CHILDREN'S HEALTH

Patient Name: _____

Date of Birth: _____

PHYO
CMC85676-001NS Rev. 6/2021

Intravenous Immunoglobulin (IVIG) (Neurology) Tapering Infusion Therapy Plan

Baseline Patient Demographic

To be completed by the ordering provider.

Diagnosis: _____ Height: _____ cm Weight: _____ kg Body Surface Area: _____ (m^2)

☐ NKDA - No Known Drug Allergies ☐ Allergies: _____

Therapy Plan orders extend over time (several visits) including recurring treatment.

Please specify the following regarding the entire course of therapy:

Duration of treatment: _____ weeks _____ months _____ unknown

Treatment should begin: ☐ as soon as possible (within a week) ☐ within the month

****Plans must be reviewed / re-ordered at least annually. ****

ORDERS TO BE COMPLETED FOR EACH THERAPY

ADMIT ORDERS

☑ **Height and weight**

☑ **Vital signs**

Hypotension Defined Admit

☐ **Nursing communication**

Prior to starting infusion, please determine the patient's threshold for hypotension as defined by the following parameters. This information will be needed in the event of an infusion reaction occurring.
Hypotension is defined as follows:
1 month to 1 year - systolic blood pressure (SBP) less than 70
1 year to 11 years - systolic blood pressure (SBP) less than 70 + (2 x age in years)
11 years to 17 years - systolic blood pressure (SBP) less than 90
OR any age - systolic blood pressure (SBP) drop of more than 30% from baseline.
Baseline systolic blood pressure (SBP) x 0.7 = value below defined as hypotension.

NURSING ORDERS

Please select all appropriate therapy

IV START NURSING ORDERS

☐ **Insert peripheral IV / Access IVAD**

Place PIV if needed or access IVAD if available

☐ **lidocaine 1% BUFFERED (J-TIP LIDOCAINE)**

0.2 mL, INTRADERMAL, PRN

☐ when immediate procedure needed ☐ when procedure will take about 1 minute ☐ patient / family preference for procedure

Administration Instructions: NOTE: Do not use this medication in patients with bleeding disorders, platelets ≤ 20,000, or in patients taking anticoagulants, when accessing implanted ports or using a vein that will be utilized for chemotherapy administration, nor for pre-term infants or neonates.

☐ **lidocaine - prilocaine (EMLA) cream**

TOPICAL, PRN

☐ when more than 60 minutes are available before procedure ☐ when procedure will take more than 1 hour

☐ patient / family preference for procedure

Administration Instructions: NOTE: In children < 3 months of age, or < 5 kg in weight, maximum application time is 1 hour.

☐ **lidocaine - tetracaine (SYNERA) patch**

TOPICAL, PRN

☐ when 20 - 30 minutes are available before procedure ☐ when procedure will take more than 1 hour

☐ when anticipated pain is less than 5 mm from skin surface ☐ patient / family preference for procedure

Key: cm = centimeter; gm = gram; IV = intravenous; IVAD = implantable venous access device; IVIG = intravenous immunoglobulin; kg = kilogram; m^2 = square meters; mg = milligram; mL = milliliter; mL / hr = milliliters per hour; mOsm / L = milliosmole per liter; NKDA = No Known Drug Allergies; ODT = orally distengrating tablet; pH = hydrogen ion concentration; PRN = as needed; SBP = systolic blood pressure

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NURSING ORDERS, CONTINUED

☐ **lidocaine with transparent dressing 4% kit**

TOPICAL, PRN

☐ when 20 - 30 minutes are available before procedure ☐ when procedure will take more than 1 hour

☐ patient / family preference for procedure

☐ **Heparin flush**

heparin flush

10 - 50 units, INTRAVENOUS, PRN, IV line flush. Per protocol, heparin should not be used to flush peripheral IVs. This heparin flush should be used with all central lines including IVADs, with the exception of de-accessing the IVAD.

heparin flush

100 - 300 units, INTRAVENOUS, PRN, IV line flush. Per protocol, heparin should not be used to flush peripheral IVs. For use only when de-accessing IVADs.

