leslie Street Toronto, ONTARIO M2K IEI (416) 756-6978
Additional Instructions: Clinic will contact pt for appointment. Echocardiogram will need to be completed prior to appointment.		

NYGH Scheduled Appointment(s)

Below is a list of your follow up appointments at North York General Hospital that have been booked

Appointment Type	When	Where	Contact Information
CR Echocardiography	10/31/2022 08:15	General Division	

Ensure that you complete the Medication Reconciliation.

Medications

Below is a summary of your medications. You may have new medications, and you may be instructed to stop taking some medications. You may need to pick up some medications from a pharmacy. If you are unsure about your medications, talk to your care team before leaving the hospital.

	What	How Much	How	When	Additional Instructions	Pickup
New	bisoprolol	2.5 Milligram	Oral	daily		
New	sacubitril-valsartan (ENTRESTO 24.3 mg/25.7 mg)	1 tab(s)	Oral	twice daily		
Changed	furosemide (Lasix)	40 Milligram	Oral	daily		Printed
Unchanged	amLODIPine-atorvastatin (amLODIPine-atorvastatin 10 mg-20 mg oral tablet)	1 tab(s)	Oral	daily		
Unchanged	budesonide (Pulmicort 100 mcg/puff Turbuhaler)	1 puff(s)	Inhalation	daily		
Unchanged	salbutamol (Ventolin 100 mcg/puff MDI)		Inhalation	every 12 hours		

Fill out the Additional Instructions to communicate why medications have changed.

	What	How Much	How	When	Comments
Stop Taking	ramipril	5 Milligram	Oral	daily	

Fill out the Reason for Visit so the patient knows why they were in the hospital.

Summary Of Your Visit

Reason for Your Visit

Shortness of breath and leg swelling

Your Diagnosis

CHF - Congestive heart failure
HTN - Hypertension

Use the Problem List to select the patient's diagnoses.

Chronic Problems

Ongoing -

Asthma
CHF - Congestive heart failure
HTN - Hypertension
Hyperlipidemia

Historical -

COVID-19 - admitted to CrCU 6 months ago

Procedures Performed

- Appendectomy Laparoscopic (Right) (09/22/2022)

Your Care Team

Attending Provider: Test, P3 NYGH Physician Cardiologis
Family Physician: Velshi, Nash

Allergies

penicillin

Immunizations This Visit

Given

Vaccine	Date
COVID-19 Vaccine (Pfizer/COMIRNATY)	09/22/2022

Last Charted Weight (Last 72 Hrs)

Weight: 71 kg (09/27/22 08:44:00)

Laboratory Results

Selected Lab Results (Last 24 Hrs)

Haematology
HGB: 140 g/L (09/27/22 08:47:36)
LKC: 6.6 10E9/L (09/27/22 08:46:25)
Platelets: 190 10E9/L (09/27/22 08:47:35)
MCV: 93 fL (09/27/22 08:47:25)
RDW-CV: 12.2 % (09/27/22 08:47:30)
INR: 4.5 High (09/27/22 08:47:22)
PTT: 140 sec Critical (09/27/22 08:46:41)
Chemistry
Creatinine: 90 UMOL/L (09/27/22 08:47:38)
Albumin: 40 g/L (09/27/22 08:47:31)
Calcium: 2.1 mmol/L (09/27/22 08:47:37)
Magnesium: 0.8 mmol/L (09/27/22 08:47:23)
Phosphate: 1.2 mmol/L (09/27/22 08:47:24)
Sodium: 140 mmol/L (09/27/22 08:47:32)
Potassium: 3.9 mmol/L (09/27/22 08:47:33)
Chloride: 107 mmol/L (09/27/22 08:47:43)

Include the laboratory results that are relevant to the patient's condition.

Cardiac/Endocrine
TSH: 2.5 (09/27/22 08:47:44)
ll.iver Function
ALT: 70 U/L High (09/27/22 08:47:39)
AST: 20 U/L (09/27/22 08:47:46)

Pertiinent Results

Selected Notes and Imaging Results

Chest PA and lateral:

Borderline cardiiomeg,aly with no evidence of failure.

Healing fracture of the left second rib.

