NHS
Suffolk and North East Essex

Medical Oxygen - Emollients with no, or low paraffin content guidance

The topical application of paraffin- based skin-products, for example, emulsifying ointment or 50% liquid paraffin + 50% white soft paraffin (WSP) ointment have a potential fire risk as bandages, dressings and clothing that come in to contact with them are easily ignited with a naked flame or cigarette.
Paraffin products are also constituents in some commonly prescribed 'specials' creams and ointment, for example emulsifying ointment is often used as a diluent to lower the strength of a ready prepared ointment.
The evidence currently only relates to WSP and there is no data to show that there is a fire hazard risk with preparations containing concentrations of WSP lower than 50%, however, the NPSA took the view that this risk could apply to any paraffin based product.
All patients and their families should be warned regarding the following risks:

- The risk of fire should be considered when using large quantities of any paraffin-based emollient (e.g., application of 100g or more at once or over a short period of time).
- Patients who require large quantities of emollient (100g or more) should use a water- based product (e.g., cream or lotion) rather than a paraffin based one (e.g., ointment) to reduce the fire risk. The risk is greater when these preparations are applied to large areas of the body and clothing, or dressings become soaked with ointment.
- Bedding and clothing should be washed regularly at 60 ^{o}C, to minimise the build-up of impregnated paraffin.
- Patients should be told to keep away from open or gas fires or hobs and naked flames, including candles etc. and not to smoke when using these paraffin containing preparations.
- Patients who use nasal cannulae (prongs) for **oxygen administration** can apply a water-based lubricant (Aquagel) to the lips and nose to prevent drying and cracking. **Paraffin based products are not recommended as they can plug air holes and are a fire hazard.**
- Patients on Oxygen - read coding in the notes about oxygen use is recommended, they must use a paraffin free emollient.

Medical oxygen is non-flammable but strongly supports combustion (including some materials that do not normally burn in air). It is highly dangerous in the presence of oils, greases, tarry substances, and many plastics due to the risk of spontaneous combustion with high pressure gases. Therefore, patients on medical oxygen who require an emollient should not use any paraffin- based product. Naked flames and smoking are prohibited when medical oxygen is in use.

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Emollients suitable for patients using Medical Oxygen	
Paraffin based products are flammable and medical oxygen strongly supports combustion, therefore, to avoid fires patients on Medical Oxygen who require an emollient should not use any paraffin-based products.	
Below is a list of products that are more suitable for prescribing for patients using oxygen	
Aquagel	Prescribe for patients who use nasal cannula for oxygen administration. Can be applied to lips and nose to prevent drying and cracking
ImuDerm Urea Emollient®	Contains Urea 5%, glycerol 5% (*500g pump=£6.79)
Balneum Plus Cream ®	Contains Lauromacrogols 3%, urea 5% (*100g=£3.29, 500g pump pack=£14.99)
Epimax paraffin-free Ointment®	Contains Polyoxyethylene (40) hydrogenated castor oil 38% (*500g= £4.99)

*Prices current to July 22 Drug Tariff

References:

 Paraffin-based skin emollients on dressings or clothing: fire risk. MHRA April 2016:

https://www.gov.uk/drug-safety-update/paraffin-based-skin-emollients-on-dressings-or-clothing-fire-risk

- Prescqipp Bulletin 228 Emollients, paraffin content and risk of fire June 2020
- https://www.bochomeoxygen.co.uk/en/images/National%20Patient%20Safety%20Agency_tcm1109-274132.pdf