



Patient Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

PHYO  
CMC84596-001NS Rev. 12/2020

### Intravenous Immunoglobulin (IVIG) (for Immunology) - Therapy Plan

#### BASELINE PATIENT DEMOGRAPHIC

To be completed by the ordering provider.

 NKDA - No Known Drug Allergies    Height: \_\_\_\_\_ cm    Weight: \_\_\_\_\_ kg    Body Surface Area: \_\_\_\_\_ (m<sup>2</sup>)

 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  $70 = (2 \times \text{age in years})$ 

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)  $\times 0.7 =$  value below defined as hypotension.

##### NURSING ORDERS

Please select all appropriate therapy

##### IV START NURSING ORDERS

 Insert peripheral IV

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 procedureAdministration Instructions: NOTE: Do not use this medication in patients with bleeding disorders, platelets  $\leq 20,000$ , 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.



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**ORDERS TO BE COMPLETED FOR EACH THERAPY**

**NURSING ORDERS, CONTINUED**

**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

**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

**Select one:**

**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 0.9% injection**

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

**sodium chloride - pres free 0.9% injection**

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

**PRE- PROCEDURE LABS**

**SCID panel**

Unit collect

**Lymphocyte proliferation, mitogens**

Unit collect



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**PRE-PROCEDURE LABS, CONTINUED**

**Lymphocyte proliferation, antigens**

Unit collect

**Lymphocyte immunophenotype - extended**

Unit collect

**Immunoglobulin G**

Unit collect

**Immunoglobulin E**

Unit collect

**Immunoglobulin A**

Unit collect

**Immunoglobulin M**

Unit collect

**Comprehensive metabolic panel**

Unit collect

**Complete blood count with differential**

Unit collect

**Urinalysis**

Unit collect

**T-Cell receptor excision circles**

Unit collect

**T-Cell recent thymic emigrants**

Unit collect

**B-Cell immunphenotyping test**

Unit collect

send out lab to Mayo Clinic

**Targeted BTK gene sequencing test**

Unit collect

send out lab to Mayo Clinic

**T-Cell spectratyping test**

Unit collect

send out lab to Mayo Clinic

**C-reactive protein**

Unit collect

**Sedimentation rate erythrocyte**

Unit collect

**Lactate dehydrogenase**

Unit collect



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**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:** \_\_\_\_\_

 **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:** \_\_\_\_\_

 **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:** \_\_\_\_\_

**diphenhydrAMINE injection**

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

**Dose:** \_\_\_\_\_



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**PRE-MEDICATIONS, CONTINUED**

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

**Nursing communication**

Administer only one of the ondansetron orders, solution or ODT, do not give both.

**Ondansetron solution**

ORAL, PRN, pre-medication, give 30 minutes prior to infusion, for 1 dose

**Dose:** \_\_\_\_\_

**Ondansetron ODT**

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**

**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** Every 15 minutes, 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.

**Nursing communication**

Monitor fluid intake and urine output during infusion and as needed.

**Nursing communication**

IVIG administration rate if using a 10 % solution:

\*\* Consider reduced infusion rate if patient is at risk for renal insufficiency, thromboembolic events, volume overload, and / or utilizing 10% solution for initial dose **INFUSE OVER \_\_\_\_\_ HOURS\*\*** (see policy for reduced rate)

Initial Infusion Rate (Reduced Rate) = (0.05 g /kg / hour) 0.5mL / kg / hour	After 15 - 30 minutes at previous rate
(0.025 g / kg / hour) 0.25 mL / kg / hour	(0.1 g / kg / hour) 1 mL / kg / hour
(0.05 g / kg / hour) 0.5 mL / kg / hour	(0.2 g / kg / hour) 2 mL / kg / hour
(0.1 g / kg / hour) 1 mL / kg / hour	(0.4 g / kg / hour) 4 mL / kg / hour
(**)Maximum Initial Infusion / Reduced Rate (0.2 g / kg / hour) 2 mL / kg / hour	

Key: cm = centimeter; gm = gram; IV = intravenous; IVAD = implantable venous access device; IVIG = intravenous immunoglobulin; kg = kilogram; m<sup>2</sup> = square meters; mg = milligram; mL = milliliter; mL / hr = milliliters per hour; mOsm / L = milliosmole per liter; NKDA = no known drug allergies; ODT = orally disintegrating tablet; pH = hydrogen ion concentration; PIV = peripheral intravenous; PRN = as needed; PVC = polyvinyl chloride; SCID = severe combined immunodeficiency



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#### ORDERS TO BE COMPLETED FOR EACH THERAPY

#### INTRA-PROCEDURE, CONTINUED

##### Physician communication order

Please select one Gamunex or Gammaguard. \*GAMUNEX is the preferred CHST product. Please select GAMMAGARD only if clinically warranted. Dose of IVIG typically begins at 400 mg/kg. Please enter the dose of IVIG in 'gm' to facilitate prior authorization requirements.

##### Select one:

Immune globulin 10% (GAMUNEX - C) 1 gram / 10 mL 10% injection **Every 4 weeks**

INTRAVENOUS, ONCE, see "IVIG admin policy" for administration directions.

Dose: \_\_\_\_\_

Immune globulin 10% (GAMMAGARD) 10% injection **Every 4 weeks**

INTRAVENOUS, ONCE, see "IVIG admin policy" for administration directions.

Dose: \_\_\_\_\_

#### 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  $70 + (2 \times \text{age in years})$

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)  $\times 0.7 =$  value below defined as hypotension.



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**ORDERS TO BE COMPLETED FOR EACH THERAPY**
**EMERGENCY MEDICATIONS, CONTINUED**
 **EPINEPHrine injection**
**(AMPULE / EPI - PEN JR. / EPI - PEN)**

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 &lt; 5, or a pH &gt; 9, or an osmolality &gt; 600 mOsm / L.

**Dose:** \_\_\_\_\_

 **Cardio / respiratory monitoring rationale for monitoring:**
**high risk patient (please specify risk)**

(Patient receiving infusion with potential infusion reactions); heart rate, respiratory rate, oxygen saturation

Rationale for Monitoring: High risk patient (please specify risk)

Parameters: heart rate, respiratory rate, oxygen saturation

Alarm limits: preset to age specified limits

 **diphenhydrAMINE injection**

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., INHALATION, ONCE PRN, for wheezing, but oxygen saturations stable while waiting for code team, continue to monitor oxygen saturation or 1 dose

**Dose:** \_\_\_\_\_

**POST - PROCEDURE**
 **Nursing communication**
**NS bolus**

Sodium Chloride 0.9% for fluid bolus infusion

10 mL / kg, Intravenous, Once PRN, post-procedure hydration, Administer over 30 minutes

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 flush per protocol prior to de - accessing IVAD. Discontinue PIV prior to discharge on the last day of infusion.

 **sodium chloride 0.9% infusion**

INTRAVENOUS at 0 - 25 mL / hr ONCE

**Dose:** \_\_\_\_\_

**CONSULT TO SERVICE**
 **Consult to Child Life**
**Note:** \_\_\_\_\_

 **Consult to Social Work**
**Note:** \_\_\_\_\_



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ORDERS TO BE COMPLETED FOR EACH THERAPY

**CONSULT TO SERVICE**

Consult to Psychology

Note: \_\_\_\_\_

Consult to Care Coordination

Note: \_\_\_\_\_

(circle one):  
MD DO

\_\_\_\_\_  
Signature of Provider

\_\_\_\_\_  
Credentials

\_\_\_\_\_  
Date

\_\_\_\_\_  
Time

\_\_\_\_\_  
Printed Name of Provider