Chronic scarring in the lung bases with no definite evidence of acute airspace disease

Opinion:

NII acute [1)

Use the Patient Education component to add the Heart Failure Zones educational handout for patients.
Note: this handout is only an example.

Educational Materials

HEART FAILURE ZONES

GREEN ZONE ALL CLEAR – This Zone is your GOAL

Your symptoms are under control. You have:

- No shortness of breath
- No weight gain of *more* than 2 pounds (it may change 1-2 pounds some days)
- No swelling of your feet, ankles, legs or stomach
- No chest pain

YELLOW ZONE CAUTION – This zone is WARNING

Call Your Doctor if you have:

- Gained 3 or more pounds in 1 day OR 5 or more pounds in 1 week
- Increased swelling of your feet, ankles, legs, or stomach
- No energy to do daily activities
- Dry hacking cough
- Dizziness
- Difficulty breathing when lying down

RED ZONE EMERGENCY – This zone means act FAST

Go to the Emergency room or call 911 if you have any of the following:

- Struggling to breathe
- Fast heartbeat or chest discomfort
- New dizziness, confusion, or fainting

(1] Chest AP/ Latera'I; Bass, Arthur 08/18/2022.07:47

Completed Action List:

* Perform by Test, P3 NYGH Physician Cardiollog1ist on 2022 September 27 10:08
* Sign by Test, P3 NYGH Physician Cardiologist on 2022 September 27 10:08
* VERIIFYby Test, P3 NYGH Physician Cardiologist on 2022 September 27 10:08

BEFORE YOU PROCEED

Step-by-step directions can be found in the Checklist for Creating Patient and Provider Discharge Summary. Access it on the NYGH clinician portal.

Click here

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NORTH YORK GENERAL

4001 Leslie Street
Toronto, Ontario M2K 1E1

Patient :	SHIN, Mr. DEMO			MRN:	8074525
DOB/Age/Sex :	8/22/1975	47 years	Male	HCN:	0123123123
Visit Type :	Inpatient			FIN:	0008183318
Family MD :	Velshi,Nash			Admit Date:	9/20/2022
Attend MD :	Test,P3 NYGH Physician Cardiologist			Disch. Date:	

Discharge Documentation

Document Name: Discharge Summary Document Status: Auth (

Provide an accurate Anticipated Discharge Date. If the actual discharge date/time has changed, add a new Anticipated Discharge Date with a reason if significant.

Name: SHIN, Mr. DEMO
Sex: Male
Date of Birth: 08/22/1975
Age: 47 Years

MRN: 8074525
Location: North York General Hospital
Health Card Number: 0123123123

Clearly indicate the patient's primary diagnosis.

Primary Discharge Diagnosis
CHF secondary to cocaine and dilated cardiomyopathy

Hospital Course

This 46-year-old gentleman was admitted on September 20, 2022 with shortness of breath and leg edema. He has a known history of dilated cardiomyopathy secondary to previous cocaine use.

Please refer to admission history for more detailed information about his presenting symptoms. In brief this patient presented with a 1 week history of increasing shortness of breath, orthopnea and leg edema. In the day prior to admission he had quite severe symptoms as well as some chest discomfort and called EMS. In the emergency department, he was hypoxemic requiring 3 L nasal prong. He was given IV diuretic and required admission through internal medicine. Initial chest x-ray did show some pulmonary vascular redistribution. ECG did not show any ischemic changes. Troponin was unremarkable. Patient did endorse some recent cocaine use although urine toxicology screen in the emergency department was negative.

He was admitted to the cardiology ward. He did respond to diuresis. Telemetry did not show any new dysrhythmia. Repeat 2D echocardiogram did show reduced LV ejection fraction at 41% compared to 50% on prior ec

On the day of discharge patient was on room a denied any shortness of breath. Leg edema was imp cardiac educator.

Adverse Events/Complications
Medication error - given incorrect dose of lasi No harm to patient but disclosed

Include an itemized discharge plan that clearly indicates which receiving clinician is following up with what.

Discharge Diagnosis and Follow Up Plan
1. CHF - Congestive heart failure
   New medications started as per medication list
   Referral to Heart Function clinic under Dr. R. Bajaj and team
   Will need follow up with family doctor for bloodwork and blood pressure check
2. HTN - Hypertension
   Follow up with family doc as above for check of creatinine, potassium and blood pressure.

