Orders

Cirrhosis Admission Adult

More detailed information to support the Cirrhosis orders is available at the cirrhosiscare.ca website. Consider specialty referrals for circumstances such as hepatocellular carcinoma, management of decompensated cirrhosis and assessing potential candidacy for liver transplantation.

Consider opening and merging any appropriate diagnosis based order sets:

- Alcohol Withdrawal Adult Order Set
- Electrolyte Disturbance Order Panel
- Gastroenterology Ascites Fluid Analysis
- Transfusion Medicine Adult (packed cells)
- Plasma Protein Product Albumin 25% Panel

www.cirrhosiscare.ca

General

Notify Primary Care Physician of patient admission

☐ Notify Primary Care Physician of patient admission

Goals of Care Designation Orders

Conversations leading to the ordering of a Goals of Care Designation (GCD) Order, should take place as early as possible in a patient's course of care. The Goals of Care Designation Order is created, or the previous GCD Order is affirmed or changed resulting from this conversation with the patient or, where appropriate, the Alternate Decision-Maker. Select a GCD order below and document the content of conversations and/or decisions on the Advanced Care Planning (ACP)/GCD Tracking Record.

Specify on the GCD order, if there are specific clarifications to this GCD Order. Document these clarifications on the ACP/GCD Tracking Record as well.

- ○ GCD-R1
- ○ GCD-R2
- ○ GCD-R3
- ○ GCD-M1
- ○ GCD-M2
- ○ GCD-C1
- ○ GCD-C2

Isolation

	Required Isolation Type				
Suspected or Known:	Airborne	Airborne & Contact	Contact	Contact & Droplet	Droplet
Antibiotic Resistant Organism (ARO) (e.g. MRSA, VRE, CPO)			X		
C. difficile infection			X		
Chickenpox		X			
Gastroenteritis – infectious, no vomiting			X		
Gastroenteritis – infectious, vomiting				X	
Group A *Streptococcus*, invasive infection				X	
Influenza-like Illness				X	
Measles	X				
Meningitis – Bacterial or cause unknown					X
Meningococcus, invasive infection					X
Mumps					X
Mycobacterium tuberculosis (pulmonary)	X				
Mycoplasma pneumoniae					X
Pertussis					X
Respiratory tract infection, viral				X	
Rubella (German measles)					X
Shingles - Disseminated		X			

- Safety and Precautions - Refer to Infection Prevention and Control (IPC) guidelines

- ○ Initiate Airborne Isolation
- ○ Initiate Airborne and Contact Isolation
- ○ Initiate Contact Isolation
- ○ Initiate Contact and Droplet Isolation
- ○ Initiate Droplet Isolation

Diet and Nutrition

Diet and Nutrition

Recommended that majority of patients receive High Protein/ High Calorie diet. If clinically required, both High Protein/High Calorie and low sodium diet (2 grams of sodium) can be selected.

- ☐ Adult Diet Regular; High Pro High Cal ⓘ
  Now or Specify Date/Time
- ☐ Adult Diet Regular; 2000 mg/2 g Na; High Pro High Cal
  Now or Specify Date/Time
- ☐ NPO Diet
  Now or Specify Date/Time
- ☐ Oral Nutrition Supplements; Ensure Protein Max
  3 TIMES DAILY, Give at time of medication administration. Note: This Medpass can be used to increase calories and protein and is appropriate when patient is on any type of oral diet including gluten free and diabetic. Suitable for lactose intolerance but NOT appropriate for dairy allergy. Give 3 to 5 times per day.
- ☐ Total Fluid Intake (TFI)
  Restricted to 1500ml/24hrs

Patient Care

Precautions and Safety

- ☐ Must Be Up for Meals
  Patient should be upright and fully alert during all oral intake and for 30 minutes afterwards.

