Name of Policy:	**IVIG Dosing**
Policy Number:	3364-133-93
Department:	Pharmacy
Approving Officer:	Senior Hospital Administrator
Responsible Agent:	Director of Pharmacy
Scope:	University of Toledo Medical Center

THE UNIVERSITY OF TOLEDO MEDICAL CENTER

Effective Date: 5/16/2023
Initial effective date: 8/1/2012

_____ New policy proposal	___x___ Minor/technical revision of existing policy
_____ Major revision of existing policy	_____ Reaffirmation of existing policy

(A) Policy Statement

Intravenous immune globulin (IVIG) dosing at the University of Toledo Medical Center (UTMC) will be based on the patient's ideal body weight (IBW), actual body weight (ABW) if less than IBW, or dosing weight (DW) if obese. In order to facilitate the ordering process and proper reimbursement for outpatients receiving IVIG in ambulatory infusion centers an outpatient standardized order form approved by forms committee (Appendix 1) will be utilized for ordering of IVIG. When ordering IVIG for inpatients, providers will utilize an electronic order via the hospitals electronic ordering system. Outpatient administration is the preferred location and should be utilized unless inpatient administration is clinically necessary. Gammagard will be the preferred IVIG formulation in both the inpatient and outpatient setting. Patients with existing precertification for another agent can continue to receive the same agent. When a new precertification is warranted, Gammagard will be the preferred agent and a new precertification for Gammagard should be obtained. If the insurance company will only approve an alternative formulation for outpatient administration the prior authorization staff will notify pharmacy, and the approved formulation will be documented for pharmacy records. Gammagard will be dispensed unless a dispensed as written (DAW) is selected for an alternative formulation. If precertification denied, an appeal process must include providing supporting primary literature, appeal to Pharmacy and Therapeutics (P&T) chair, Chief Medical Officer, or Medical Chief of Staff for approval of use.

(B) Purpose of Policy

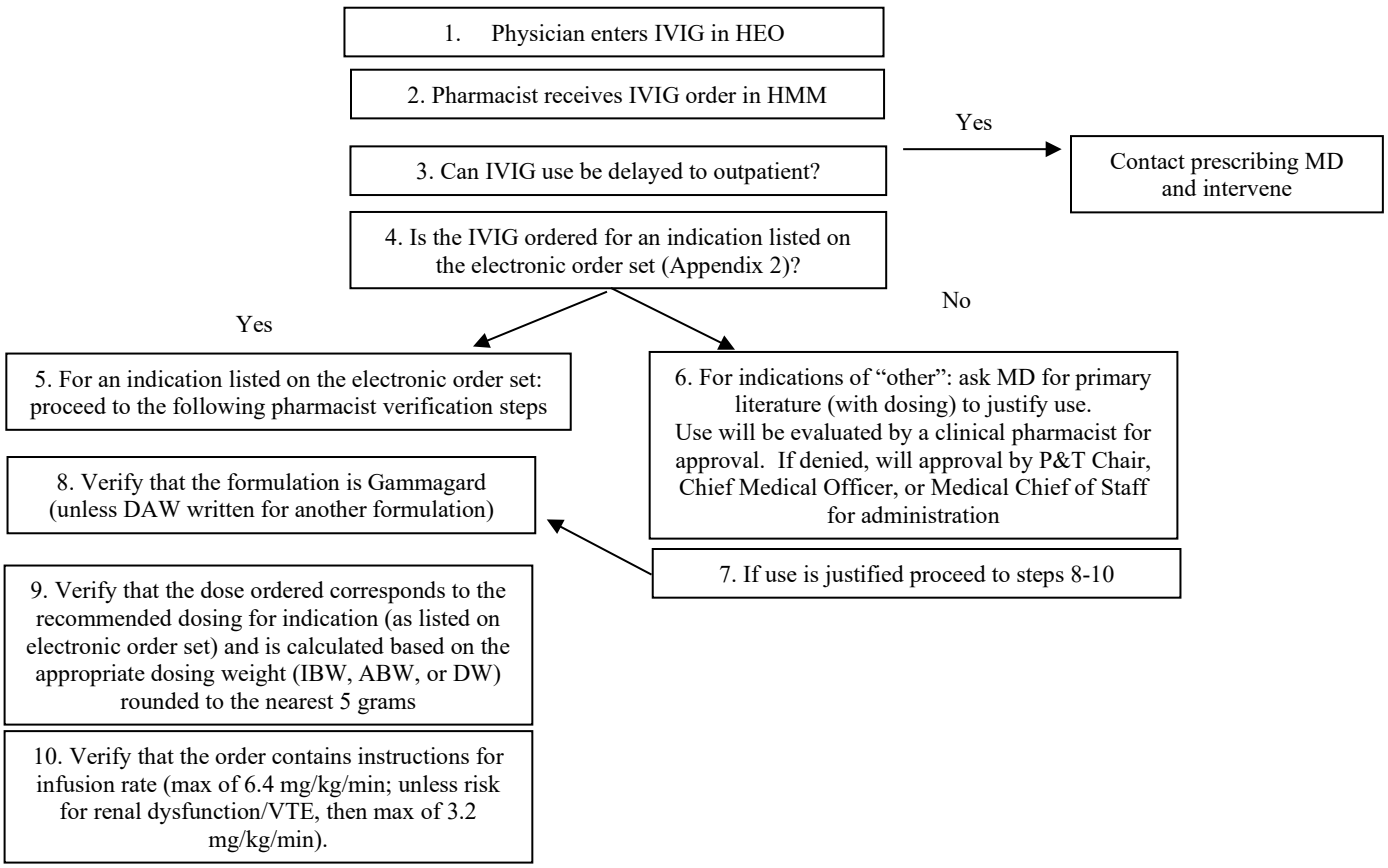
This policy will provide the calculations for the determination of IVIG dosing by IBW, ABW, or DW. The policy will also outline how to order IVIG and provide approved indications/dosing for inpatient and outpatient administration of IVIG.