Selected Notes & Imaging Results
Chest PA and lateral:
Borderline cardiomegaly with no evidence of failure.

RRID: 25414835

Tag only relevant and pertinent selected notes and imaging results. Avoid tagging entire reports.

Visit Information
Admit Date/Time:
Encounter Type: In
Attending Provider: Test, P3 NYGH Physician Cardiologis

Anticipated Discharge Date/Time and Disposition
Discharge Patient - Ordered
-- 09/27/22 8:50:00, Discharging to: Home

Problems
Ongoing
- Asthma
- CHF - Congestive heart failure
- HTN - Hypertension
- Hyperlipidemia

Historical
- COVID-19 - admitted to CCU 6 months ago

Use the Problem List to select the patient's diagnoses.

Procedure(s)
- Appendectomy Lapar (09/22/2022)

Allergies
penicillin

Immunizations This Visit
Given

Vaccine	Date
COVID-19 Vaccine (Pfizer/COMIRNATY)	09/22/2022

Last Charted Vitals (Last 24 Hrs)
Tympanic Temperature: 36.5 DegC
Peripheral Pulse Rate: 75 bpm
Respiratory Rate: 20 br/min
Systolic Blood Pressure: 121 MM HG
Diastolic Blood Pressure: 76 MM HG
SpO2: 99 %

Last Charted Weight (Last 72 Hrs)
Weight: 71 kg (09/27/22 08:44:00)

Check the automatically pulled selected lab results and ensure that the relevant labs are included.

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NORTH YORK GENERAL

4001 Leslie Street
Toronto, Ontario M2K 1E1

Patient :	SHIN, Mr. DEMO			MRN:	8074525
DOB/Age/Sex :	8/22/1975	47 years	Male	HCN:	0123123123
Visit Type :	Inpatient			FIN:	0008183318
Family MD :	Velshi,Nash			Admit Date:	9/20/2022
Attend MD :	Test,P3 NYGH Physician Cardiologist			Disch. Date:	

Discharge Documentation

Healing fracture of the left second rib.
Chronic scarring in the lung bases with no definite evidence of acute airspace disease
Opinion:
Nil acute [1]

Goals of Care
Date/Time of GoC Discussion: 09/22/22 15:46:00
Pt Capable To Make Treatment Decisions: Yes

Patient's Illness Understanding
09/22/22 15:45:00
Good understanding of illness. Would want to pursue invasive treatment at this point given age. Would not want prolonged invasive treatment if doctors feel he would not survive but would want trial of treatments.

CareTeam's Treatment Plan/Recommendation
09/22/22 15:45:00
Continue full medical treatment. Full Code

Selected Lab Results (Last 24 Hrs)
Haematology
HGB: 140 g/L (09/27/22 08:47:36)
LKC: 6.6 10E9/L (09/27/22 08:46:25)
Platelets: 190 10E9/L (09/27/22 08:47:35)
MCV: 93 fL (09/27/22 08:47:25)
RDW-CV: 12.2 % (09/27/22 08:47:30)
INR: 4.5 High (09/27/22 08:47:22)
PTT: 140 sec Critical (09/27/22 08:46:41)
Chemistry
Creatinine: 90 UMOL/L (09/27/22 08:47:38)
Albumin: 40 g/L (09/27/22 08:47:31)
Calcium: 2.1 mmol/L (09/27/22 08:47:37)
Magnesium: 0.8 mmol/L (09/27/22 08:47:23)
Phosphate: 1.2 mmol/L (09/27/22 08:47:24)
Sodium: 140 mmol/L (09/27/22 08:47:32)
Potassium: 3.9 mmol/L (09/27/22 08:47:33)
Chloride: 107 mmol/L (09/27/22 08:47:43)
Cardiac/Endocrine
TSH: 2.5 (09/27/22 08:47:44)
Liver Function
ALT: 70 U/L High (09/27/22 08:47:39)
AST: 20 U/L (09/27/22 08:47:46)

The Medication Reconciliation you completed will be pulled into both the patient and provider discharge summaries.