Activity

- ○ Mobilize Patient
  - ☐ Ambulate
    3 times daily, Mobilize by ambulating at least daily progressing to at least 3 times daily in hallway
  - ☐ No Activity Restrictions: Up in Chair TID with Meals
  - ☐ Nursing Communication - Notify Physiotherapist
    Notify Physiotherapist if prehospital mobility concerns or if patient requires more than one-person assist
- ○ No Activity Restrictions
- ○ Bed Rest With Expections
- ○ Strict Bed Rest

Vital Signs

- ☐ Vital Signs
  Per protocol, Every 2 hours for 8 hours, THEN every 4 hours
- ☐ Vital Signs
  Every 4 hours
- ☐ Vital Signs
  Every 8 hours
- ☐ Vital Signs
  Every 12 hours
- ☐ Vital Signs
  Per protocol
- ☐ Nursing Communication - Do Not Record Vital Signs

Intake and Output

- ☐ Intake and Output
  Every shift

POCT Glucose

- [ ] Glucose Meter POCT
  4 times daily before meals and at bedtime, 15 to 30 minutes before scheduled meals and at bedtime, AND PRN for suspected hypoglycemia.
- [ ] Glucose Meter POCT
  Daily at Night (0200), Starting 15/3/21
- [ ] Glucose Meter POCT
  3 times daily after meals, Assess 2 hours post meal time
- [ ] Glucose Meter POCT

Height and Weight

- [ ] Weigh Patient - on Admission
  Once
- [ ] Weigh Patient
  Daily, Weigh between 0800 hours and 1000 hours.
- [ ] Weigh Patient
  Weekly
- [ ] Measure Height

Patient Care Assessments

- [ ] Nursing Communication - Stool Chart
  Use stool chart flowsheet.
- [ ] Nursing Communication - Audit Score
  Complete Audit-C Screening (www.mdcalc.com/audit-c-alcohol-use)
- [ ] Notify Most Responsible Health Practitioner (MRHP) - Audit Score
  If Audit score positive (greater than 3 in males and greater than 2 in females)
- [ ] Patient Education
  - [ ] **Initiate patient teaching when patient/family ready**
  - [ ] **Provide handout:Cirrhosis-Patient Care Instructions (https://myhealth.alberta.ca/Alberta/Pages/Cirrhosis-Patient-Care-Instructions.aspx)**
  - [ ] **Provide video series: 5 key Cirrhosis education videos for patients and their caregivers (cirrhosiscare.ca/discharge-videos)**
- [ ] Nursing Communication
  Please ensure that if the patient has a liver specialist in the community, the liver specialist is listed on the Patient Care Team.

NG Feeding Tube Insertion and Management

Be cautious with NG tube placement if patient has had recent variceal banding (less than 5 days). Consider GI consult if questions.

- [ ] Small Bore (Feeding Tube) Insert and Maintain
- [ ] Large Bore (Drainage Tube) Insert and Maintain
- [ ] NG/OG Tube Unclogging

Indwelling Urinary Catheter Management

- [ ] Insert Indwelling Urinary Catheter
- [ ] Urinary Catheter - Discontinue
- [ ] Urinary Catheter - Discontinue
  Discontinue Once on Unit

Respiratory Interventions

- [ ] Oxygen therapy: Titrate oxygen to maintain saturation range of SpO2 92% to 96%
  Oxygen Therapy: All presentations EXCEPT Acute Coronary Syndrome, known CO2 retainers and Carbon Monoxide poisoning. All other presentations (including pregnancy and acute stroke) should adhere to the above Sp02 goals. NOTE: For acute stroke, do not apply supplemental oxygen unless SpO2 is under 90%:
- [ ] Oxygen therapy: Known CO2 retainer (Sp02 88% to 92%)
- [ ] Oxygen Therapy: All Acute Coronary Syndromes (ACS)
  When SpO2 is under 90%, titrate Oxygen to maintain saturation range SpO2 90-92%
- [ ] Notify Provider (MRHP) - if Oxygen flow increases by greater than 2L/min from previous to maintain the same level of oxygenation, or if there is a progressive increase in the work of breathing
  If Oxygen flow increase by greater than 2 L/min from previous to maintain the same level of oxygenation or if there is a progressive increase in the work of breathing
- [ ] Notify Provider (MRHP) - If a new change to Oxygen Flow of 8L/min or Higher to maintain same level of oxygenation
  if new change to Oxygen flow of 8 LPM or higher to maintain same level of oxygenation

Laboratory Investigations - Routine

Hematology

- [ ] CBC with differential
  Once

Chemistry

Consider Liver Disease work-up panel if new diagnosis of cirrhosis and hasn't previously been done. Alpha Fetoprotein if clinical need or not completed in prior 6 months. Vitamin D if not completed in prior 6 months.