(C) Procedure

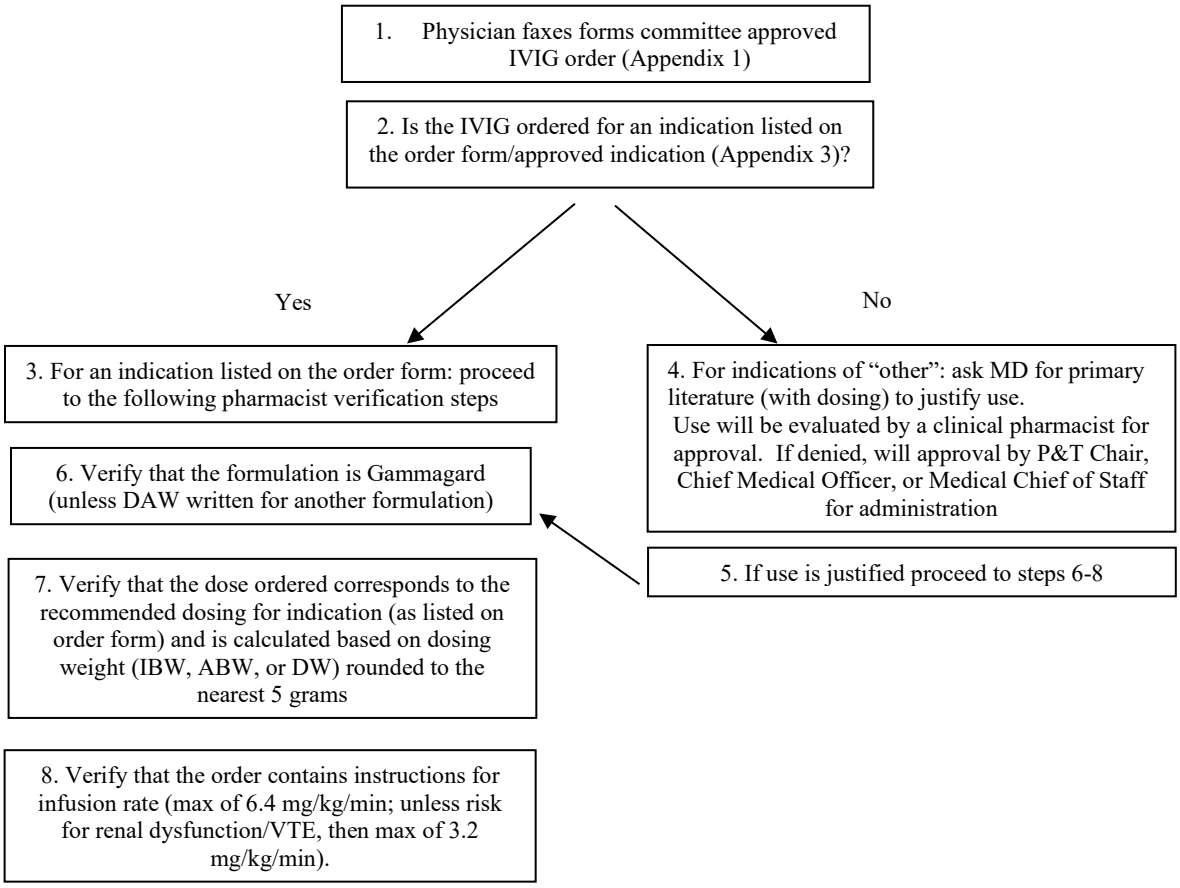
1. Outpatient administration is the preferred location and should be utilized unless inpatient administration is clinically necessary. A clinical pharmacist will intervene on IVIG inpatient orders to see if treatment can be delayed until the patient is discharge.
2. Precertification required for outpatient administration of IVIG. If precertification denied, an appeal process must include providing supporting primary literature, appeal to P&T chair, Chief Medical Officer, or Medical Chief of Staff for approval of use.
3. Orders for IVIG must be for an approved indication. See appendix 2 for inpatient approved indications/dosing and appendix 3 for outpatient approved indications/dosing
    a. If the order is not for an approved indication, the ordering physician must provide primary literature for the requested indication.
    b. After submission of the primary literature a clinical pharmacist will review for appropriateness.
    c. If denied use by clinical pharmacist, the physician may appeal to the P&T chair, Chief Medical Officer, or Medical Chief of Staff.
4. Gammagard will be the preferred IVIG formulation and will be dispensed unless a DAW is selected for an alternative formulation.
5. Orders for IVIG at UTMC should be written as a gram/kg dose
    a. Upon receiving the order for IVIG, the pharmacist will calculate the patient's IBW by using the appropriate formula below:
        i. Male patient greater than 60 inches = 50 + (2.3 x number of inches greater than 60 inches)
        ii. Female patient greater than 60 inches = 45.5 + (2.3 x number of inches greater than 60 inches)
        iii. If less than 60 inches:
            - Male patient = 50kg – 0.83kg for each inch less than 60 inches
            - Female patient = 45.5kg – 0.75kg for each inch less than 60 inches

b. If the patient's ABW is 30% above IBW, a dosing weight will be calculated and used based on the following formula:
   i. DW = IBW + 0.4 (ABW – IBW)