Medications

	What	How Much	How	When	Additional Instructions	Pickup
New	bisoprolol	2.5 Milligram	Oral	daily	new heart failure medication; can lower blood pressure	
New	sacubitril-valsartan (ENTRESTO 24.3 mg/25.7 mg)	1 tab(s)	Oral	twice daily	new heart failure medication; replaces ramipril as both cannot be given together	
Changed	furosemide (Lasix)	40 Milligram	Oral	daily	increased from 20 to 40mg. Please see above instructions for dose adjustment based on weight	Printed
Unchanged	amLODIPine-atorvastatin	1 tab(s)	Oral	daily		

Fill out the Additional Instructions to communicate why medications have changed.

RRID: 25414835

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If you are not the intended recipient of this document, please contact NYGH immediately at 416-756-6207

NORTH YORK GENERAL

4001 Leslie Street
Toronto, Ontario M2K 1E1

Patient :	SHIN, Mr. DEMO			MRN:	8074525
DOB/Age/Sex :	8/22/1975	47 years	Male	HCN:	0123123123
Visit Type :	Inpatient			FIN:	0008183318
Family MD :	Velshi,Nash			Admit Date:	9/20/2022
Attend MD :	Test,P3 NYGH Physician Cardiologist			Disch. Date:	

Discharge Documentation

	What	How Much	How	When	Additional Instructions	Pickup
	(amLODIPine-atorvastatin 10 mg-20 mg oral tablet)					
Unchanged	budesonide (Pulmicort 100 mcg/puff Turbuhaler)	1 puff(s)	Inhalation	daily		
Unchanged	salbutamol (Ventolin 100 mcg/puff MDI)		Inhalation	every 12 hours		

	What	How Much	How	When	Comments
Stop Taking	ramipril	5 Milligram	Oral	daily	

Patient Discharge Instructions

1) **Please call your family doctor/primary care provider** as soon as possible to schedule a follow-up appointment within 7 days of going home from the hospital.

2) If you have been referred to Home and Community Care Support Services and if you have not heard from them within 24 hours of going home from the hospital, **please call 416-229-8637.**

3) **Measure and record your weight** every morning after using the washroom but before eating (at the same time, wearing the same clothes, on the same scale).

4) **It is not normal for your weight to change more than 1 kg (2.5 lbs) over 24 hours or within a day.** Consult your cardiologist to determine if you need to adjust your dose of Furosemide (Lasix).
- *Last Charted Weight (within 72 Hrs):* Weight: 71 kg (09/27/22 08:44:00)

5) Do not drink more than **6-8 cups (1500 - 2000 mL) of fluids** daily.

6) Do not eat more than **2-3 g (2000 - 3000 mg) of salt** daily.

7) **Maintain physical activity** as tolerated.

Use the .cardo_CHF Instructions dot phrase to add general instructions for patients and attach them to the discharge summary.

Follow Up Instructions

With	When	Contact Information
Velshi, Nash	In 1 week	708-6A-49 The Donway West Toronto M3C 2E8 (416) 709-0697
Additional Instructions: Patient to call to arrange appointment. Will need blood work and blood pressure check.		
General - Heart Function Clinic	In 4 weeks	4001 Leslie Street

Use the Follow Up Widget to add all follow up appointments to the discharge summary. Add the purpose of each appointment in the comment field.

RRID: 25414835

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ORTH YORK GENERAL
4001 Lesllie Street
Toronto. Ontario M2K lEI

Patient :	SHIN, Mr. DEMO			MRN:	8074525
DOB/Age/Sex:	8122/1975	47 years	Male	HCN:	0123123123
Visit'Iype:	Inpatient			FIN:	0008183318
Family MD:	VeJshi Nash			Admit Date:	*9f20/'11J'l2*
Attend MD:	Thst,P3 NYGH Physician Cardiologist			Diis.clJ.. Date:	

Discharge Documentation

With	Whcm	Contact Information
		Toronto, ONTARIO IM:2K **1E1** (416),756-6978
Additional Instructions: Clinic will contact pt for appointment Eohocardiogram **will** need to be completed prior to appointment.		