- [ ] Aspartate Amino Transferase (AST)
  Once
- [ ] Alpha Fetoprotein (AFP)
  Once
- [ ] Alanine Amino Transferase (ALT)
  Once
- [ ] Bilirubin, Total
  Once
- [ ] Albumin
  Once
- [ ] Urea
  Once
- [ ] Creatinine
  Once
- [ ] Electrolyte Panel (Na, K, Cl, CO2, Anion Gap)
  Once
- [ ] Glucose, Random
  Once
- [ ] Calcium
  Once
- [ ] Magnesium
  Once
- [ ] Phosphate
  Once

- [ ] 25-Hydroxy Vitamin D
  Once
- [ ] Lactate
  Once

Coagulation

- [ ] INR
  for 1 occurrence

Therapeutic Drug Monitoring and Toxicology

- [ ] Ethanol Level
- [ ] Alcohol Panel (Ethylene Glycol, Methanol, Isopropanol, Acetone)
- [ ] Acetaminophen Level

Blood Gas

Consider ABG if:

- Patient is critically ill
- Patient shows signs of carbon dioxide retention (e.g. acute breathlessness or drowsiness, increased respiratory rate)
- Patient is at risk of metabolic conditions
- Unexpected or inappropriate drop below 94% SpO2 while patient is awake
- Increased breathlessness or drop of greater than or equal to 3% SpO2 when patient with chronic hypoxemia was previously stable

- [ ] Blood Gas Venous POCT
  Once
- [ ] Blood Gas Arterial POCT
  Once
- [ ] Blood Gas Venous
  STAT
- [ ] Inpatient Consult to Respiratory Therapy

Laboratory Investigations - Repeating

Hematology

- [ ] CBC and Differential
  Daily Morning, for 7 occurrences

Chemistry

- [ ] Aspartate Aminotransferase (AST)
  Daily Morning, for 7 occurrences
- [ ] Alanine Aminotransferase (ALT)
  Daily Morning, for 7 occurrences
- [ ] Alkaline Phosphatase (ALP)
  Daily Morning, for 7 occurrences
- [ ] Bilirubin, Total
  Daily Morning, for 7 occurrences
- [ ] Albumin
  Daily Morning, for 7 occurrences
- [ ] Creatinine
  Daily Morning, for 7 occurrences
- [ ] Urea
  Daily Morning, for 7 occurrences
- [ ] Electrolyte Panel (Na, K, Cl, CO2, Anion Gap)
  Daily Morning, for 7 occurrences
- [ ] Calcium
  Daily Morning, for 3 occurrences
- [ ] Magnesium
  Daily Morning, for 3 occurrences
- [ ] Phosphate
  Daily Morning, for 3 occurrences

Coagulation

- [ ] INR
  Daily Morning, for 7 occurrences

Diagnostic Imaging

General Radiology

- [ ] GR Chest 2 Projections

Computed Tomography

- [ ] CT Abdomen Enhanced
  Once
- [ ] CT Abdomen
  Once

Ultrasound

- [ ] US Abdomen Complete 2 or more Organs
  Once

Magnetic Resonance

- [ ] MR Abdomen
  Once

Fluids/Electrolytes

IV Maintenance

- [ ] Initiate IV: Intravenous Cannula - Insert
- [ ] Saline Lock IV
- [ ] sodium chloride 0.9% flush injection
  2-5 mL, IV lock, every 8 hours, as needed, maintenance of line patency

IV Fluid Boluses

- [ ] lactated Ringer's bolus
  intravenous, once
- [ ] sodium chloride 0.9 % bolus
  intravenous, once

IV Fluid Infusions

- [ ] ringers lactate infusion
  intravenous, continuous
- [ ] sodium chloride 0.9% infusion
  intravenous, continuous
- [ ] dextrose 5% - sodium chloride 0.45% infusion
  intravenous, continuous
- [ ] dextrose 5% - sodium chloride 0.9% infusion
  intravenous, continuous

Medications

Analgesics and Antipyretics

- [ ] acetaminophen tablet
  650 mg, oral, every 6 hours, as needed

Antiemetics

- [ ] dimenhyDRINATE PO/IV

  Avoid dimenhyDRINATE in patients 65 years of age or older due to increased risk of side effects including delirium. Suggest 25 mg for mild/moderate nausea, 50 mg for moderate/severe nausea.

  dimenhyDRINATE tablet 25-50 mg
  25-50 mg, oral, every 4 hours, as needed, nausea, vomiting,

  Or

  dimenhyDRINATE injection 25-50 mg
  25-50 mg, intravenous, every 4 hours, as needed, nausea, vomiting,