c. If the patient's ABW is less than the patient's IBW, the ABW will be used to calculate the dose of IVIG.
d. The IVIG Dose will be rounded to the nearest 5 grams
e. If the calculated dosing is different from the prescribed dose from the physician, the pharmacist will write the order for IVIG using the appropriate calculation listed above (based on IBW, ABW, or DW).
   i. Outpatients:
      - The calculated dose will be written as a dose rounding note via the pharmacy intervention tool: "Per hospital dose rounding policy (3364-133-93) for IVIG: IVIG will be rounded from @dose to @dose. Thanks!"
      - The Pharmacist will note prescribing physician
      - The Pharmacist signature on pharmacy intervention tool note is required
      - The Pharmacist will send copy of the dose rounding pharmacy intervention tool note through fax machine to attach to patient profile in pharmacy system, and the send original copy to nursing unit to be placed in the patient's chart.
   ii. Inpatients:
      - The dose will be verified as IBW, ABW, or DW from the electronic order set for inpatients as described above.
      - If the dose was not calculated correctly the pharmacist will re-enter the order from the electronic order set with the correct dose and discontinue the previous order.
      - The Pharmacist will add to the comments in electronic ordering system "per UTMC P&T approved policy 3364-133-93"

6. Inpatient Order Entry/Verification Process:



7. Outpatient Order Entry/Verification Process:



Approved by:		**Review/Revision Date:**
		5/09 8/15 5/20 4/22 5/23
/s/ Lindsey Eitniear, PharmD, BCPS, AAHIVP Director of Pharmacy	05/16/2023 Date	
/s/ Russell Smith Pharm D, BCPS, MBA Senior Hospital Administrator *Review/Revision Completed By:* *Pharmacy*	05/16/2023 Date	
		Next Review Date: 6/2026
Policies Superseded by This Policy:		

It is the responsibility of the reader to verify with the responsible agent that this is the most current version of the policy.