Scheduled Ag intments

Appointment Type	When	Where	Contact InforD1ation
CR Echocardiography	10/31/:2022 08:115	General Division	

[1] Ches! AP *I* Lateral; Bass, Air1Jhur 08/18/2022 07:47

Eleatronioally Signed By: Test,. P3 NYGH Physician Cardiologist
On: 09/27/2022. 09:07

The family physician on record will automatically receive a copy of/his report.
PLEASE NOTE: Elements of thjs report were generated using electronic technology including speech recognition.

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NORTH YORK GENERAL

4001 Leslie Street
Toronto, Ontario M2K 1E1

Patient :	SHIN, Mr. DEMO			MRN:	8074525
DOB/Age/Sex :	8/22/1975	46 years	Male	HCN:	0123123123
Visit Type :	Inpatient			FIN:	0008183016
Family MD :	Velshi,Nash			Admit Date:	8/17/2022
Attend MD :	Bajaj,Ravi Roshan			Disch. Date:	

Discharge Documentation

Educational Materials
HEART FAILURE ZONES

GREEN ZONE ALL CLEAR – This Zone is your GOAL

Your symptoms are under control. You have:
- No shortness of breath
- No weight gain of *more* than 2 pounds (it may change 1-2 pounds some days)
- No swelling of your feet, ankles, legs or stomach
- No chest pain

YELLOW ZONE CAUTION – This zone is WARNING

Call Your Doctor if you have:
- Gained 3 or more pounds in 1 day OR 5 or more pounds in 1 week
- Increased swelling of your feet, ankles, legs, or stomach
- No energy to do daily activities
- Dry hacking cough
- Dizziness
- Difficulty breathing when lying down

RED ZONE EMERGENCY – This zone means act FAST

Go to the Emergency room or call 911 if you have any of the following:
- Struggling to breathe
- Fast heartbeat or chest discomfort
- New dizziness, confusion, or fainting

Use the Patient Education component to add the Heart Failure Zones educational handout for patients.
Note: this handout is only an example.

RRID: 25302821

Evidence2Practice Ontario

St. Mary's General Hospital

NEW **Admission Information** Admit Date
August 12th, 2022
Discharge Date
August 20th, 2022

NEW Care Team
Attending Physician -
AGARWAL, PAYAL
Consulting Physician -

Cerner Test, Physician - Hospitalist CCL Cerner
Cerner Test, Physician - Cardiovascular Cerner

Primary Care Physician -
CERNER, SUPPORT

Clearly indicate the patient's discharge diagnosis.

NEW Discharge Diagnosis
Heart Failure

Hospital Course
This 46-year old gentleman was admitted on August 12, 2022 with shortness of breath and leg edema. In brief this patient presented with 1 week history of increasing shortness of breath, orthopnea, and leg edema. In the day prior to admission he had quite severe symptoms as well as some chest discomfort and called EMS. In the emergency department, he was hypoxic requiring 3L nasal prong. He was given IV diuretic and required admission to internal medicine. Intitial chest X-ray did show some pulmonary vascular redistribution. ECG did not show any ischemic changes. Troponin was unremarkable.

He was admitted to the ward and responded well to diuresis. Telemetry did not show any new dysrhythmia. Repeat 2D echocardiogram did show reduced LV ejection fraction at 40% compared to 50% on prior echocardiogram from 2018.
On the day of discharge patient was on room air ambulating around the ward. He denied any shortness of breath. Leg edema was improved.

Include only the laboratory results that are relevant.

Significant Lab Findings

WBC	**H 15.0**	(JUN 27)	10.0	(JUN 24)
Na	145	(JUN 24)		
K	**H 5.5**	(JUN 24)		
Cr	**H 98.0**	(JUN 27)	**H 98.0**	(JUN 24)
INR	**H 1.3**	(JUN 27)	**H 2.5**	(JUN 24)
PTT	35	(JUN 27)	**H 45**	(JUN 24)

Tag only relevant and pertinent selected notes and imaging results. Avoid tagging entire reports.

Significant Imaging Findings
Chest PA and lateral - pulmonary vascular redistribution [1]

NEW Allergies
No Known Allergies

Evidence2Practice Ontario

St. Mary's General Hospital

Include an itemized discharge plan that clearly indicates which receiving clinician is following up with what.

