*MEDICINE FORMULARY INFORMATION*

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| **Medicine / Trade name** | Hydrogen peroxide 1% Cream/Crystacide Cream 1%1 |
| **Manufacturer** | Reig Jofre UK Limited1 |
| **Image**  **(Image provided by Reig Jofre UK Ltd. 10/03/20.)** |  |
| **Medicine class** | Antiseptics and disinfectants2 |
| **Medicine formulary indication** | Localised non-bullous impetigo3 |
| **Formulation and strength** | Hydrogen peroxide 1% cream1 |
| **Dose & frequency** | Apply two to three times a day.1 |
| **Length of treatment** | A 5-day course is appropriate for most people with impetigo but can be increased to 7 days based on clinical judgement, depending on the severity and number of lesions.3 |
| **Current place in therapy** | The NICE guideline impetigo: antimicrobial prescribing [NG153] recommends hydrogen peroxide 1% cream as an initial treatment for people with localised non-bullous impetigo who are not systemically unwell or at high risk of complications.3 |
| **Contraindications and cautions** | Hypersensitivity to the active substance (hydrogen peroxide) or any of the excipients (glyceryl monolaurate, glyceryl monomyristate, macrogolstearate 5000, propylene glycol, citric acid anhydrous, sodium hydroxide, sulphuric acid, 1M, sodium oxalate, salicylic acid, disodium edetate, sodium pyrophosphate, sodium stannate, purified water).1 |
| **Special warnings and caution in use** | * Avoid contact with the eyes. * Do not use on large or deep wounds. * Do not apply to healthy skin. * Hydrogen peroxide (active ingredient) can bleach fabric. * Salicylic acid (an excipient) is a mild irritant and can cause dermatitis. * Propylene glycol (an excipient) may cause skin irritation.1 |
| **Adverse effects** | A mild sensation of burning may be experienced for a short time after application.1 |
| **Drug interactions** | Crystacide cream is incompatible with iodine, permanganates and other stronger oxidising agents.1 |
| **Treatment alternatives** | First-choice topical antibiotic if hydrogen peroxide 1% cream is unsuitable (e.g. impetigo around the eyes) or ineffective:   * Topical fusidic acid 2% apply three times a day for 5 days.3 * If fusidic acid resistance is suspected or confirmed - Topical mupirocin 2% apply three times a day for 5 days.3 |
| **Future alternatives** | None known. |
| **Patent expiry** | Not applicable |
| **List price** | 25g: £8.07 or 40g: £11.624 – a 25g tube should be a sufficient quantity for most patients. |
| **Retail price** | 25g: £14.524 |
| **NICE guidance or national guidelines on use?** | NG153 recommends considering hydrogen peroxide 1% cream as an initial treatment for people with localised non-bullous impetigo who are not systemically unwell or at high risk of complications.3 For people with impetigo that is worsening or has not improved after treatment with hydrogen peroxide 1% cream, offer:  • a short course of a topical antibiotic if the impetigo remains localised or  • a short course of a topical or oral antibiotic if the impetigo has become widespread  NG153 acknowledges that the use of hydrogen peroxide 1% cream represents a change in practice and health professionals may not be familiar with its use.3  The evidence considered in NG153 was a systematic review which found that topical fusidic acid (2% applied two to three times a day for up to 21 days) was not significantly different to hydrogen peroxide cream (1% applied two to three times a day for up to 21 days) in children with impetigo for cure or improvement (follow-up not reported; 1 RCT, n=256, 82.0% versus 71.9%, RR 1.14, 95% CI 1.00 to 1.31; moderate quality evidence). There was no significant difference between topical fusidic acid and hydrogen peroxide in the number of children experiencing adverse events leading to withdrawal (1 RCT, n=256, 2.3% versus 0%, RR 7.00, 95% CI 0.37 to 134.16; low quality evidence) or the number of children with mild side effects (1 RCT, n=256, 7.0% versus 10.2%, RR 0.69, 95% CI 0.31 to 1.56; low quality evidence).5 |
| **Other relevant evidence** | **Antiseptic and disinfectant properties**1  Hydrogen peroxide is a well-known antiseptic agent and is effective against a majority of pathogenic micro-organisms. In-vitro pharmacology studies have shown that hydrogen peroxide has both activity against a wide variety of micro-organisms and is a potent antibacterial agent with effect against Gram-positive as well as Gram-negative bacteria. In-vitro studies have shown that the bactericidal activity of Crystacide cream 1% is equal in effect compared with a 1% aqueous solution of hydrogen  peroxide, and the duration of action is longer for the cream. There are no known pathogenic bacteria or fungi that develop resistance to hydrogen peroxide.  NG153 states that the evidence suggests that hydrogen peroxide 1% cream is as effective as a topical antibiotic for treating impetigo.3 Impetigo was cured or improved in a large proportion of people using hydrogen peroxide. This evidence was from a single randomised controlled trial. No evidence was identified for treating impetigo with other topical antiseptics, so the committee could not make a recommendation for their use.  Based on the available evidence, the NICE committee agreed that the long-term benefits of good antimicrobial stewardship, in combination with the low risk of adverse events compared with using a topical antibiotic, outweighed the additional cost of hydrogen peroxide 1% cream.5 |
| **Incidence of condition** | Impetigo affects all age groups but is most common in young children. The annual incidence is around 2.8% in children up to 4 years of age. In children aged 5-15 years there is a 1.6% annual incidence. The incidence decreases with increasing age and is lowest in people aged over 65 years. Males and females are equally affected.6 |
| **Does the product have a place in therapy or practice?** | Yes - for localised non-bullous impetigo in patients who are not systemically unwell or at high risk of complications in line with NICE NG153.3 |
| **Date of last revision** | 10/03/2020 |
| **Cost of intervention vs. other therapeutic alternatives4,7** | |  |  |  | | --- | --- | --- | | **Product** | **Pack size** | **Cost** | | Hydrogen peroxide 1% cream (Crystacide) | 25g  40g | £8.07  £11.62 | | Fusidic acid 2% cream | 15g  30g | £2.33  £4.66 | | Mupirocin 2% cream or ointment (Bactroban) | 30g | £5.26 |   Crystacide cream 1% Retail prices: 25g: £12-£13, 40g: £16 - £18.8 |
| **National use and spend** | Hydrogen peroxide 1% cream (Jan to Dec 2019 NHSBSA):  England total items: 1,268  England total cost: £12,450  Use is likely to increase due to inclusion in NG153.  NG153 resource implications states that the incremental cost of hydrogen peroxide 1% cream is estimated to be around £3.50 more per person, when compared with current treatment options for people with localised non-bullous impetigo who are not systemically unwell or at risk of complications.9 NICE expect the population that will be eligible for this treatment will not be greater than around 125,000 people per year, with the biggest incidence occurring in children.9 This equates to £437,500 per year or £705 per 100,000 population. |

**References:**

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2. Joint Formulary Committee. British National Formulary (online) London: BMJ Group and Pharmaceutical Press [www.medicinescomplete.com](http://www.medicinescomplete.com) Accessed on 09/03/20.
3. National Institute for Health and Care Excellence (NICE) guideline [NG153]. Impetigo: antimicrobial prescribing. <http://www.nice.org.uk/guidance/ng153> Accessed 09/03/20.
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