# Children's Antimicrobial Management Program (ChAMP)

#### **MONOGRAPH**

# Clindamycin Monograph - Paediatric

Scope (Staff):	Medical, Pharmacy, Nursing
Scope (Area):	All Clinical Areas

# **Child Safe Organisation Statement of Commitment**

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this **DISCLAIMER** 

	QUICKI	LINKS	
<u>Dosage/Dosage</u> <u>Adjustments</u>	Administration	Compatibility	Monitoring

#### **DRUG CLASS**

Lincosamide antibiotic. (1-3)

#### INDICATIONS AND RESTRICTIONS

Clindamycin is indicated in the treatment of serious infections caused by gram positive or anaerobic bacteria resistant to other agents (e.g. Methicillin Resistant *Staphylococcus aureus* [MRSA]) or in patients allergic to other agents (e.g. penicillin and/or cephalosporin allergy) and as an adjunct to standard beta-lactam antibiotics in specific clinical situations (e.g. invasive group A streptococcal infections, iGAS).<sup>(3-5)</sup>

Topical clindamycin is only indicated for the treatment of acne. (3)

#### Oral and topical: Unrestricted (green) antibiotic

This is not a restricted agent. Follow standard ChAMP guidelines where appropriate.

# IV: Monitored (orange) antibiotic

Clindamycin is indicated for use as per the indications stipulated in <u>Formulary One</u>. For any other use, phone approval must be obtained from ChAMP before prescribing as per the <u>Children's Antimicrobial Management Program (ChAMP) Policy</u>

# **CONTRAINDICATIONS**

Hypersensitivity to clindamycin, lincomycin or any component of the formulation. (3, 6-9)

#### **PRECAUTIONS**

- Rapid IV injection is not recommended as rapid administration may cause hypotension and cardiac arrest. Refer to Administration section for further information. (2, 7, 9)
- The IV preparation contains benzyl alcohol which has been associated with fatal 'gasping syndrome' in premature neonates. Use with caution in neonates. (7, 9)
- Clindamycin should be used with caution in patients with a history of pseudomembranous colitis
  associated with clindamycin or other lincosamide antibiotics (administered orally, intravenously
  or topically), and in patients with ulcerative colitis or enteritis due to its association with severe
  colitis.<sup>(7, 9)</sup>
- Patients, parents and carers should be instructed to cease therapy and contact the prescriber if any diarrhoea develops whilst on clindamycin and up to 2 months after ceasing therapy.<sup>(6)</sup>
- Clindamycin is potentially nephrotoxic. Acute kidney injury including acute renal failure has been reported. Monitoring of renal function should be considered during therapy of patients with preexisting renal dysfunction or taking concomitant nephrotoxic drugs and monitoring of renal function should be performed if therapy is prolonged.<sup>(7, 9, 10)</sup>
- Serious rash events, some with fatal outcomes, have been reported with systemic clindamycin therapy. Clindamycin should be permanently discontinued if severe skin or hypersensitivity reactions occur.<sup>(7)</sup>

#### **FORMULATIONS**

Listed below are products available at PCH, other formulations may be available, check with pharmacy if required:

- 150 mg Capsules
- 600 mg/4 mL Ampoule
- 1% topical lotion
- Clindamycin 1% with Benzoyl Peroxide 5% Gel (Duac ® Once Daily Gel)

Imprest location: Formulary One

#### **DOSAGE & DOSAGE ADJUSTMENTS**

**Neonates: Refer to Neonatal Medication Protocols** 

Dosing in Overweight and Obese Children: Dose based on measured body weight. (6, 8, 9)

Intravenous: ≥4 weeks to 18 years

**Note:** Clindamycin has excellent oral bioavailability (90%). Consider switch to oral antibiotic therapy when clinically appropriate. (2) Refer to ChAMP guideline: Intravenous to Oral Switch.

- Usual dose: 10 mg/kg/dose (to a maximum of 450 mg) given 8 hourly. (1)
- Severe infections: 15 mg/kg/dose (to a maximum of 600 mg) given 8 hourly. (1, 5)

## Dosing for Hospital in the Home (HiTH) - Baxter Elastomeric devices:

- **Usual dose:** 30-45 mg/kg/DAY (to a maximum of 1800 mg) infused over 24 hours. Doses must be rounded to the nearest 100mg.
- Minimum dose possible: 240 mg/ 24 hours.<sup>(11)</sup>

**Surgical prophylaxis:** 15 mg/kg (to a maximum of 600 mg) as a single dose within 120 minutes before surgical incision. A repeat dose is required if the operation is > 6 hours. (1, 5)

#### Oral: ≥4 weeks to 18 years:

- Usual dose: 10 mg/kg/dose (to a maximum of 450 mg) given 8 hourly. (1, 3)
- Severe infections: 10 mg/kg/dose (to a maximum of 450 mg) given 6 hourly. (3, 5)

#### Topical:

- Topical clindamycin preparations available at PCH are only indicated for acne. (3)
- Topical Solution: Apply approximately 2 mL twice a day for up to 12 weeks. (3, 6)
- **Gel:** Apply once daily in the evening for up to 12 weeks. (3, 6)