☐ **Sodium chloride flush**

Sodium chloride flush 0.9% injection

1 - 20 mL, INTRAVENOUS, PRN, IV line flush

Sodium chloride - preserative free 0.9% injection

1 - 30 mL, INTRAVENOUS, PRN, IV line flush

PRE-PROCEDURE LABS

☐ **Blood Urea Nitrogen** **INTERVAL: Every visit**

Unit collect

☐ **Creatinine** **INTERVAL: Every visit**

Unit collect

PRE-MEDICATIONS

☐ **Acetaminophen pre-medication 30 minutes prior (15 mg / kg, maximum 650 mg)**

Nursing communication

Administer only one of the acetaminophen orders, suspension or tablets, do not give both.

acetaminophen suspension

15 mg / kg, ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

Dose: _____

acetaminophen tablet

15 mg / kg ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

Dose: _____

☐ **Diphenhydramine pre-medication 30 minutes prior (1 mg / kg, maximum 50 mg)**

Nursing communication

Administer only one of the diphenhydrAMINE pre-medication orders, liquid, capsule or injection, do not give more than one of the orders as a pre-medication.

diphenhydrAMINE liquid

1 mg / kg, ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

Dose: _____

diphenhydrAMINE capsule

1 mg / kg ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion

Dose: _____

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PRE-MEDICATIONS, CONTINUED

diphenhydrAMINE injection

1 mg / kg, INTRAVENOUS, 1 dose pre-medication, give 30 minutes prior to infusion
Dose: _____

☐ **Ibuprofen pre-medication 30 minutes prior (10 mg / kg, maximum 600 mg)**
nursing communication
Administer only one of the ibuprofen orders, suspension or tablets, do not give both.

ibuprofen suspension

10 mg / kg, ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion
Dose: _____

ibuprofen tablet

10 mg / kg ORAL, for 1 dose pre-medication, give 30 minutes prior to infusion
Dose: _____

☐ **Ondansetron pre-medication 30 minutes prior (0.1 mg / kg, maximum 4 mg)**

Nursing communication
Administer only one of the ondansetron orders, injection or ODT, do not give both.

ondansetron injection
0.1 mg / kg IV PRN, pre-medication, give 30 minutes prior to infusion, for 1 dose
Dose: _____

ondansetron ODT
0.1 mg / kg ORAL, PRN, pre-medication, give 30 minutes prior to infusion, for 1 dose
Dose: _____

☐ **NS bolus PRN**
sodium chloride 0.9% for fluid bolus infusion

10 mL / kg, INTRAVENOUS, ONCE PRN, pre-medications, give 30 minutes prior to infusion, for 1 dose, Administer over 30 minutes
Dose: _____

INTRA-PROCEDURE

INTRAVENOUS IMMUNOGLOBULIN (IVIG)

☑ **Physician communication order**
Gamunex is the preferred CHST product and the plan is scheduled to taper as follows. IVIG daily x 5 days for the first month, then IVIG daily x 4 days for the second month, then IVIG daily x 3 days repeating monthly. Total dose = 2 gm / kg divided (0.4 gm / kg x 5 days, 0.5 gm / kg x 4 days, or 0.7 gm / kg x 3 days). Please enter the dose of IVIG in 'gm' to facilitate prior authorization requirements. If Gammagard is needed, select the Gammargard 5, 4 and 3 day sections with the same dosing as above.

☑ **Therapy Appointment Request**
Please select department for the therapy appointment request:

Expires in 365 days

☐ Dallas Special Procedures ☐ Plano Infusion Center ☐ Dallas Allergy ☐ Dallas Transplant ☐ Dallas Neurology

☑ **Vital Signs**

Check baseline blood pressure, pulse, respirations and temperature prior to starting of IVIG infusion. Observe frequently, every 15 - 30 minutes, upon initiation of IVIG infusion for signs of symptoms and / or complaints of infusion related reactions. Monitor every 15 - 30 minutes until maximum infusion rate is reached. Continue vital signs hourly after maximum rate is reached. If an adverse effect occurs, slow the infusion rate or temporarily interrupt the infusion.

Key: cm = centimeter; gm = gram; IV = intravenous; IVAD = implantable venous access device; IVIG = intravenous immunoglobulin; kg = kilogram; m^2 = square meters; mg = milligram; mL = milliliter; mL / hr = milliliters per hour; mOsm / L = milliosmole per liter; NKDA = No Known Drug Allergies; ODT = orally distengrating tablet; pH = hydrogen ion concentration; PRN = as needed; SBP = systolic blood pressure

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ORDERS TO BE COMPLETED FOR EACH THERAPY

INTRA-PROCEDURE, CONTINUED

☑ **Nursing communication**

IVIG administration rate if using a 10 % solution: INFUSE OVER _____ HOURS.

☐

Initial Infusion Rate	
0.05 gm / kg / hour = 0.5 mL / kg / hour	for 15 - 30 minutes then increase to
0.1 gm / kg / hour = 1 mL / kg / hour	then after 15 - 30 minutes increase to
0.2 gm / kg / hour = 2 mL / kg / hour	then after 15 - 30 minutes increase to
0.4 gm / kg / hour = 4 mL / kg / hour	until infusion complete

Maximum initial infusion rate is 0.4 gm / kg / hour = 4 mL / kg / hour

**Consider reduced infusion rate if patient is at risk for renal insufficiency, thromboembolic events, volume overload, and / or utilizing 10% solution for initial dose.