- [ ] metoclopramide PO/IV

  -PO administration or slow infusion via IVPB are preferred for metoclopramide to reduce the risk of akathisia. Suggest 5 mg for mild/moderate nausea or if CrCl less than 40mL/min; 10 mg for moderate/severe nausea, and CrCl over 40mL/min. -Avoid in Parkinson's patients - may exacerbate symptoms.
  -Maximum dose of metoclopramide for Child Pugh B or C patients is 20mg every 24 hours
  CrCl cannot be calculated (No successful lab value found.).

  metoclopramide tablet 5-10 mg
  5-10 mg, oral, every 6 hours, as needed, nausea, vomiting,

  Or

  metoclopramide injection 5 mg
  5 mg, intravenous, every 6 hours, as needed, nausea, vomiting,

- [ ] onsansetron PO/IV

  4 mg starting dose recommended for ondansetron.
  Maximum dose of ondansetron for Child Pugh - C patients is 8 mg every 24 hours.

  ondansetron tablet 4 mg
  4 mg, oral, every 8 hours, as needed, nausea, vomiting,

  Or

  ondansetron, preservative free 4 mg in D5W 50 mL bag
  4 mg, intravenous, every 8 hours, as needed, nausea, vomiting,

- [ ] ondansetron DISINTEGRATING tablet

  Due to high cost, recommend reserving ondansetron DISINTEGRATING tab for actively vomiting patients without an IV.
  Maximum dose of ondansetron for Child Pugh - C patients is 8 mg every 24 hours.

  - [ ] ondansetron tablet orally disintegrating 4 mg
    4 mg, oral, every 8 hours, as needed, nausea, vomiting,

Vitamins and Minerals

- [ ] vitamin D3 (cholecalciferol) tablet
  1,000 units, oral, daily

- [ ] folic acid PO/IV

  folic acid tablet 5 mg
  5 mg, oral, daily,

  Or

  folic acid injection 5 mg
  5 mg, intravenous, daily,

- [ ] multivitamin PO/IV

  multivitamin with minerals tablet 1 tablet
  1 tablet, oral, daily,

  Or

  multivitamin, adult (MULTI-1000) injection 10 mL
  10 mL, intravenous, daily,

- [ ] thiamine IV (For suspected Wernicke's encephalopathy)

  vitamin B1 (thiamine) injection amp 500 mg
  500 mg, intravenous, every 8 hours, scheduled,

  Followed By

  vitamin B1 (thiamine) injection amp 300 mg
  300 mg, intravenous, daily,

- [ ] thiamine PO/IV (For Wernicke's prophylaxis dosing)

  vitamin B1 (thiamine) injection amp 300 mg
  300 mg, intravenous, every 8 hours,

  Or

  vitamin B1 (thiamine) tablet 300 mg
  300 mg, oral, every 8 hours, I

Consults/Referrals

IP Specialty Consults

- [ ] Inpatient Consult to Infectious Diseases
- [ ] Inpatient Consult to Critical Care Medicine (Intensivist)
- [ ] Inpatient Consult to Nephrology
- [ ] Inpatient Consult to Addiction Services
- [ ] Inpatient Consult to Pharmacy

IP Allied Health Consults

Consider Physiotherapy or Occupational Therapy Consults if routine screens positive for functional dependence, immobility, or fall risk.
Consider Discharge Planning consult if two or more ED visits / admissions in the past year, need for alternate level of care, etc.
Consider Social Work consult if unstable housing, finances, complex psychosocial concerns.

- [ ] Inpatient Consult to Physical Therapy
- [ ] Inpatient Consult to Occupational Therapy
- [ ] Inpatient Consult to Discharge Planning
- [ ] Inpatient Consult to Social Work
- [ ] Inpatient Consult to Dietitian
- [ ] Inpatient Consult to Speech Language Therapy

Cirrhosis Specific Order Panels

- Alcohol Associated Hepatitis — Click for more
- Alcohol Use Disorder in Cirrhosis — Click for more
- Ascites Hepatic Hydrothorax, Edema in Cirrhosis — Click for more
- Hepatic Encephalopathy — Click for more
- Spontaneous Bacterial Peritonitis (SBP) or Spontaneous Bacterial Pleuritis, Cirrhosis — Click for more
- Liver Disease Work Up — Click for more
- Renal Dysfunction in Cirrhosis — Click for more
- Hepatorenal Syndrome (HRS) — Click for more
- Variceal Bleed — Click for more