Appendix 1: Inpatient IVIG Approved Indications and Dosing:

Indication	Recommended dosing
Primary immunodeficiency diseases	0.4-0.6 gram/kg every 3-4 weeks
Idiopathic thrombocytopenic purpura	0.4 gram/kg/day x5 days or 1-2 gram/kg/day x1-2 days
Dermatomyositis and polymyositis	2 gram/kg divided doses every 4 weeks
Vasculitis	0.4 gram/kg/day x5 days
Guillain-Barre syndrome	0.4 gram/kg/day x5 days
Chronic demyelinating polyneuropathy	LD: 2 gram/kg divided over 2-4 days MD: 1 gram/kg every 3 weeks
Multifocal motor neuropathy	0.5-2.4 gram/kg/month
Lambert-Eaton myasthenic syndrome	2 gram/kg divided over 2-5 days
Myasthenia gravis	2 gram/kg divided over 2-5 days
Stiff-man syndrome	2 gram/kg divided over several days
Autoimmune mucocutaneous blistering skin diseases	2 gram/kg divided over 2-5 days
Pediatric HIV infection	0.4-0.6 gram/kg every 3-4 weeks
Kawasaki disease	1-2 gram/kg over 10-12 hours
Hypogammaglobulinemia with recurrent bacterial infection	0.4-0.6 gram/kg every 3-4 weeks
B-cell chronic lymphocytic leukemia	0.4-0.6 gram/kg every 3-4 weeks
Bone marrow transplantation	0.5 gram/kg/week
Antibody-mediated rejection//Positive B Cell Crossmatch	2 gram/kg divided over 1-2 days or 0.1-0.5 gram/kg/dose every other day with plasmapheresis
CMV-induced pneumonitis in solid organ transplant	0.5 gram/kg x5 days
Streptococcal Toxic Shock Syndrome	1 g/kg on day 1, and 0.5 g/kg on days 2 and 3
*Other (please describe):_____ *Must provide supporting literature to the pharmacist for the desired indication	

Appendix 2: Outpatient Intravenous Immunoglobulin Approved Indications and Dosing

Indication	Recommended dosing
Primary immunodeficiency diseases	0.4-0.6 gram/kg every 3-4 weeks
Idiopathic thrombocytopenic purpura	0.4 gram/kg/day x5 days or 1-2 gram/kg/day x1-2 days
Dermatomyositis and polymyositis	2 gram/kg divided doses every 4 weeks
Vasculitis	0.4 gram/kg/day x5 days
Guillain-Barre syndrome	0.4 gram/kg/day x5 days
Chronic demyelinating polyneuropathy	LD: 2 gram/kg divided over 2-4 days MD: 1 gram/kg every 3 weeks
Multifocal motor neuropathy	0.5-2.4 gram/kg/month
Lambert-Eaton myasthenic syndrome	2 gram/kg divided over 2-5 days
Myasthenia gravis	2 gram/kg divided over 2-5 days
Stiff-man syndrome	2 gram/kg divided over several days
Autoimmune mucocutaneous blistering skin diseases	2 gram/kg divided over 2-5 days
Pediatric HIV infection	0.4-0.6 gram/kg every 3-4 weeks
Kawasaki disease	1-2 gram/kg over 10-12 hours
Hypogammaglobulinemia with recurrent bacterial infection	0.4-0.6 gram/kg every 3-4 weeks
B-cell chronic lymphocytic leukemia	0.4-0.6 gram/kg every 3-4 weeks
Bone marrow transplantation	0.5 gram/kg/week
Antibody-mediated rejection/Positive B Cell Crossmatch	2 gram/kg divided over 1-2 days or 0.1-0.5 gram/kg/dose every other day with plasmapheresis
CMV-induced pneumonitis in solid organ transplant	0.5 gram/kg x5 days
*Other:_____ *Must provide supporting literature to the pharmacist for the desired indication	