☐

Initial Infusion REDUCED Rate	
0.025 gm / kg / hour = 0.25 mL / kg / hour	for 15 - 30 minutes then increase to
0.05 gm / kg / hour = 0.5 mL / kg / hour	then after 15 - 30 minutes increase to
0.1 gm / kg / hour = 1 mL / kg / hour	then after 15 - 30 minutes increase to
0.2 gm / kg / hour = 2 mL / kg / hour	until infusion complete

Maximum initial infusion REDUCED rate is 0.2 gm / kg / hour = 2 mL / kg / hour

INTRAVENOUS IMMUNOGLOBULIN (IVIG) - GAMUNEX-C

Physician communication order

If Gammagard is needed, unselect the Gamunex 5, 4 and 3 day sections and select the Gammargard 5, 4 and 3 day sections with the same dosing as above.

☐ **IVIG - GAMUNEX - C (5 Days - month 1)**

immune globulin 10% (GAMUNEX - C) 1 gram / 10 mL (10%) injection

INTRAVENOUS, ONCE, see "IVIG Administration Policy" for administration directions.

Dose: _____ **2 grams / kg divided over 5 days (0.4 g / kg x 5 days)**

☐ **IVIG - GAMUNEX - C (4 Days - month 2)**

immune globulin 10% (GAMUNEX - C) 1 gram / 10 mL (10%) injection

INTRAVENOUS, ONCE, see "IVIG Administration Policy" for administration directions.

Dose: _____ **2 grams / kg divided over 5 days (0.5 g / kg x 4 days)**

☐ **IVIG - GAMUNEX - C (3 Days - beginning month 3 until discontinued)**

immune globulin 10% (GAMUNEX - C) 1 gram / 10 mL (10%) injection

INTRAVENOUS, ONCE, see "IVIG Administration Policy" for administration directions.

Dose: _____ **2 grams / kg divided over 5 days (0.7 g / kg x 3 days)**

Key: cm = centimeter; gm = gram; IV = intravenous; IVAD = implantable venous access device; IVIG = intravenous immunoglobulin; kg = kilogram; m^2 = square meters; mg = milligram; mL = milliliter; mL / hr = milliliters per hour; mOsm / L = milliosmole per liter; NKDA = No Known Drug Allergies; ODT = orally distengrating tablet; pH = hydrogen ion concentration; PRN = as needed; SBP = systolic blood pressure

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ORDERS TO BE COMPLETED FOR EACH THERAPY

INTRA-PROCEDURE, CONTINUED

☑ **Nursing communication**

IVIG administration rate if using a 10 % solution: INFUSE OVER _____ HOURS.

☐

Initial Infusion Rate	
0.05 gm / kg / hour = 0.5 mL / kg / hour	for 15 - 30 minutes then increase to
0.1 gm / kg / hour = 1 mL / kg / hour	then after 15 - 30 minutes increase to
0.2 gm / kg / hour = 2 mL / kg / hour	then after 15 - 30 minutes increase to
0.4 gm / kg / hour = 4 mL / kg / hour	until infusion complete

Maximum initial infusion rate is 0.4 gm / kg / hour = 4 mL / kg / hour

**Consider reduced infusion rate if patient is at risk for renal insufficiency, thromboembolic events, volume overload, and / or utilizing 10% solution for initial dose.

☐

Initial Infusion REDUCED Rate	
0.025 gm / kg / hour = 0.25 mL / kg / hour	for 15 - 30 minutes then increase to
0.05 gm / kg / hour = 0.5 mL / kg / hour	then after 15-30 minutes increase to
0.1 gm / kg / hour = 1 mL / kg / hour	then after 15-30 minutes increase to
0.2 gm / kg / hour = 2 mL / kg / hour	until infusion complete

Maximum initial infusion REDUCED rate is 0.2 gm / kg / hour = 2 mL / kg / hour

INTRAVENOUS IMMUNOGLOBULIN (IVIG) - GAMMAGARD

Physician communication order

If GAMMAGARD is needed, please select the GAMMAGARD 5, 4 and 3 day sections with the same dosing as above.

☐ **IVIG - GAMMAGARD (5 Days - month 1)**

immune globulin 10% (GAMMAGARD) 10% injection
INTRAVENOUS, ONCE, see "IVIG Administration Policy" for administration directions.
Dose: _____ **2 grams / kg divided over 5 days (0.4 g / kg x 5 days)**

☐ **IVIG - GAMMAGARD (4 Days - month 2)**

immune globulin 10% (GAMMAGARD) 10% injection
INTRAVENOUS, ONCE, see "IVIG Administration Policy" for administration directions.
Dose: _____ **2 grams / kg divided over 5 days (0.5 g / kg x 4 days)**