Vitals & Measurements
HR: 88(Monitored) **RR:** 18 **BP:** 144/110 **SpO2:** 94% **WT:** 134 kg

Discharge Plan

1. CHF - Congestive heart failure
   New medications started as per medication list
   Referral to heart function clinic
   Will need follow up with family doctor for bloodwork and blood pressure check [2]
2. Hypertension
   Follow up with family doc as above for check of creatinine, potassium, and blood pressure [3]

Atrial fibrillation

Use the Problem List to select the patient's diagnoses.

Discharge Disposition
Home Independently

Use the Follow Up component to add follow up appointments. Include the purpose in the comment field.

Follow-Up

With	When	Contact Information
Follow up with Family Doctor	Within 1 week	123 Downtown Kitchener, Ontario A1A1A1
Additional Instructions: Call for followup appointment		
Dr. Smith	Within 3 Months	123 Main Street Waterloo, Ontario A1A1A1 5197777777
Additional Instructions: Call for followup appointment		

NEW

Scheduled Appointments

Appointment Type	When	Where	Contact Information
2D Echo	10/19/2022 1:45PM EDT	Echocardiography SMGH	

Evidence2Practice Ontario

St. Mary's General Hospital

Ensure you complete the Medication Reconciliation.

Fill out the Additional Instructions to communicate why medications have changed.

NEW

Medication Reconciliation

	What	How Much	When	Instructions
New	sacubitril-valsartan (Entresto 24 mg - 26 mg oral tablet)	1 tablet Oral (given by mouth)	Twice daily	
Changed	bisoprolol (bisoprolol 5 mg oral tablet)	0.5 tablet Oral (given by mouth)	Daily	
Unchanged	amlodipine-atorvastatin (amlodipine-atorvastatin 5 mg-20 mg oral tablet)	1 tablet Oral (given by mouth)	Daily	
Unchanged	furosemide (furosemide 40 mg oral tablet)	1 tablet Oral (given by mouth)	Daily	

	What	How Much	When	Comments
Stop Taking	perindopril (perindopril 4 mg oral tablet)	1 tablet Oral (given by mouth)	Twice daily	

The Medication Reconciliation you completed will be pulled into both the discharge summary and the patient's discharge instructions.

[1] Enhanced Discharge Note; WHITFIELD, HEATHER, RN 10/18/2022 15:50 EDT
[2] Enhanced Discharge Note; WHITFIELD, HEATHER, RN 10/18/2022 15:50 EDT
[3] Enhanced Discharge Note; WHITFIELD, HEATHER, RN 10/18/2022 15:50 EDT

Electronically Signed on 2022/10/18

WHITFIELD, HEATHER, RN

Electronically Signed on 2022/10/18

WHITFIELD, HEATHER, RN

References:

1. “A Toolkit to Create Your Own Patient Oriented Discharge Summary.” PODS. http://pods-toolkit.uhnopenlab.ca/.
2. Alper, Eric, Terrence A O’Malley, and Jeffrey Greenwald. “Hospital Discharge and Readmission.” UpToDate. https://www.uptodate.com/contents/hospital-dis- charge-and-readmission
3. “Ensure Discharge Summary Available within Hours - Hqontario.ca.” Health Qual- ity Ontario, September 2016. https://www.hqontario.ca/Portals/0/documents/qi/health-links/ensure-discharge-summary-available-within-hours-en.pdf.
4. Let’s make our health system healthier. “Evidence to Improve Care.” Transitions Between Hospital and Home: The Quality Standard In Brief - Health Quality Ontario (HQO). https://www.hqontario.ca/Evidence-to-Improve-Care/Quality-Standards/View-all-Quality-Standards/Transitions-between-hospital-and-home/The-Quali- ty-Standard-In-Brief
5. Lower Mainland Health Information Management Coding Services. “Discharge Summary.” Discharge summary, August 2017. http://www.himconnect.ca/physicians-and-clinicians/coding-informatics-services/discharge-summary.
6. “Transitions in Care.” CPSO, September 2019. https://www.cpso.on.ca/Physicians/Policies-Guidance/Policies/Transitions-in-Care.
7. "Post Discharge Visit Checklist". American College of Cardiology.
8. "Discharge Summary Best Practices". University Health Network. https://www.uhnmodules.ca/DischargeSummary/bestpractices.html

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