#### **Renal impairment:**

#### eGFR calculator

- Clindamycin is potentially nephrotoxic. Acute kidney injury including acute renal failure has been reported. Therefore, monitoring of renal function should be considered during therapy of patients with pre-existing renal dysfunction or taking concomitant nephrotoxic drugs and monitoring of renal function should be performed if therapy is prolonged. (10)
- No dosage adjustments are recommended for patients with renal impairment. The half-life of clindamycin is slightly extended in severe renal impairment. (7-9)

#### **Hepatic impairment:**

 No dosage adjustments are recommended for patients with hepatic impairment. The half-life of clindamycin is extended in severe hepatic impairment, although no specific dosage adjustment is recommended.<sup>(7-9)</sup>

#### **ADMINISTRATION**

#### IV infusion:

- Dilute to a final concentration of 18 mg/mL or weaker and infuse over 10 to 60 minutes at a rate no greater than 30 mg/minute OR 20 mg/kg/hour whichever is less.<sup>(2, 4, 7)</sup>
- Rapid IV administration is associated with hypotension and cardiopulmonary arrest.<sup>(9)</sup>

#### Continuous infusion:

May be given over 24 hours by continuous infusion<sup>(2)</sup> via a Baxter<sup>®</sup> infusor.<sup>(2)</sup>

#### Oral:

- Clindamycin may be taken without regard to food intake. Taking clindamycin with food may help reduce the incidence of gastrointestinal adverse effects. (12)
- If the patient is unable to swallow capsules and/or the dose is less than 150 mg, capsule(s) may be opened, and its contents dissolved in water. For example, the contents of a 150 mg capsule can be dissolved in 3 mL of water to give a 50 mg/mL solution. (12)
- The contents of the capsule may be mixed in juice or soft food to disguise the taste. (Note: clindamycin solution is extremely unpalatable and bitter – ensure a test dose is given to ensure tolerability).<sup>(3, 12, 13)</sup>

# **Topical**

- Before applying, wash affected areas with mild soap or soap substitute and warm water, rinse and pat dry.<sup>(3)</sup>
- Avoid contact with eyes, lips and inside of your mouth or nose. (3)

# **COMPATIBILITY (LIST IS NOT EXHAUSTIVE)**

#### Compatible fluids:

- Glucose 5%
- Glucose/ sodium chloride solutions
- Sodium chloride 0.9%
- Hartmann's<sup>(2)</sup>

#### Compatible at Y-site:

<u>Compatibilities of IV drugs</u> must be checked when two or more drugs are given concurrently.

#### **MONITORING**

- Hepatic function, renal function and full blood picture should be monitored weekly with prolonged therapy (i.e. longer than 7 days). (3, 4, 7)
- Patients should monitor for changes in bowel frequency.<sup>(9)</sup>

## **ADVERSE EFFECTS**

**Common:** contact dermatitis (with topical use), diarrhoea (mild-to-severe), nausea, vomiting, abdominal pain or cramps, rash, itch. (3, 4)

**Infrequent:** Clostridioides difficile-associated disease (3)

**Rare:** pseudomembranous colitis, serious cutaneous adverse reactions (SCARs), taste disturbance, anaphylaxis, blood dyscrasias, polyarthritis, jaundice, raised liver enzymes, hepatotoxicity (with high doses), acute kidney injury. (3, 4, 9)

With IV use: hypotension and cardiac arrest (with rapid injection), thrombophlebitis. (3)

#### **STORAGE**

#### IV solution:

Store ampoules (Dalacin® C brand) at 2-8°C.<sup>(2, 6)</sup>

Alternative brands may be stored below 25°C (e.g. Mylan<sup>®</sup> brand), check packaging for storage requirements.<sup>(2, 6)</sup>

#### Oral capsules:

Oral capsules should be stored below 25°C and protect from light.<sup>(6)</sup>

#### **Topical Lotion**

1% topical lotion should be stored below 25°C.<sup>(6)</sup>

# **Duac Once Daily ® Gel**

The gel should be stored at 2°C to 8°C.<sup>(6)</sup>

#### **INTERACTIONS**

This medication may interact with other medications; consult PCH approved references (e.g. Clinical Pharmacology), a clinical pharmacist or PCH Medicines Information Service on extension 63546 for more information.

# Related CAHS internal policies, procedures and guidelines

Antimicrobial Stewardship Policy

ChAMP Empiric Guidelines and Monographs

**KEMH Neonatal Medication Protocols** 

#### References

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- 2. Symons K. Wong Ee. Australian injectable drugs handbook. Abbotsford: The Society of Hospital Pharmacists of Australia; 2023.
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<sup>\*\*</sup>Please note: The information contained in this guideline is to assist with the preparation and administration of **clindamycin**. Any variations to the doses recommended should be clarified with the prescriber prior to administration\*\*

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- 12. Symons K, Emer J (editors). Australian Don't Rush to Crush Handboook. 4th edition ed. Collingwood: The Society of Hospital Pharmacists of Australia: 2025.
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Excellence Collaboration Accountability

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