☐ **IVIG - GAMMAGARD (3 Days - beginning month 3 until discontinued)**

immune globulin 10% (GAMMAGARD) 10% injection
INTRAVENOUS, ONCE, see "IVIG Administration Policy" for administration directions.
Dose: _____ **2 grams / kg divided over 5 days (0.7 g / kg x 3 days)**

Key: cm = centimeter; gm = gram; IV = intravenous; IVAD = implantable venous access device; IVIG = intravenous immunoglobulin; kg = kilogram; m^2 = square meters; mg = milligram; mL = milliliter; mL / hr = milliliters per hour; mOsm / L = milliosmole per liter; NKDA = No Known Drug Allergies; ODT = orally distengrating tablet; pH = hydrogen ion concentration; PRN = as needed; SBP = systolic blood pressure

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ORDERS TO BE COMPLETED FOR EACH THERAPY

EMERGENCY MEDICATIONS

☑ **Nursing communication**

1. Hives or cutaneous reaction only – no other system involvement: **PATIENT IS HAVING A DRUG REACTION**
   - **a.** Stop the infusion
   - **b.** Give diphenhydramine as ordered
   - **c.** Check vitals including blood pressure every 5 minutes until further orders from provider.
   - **d.** Connect patient up to monitor (cardiac / apnea, blood pressure and oxygen saturation) if not already on one
   - **e.** Notify provider for further orders
2. Hives or cutaneous reaction plus one other system, i.e. abdominal cramping, vomiting, hypotension, altered mental status, respiratory distress, mouth / tongue swelling: **PATIENT IS HAVING ANAPHYLAXIS**
   - **a.** Stop the infusion
   - **b.** Call code – do not wait to give epinephrine
   - **c.** Give epinephrine as ordered
   - **d.** Notify provider
   - **e.** Check vitals including blood pressure (BP) every 5 minutes until the code team arrives.
   - **f.** Connect patient up to monitor (cardiac / apnea, blood pressure and oxygen saturation), if not already on one.
   - **g.** Give diphenhydramine once as needed for hives
   - **h.** May repeat epinephrine every 5 minutes x 2 doses for persistent hypotension and respiratory distress with desaturation until code team arrives.
   - **i.** May give albuterol as ordered for wheezing with oxygen saturation stable while waiting for code team – continue to monitor oxygen saturation.

   Hypotension is defined as follows:
   1 month to 1 year – systolic blood pressure (SBP) less than 70
   1 year to 11 years – systolic blood pressure (SBP) less than 70 + (2 x age in years)
   11 years to 17 years – systolic blood pressure (SBP) less than 90
   OR any age – systolic blood pressure (SBP) drop more than 30% from baseline.
   Baseline systolic blood pressure (SBP) x 0.7 = value below defined as hypotension.

☑ **EPINEPHrine Injection Orderable For Therapy Plan (AMPULE / EPI - PEN JR. / EPI - PEN) 0.01 mg / kg**

0.01 mg / kg, INTRAMUSCULAR, EVERY 5 MINUTES PRN, for anaphylaxis and may be repeated for persistent hypotension and respiratory distress with desaturation until the code team arrives, for 3 doses
Use caution with PIV administration. This solution has a pH < 5, or a pH > 9, or an osmolality > 600 mOsm / L.

Dose: _____

☑ **Cardio / Respiratory Monitoring**
Rationale for Monitoring: High risk patient (please specify risk)

- ☐ Clinically significant cardiac anomalies or dysrhythmias
- ☐ Recent acute life-threatening event
- ☐ Unexplained or acutely abnormal vital signs
- ☐ Artificial airway (stent, tracheostomy, oral airway)
- ☐ Acute, fluctuating or consistent oxygen requirements

Monitor Parameters (select all that apply): ☐ Heart rate ☐ Oxygen saturation ☐ Respiratory rate
Telemetry Required: ☐ Yes ☐ No

☑ **diphenhydrAMINE injection 1 mg / kg**

1 mg / kg, INTRAVENOUS, ONCE PRN, for hives or cutaneous reaction, for 1 dose maximum dose = 50 mg per dose, 300 mg per day.

Dose: _____

☑ **albuterol for aerosol 0.25 mg / kg**

0.25 mg / kg., INHALATION, ONCE PRN, for wheezing, but oxygen saturations stable while waiting for code team, continue to monitor oxygen saturations for 1 dose

Dose: _____

POST - PROCEDURE

☑ **Nursing communication**

Flush PIV or IVAD with 20 mL 0.9% sodium chloride (250 mL bag) at the completion of the infusion.
Flush IVAD with saline and heparin prior to discharge.
Discontinue PIV prior to discharge.

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POST - PROCEDURE

☑ **sodium chloride flush 0.9%**

0 - 25 mL, sodium chloride 0.9%

Dose: _____

Signature of Provider	(circle one): MD DO Credentials	Date	Time

Printed Name of Provider

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