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**PROTON PUMP INHIBITORS AND RISK OF *C. DIFFICILE***

*Clostridium difficile* (*C. difficile*) can be part of the normal gastrointestinal flora. Infection occurs when other harmless bacteria in the gut are disrupted (e.g. by taking antibiotics) or when the immune system is compromised allowing numbers of *C. difficile* bacteria to increase to high levels.

The main risk factors for *C. difficile* infection are:
- Antibiotic use
- Hospitalisation
- Advanced age
- Underlying morbidity (e.g. chronic renal disease, cancer, abdominal surgery, tube feeding)
- Inflammatory bowel disease
- Current use of a proton pump inhibitor*

*Whilst a causal link has not been established, there is increasing evidence that there is an association between use of proton pump inhibitors (PPIs) and *C. difficile* infection.

It would seem that the general population is not at significant risk of *C. difficile* infection from PPI use. However, for patients at high risk for *C. difficile* infection (see risk factors above), judicious and evidence-based use is needed. PPI use is high in NI, with an estimated 12% of population currently prescribed a PPI.

**Action**
- Stop PPIs if possible when a broad spectrum antibiotic is commenced.
- Review the need for PPIs in patients with or at high risk of *C. difficile* infection.
- Refer to [NI Management of Infection Guidelines for Primary Care 2015](http://niformulary.hscni.net) for more information.

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**PREVIOUS NEWSLETTER EDITIONS**

Did you know you can access previous editions of the Medicines Management newsletter on the Northern Ireland Formulary website? [http://niformulary.hscni.net](http://niformulary.hscni.net)

Newsletters from 2012 onwards can be viewed.

You can also search for previous articles using the search facility of the NI Formulary website.
**EYE SUPPLEMENTS ADDED TO STOP LIST**

The HSC Board Medicines Management Team recently consulted the Macular subgroup* on the use of nutritional supplements for age-related macular degeneration (AMD). It was concluded that evidence for prescribing these products for AMD would not support their continued use. On this basis eye supplements for AMD have been added to the Prescribing Stop List.

A letter has been sent to Trusts, GPs and community pharmacists to advise of this addition to the list (for full list see Compass Report page five). An article has been included in the HSCB Optometry Practice Newsletter advising optometrists in Northern Ireland not to request a patient’s GP to prescribe these products. Examples of these items include Icaps®, Ocuvite®, PreserVision®, Viteyes®, Macushield®.

*The Macular subgroup of the Specialist Services Commissioning Team is a multidisciplinary group which aims to provide advice which will maximise the delivery of a high quality, effective, efficient and accessible service for macular diseases available for the population of Northern Ireland.

**Action for prescribers**

- Nutritional supplements should not be prescribed on HS21 prescription for AMD.
- Patients who wish to try these products if considered appropriate should be advised that it is possible to purchase these over the counter.

### NEW NICE GUIDANCE

**Service Notifications issued in Northern Ireland for the following:**

- NICE TA357 — Pembrolizumab for treating unresectable, metastatic melanoma after progression with ipilimumab
- NICE TA359 — Tolvaptan for treating autosomal dominant polycystic kidney disease
- NICE TA363 — Idelalisib for treating chronic lymphocytic leukaemia
- NICE TA364 — Daclatasvir for treating chronic hepatitis C
- NICE TA366 — Pembrolizumab for advanced melanoma not previously treated with ipilimumab
- NICE Guideline NG31 — Care of dying adults in the last days of life
- NICE Guideline NG33 — Tuberculosis

### MANAGED ENTRY DECISIONS

The following medicines were considered in March as part of the Northern Ireland Managed Entry process. For details of the outcomes please refer to the Managed Entry section of the Northern Ireland Formulary website: [http://niformulary.hscni.net/ManagedEntry/MEDecisions/Pages/default.aspx](http://niformulary.hscni.net/ManagedEntry/MEDecisions/Pages/default.aspx)

- Abatacept, adalimumab, etanercept and tocilizumab for JIA
- Anakinra (Kineret®)
- Apremilast (Otezla®)
- Bortezomib (Velcade®)
- Denosumab (Xgeva®)
- Efalizumab (Sustiva®)
- Enzalutamide (Xtandi®)
- Erlotinib (Tarceva®) and gefitinib (Iressa®)
- Glatiramer acetate 40mg/mL (Copaxone®)
- Guanfacine hydrochloride (Intuniv®)
- Lenalidomide (Revlimid®)
- Nintedanib (Ofev®)
- Olaparib (Lynparza®)
- Panobinostat (Farydak®)
- Teduglutide (Revestive®)
- Ulipristal acetate (Esmya®)

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**This newsletter has been produced for GPs and Pharmacists by the Regional Pharmacy and Medicines Management Team. If you have any queries or require further information on the contents of this newsletter, please contact one of the Medicines Management pharmacists in your local HSCB office.**

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**References**

1. HSC. Northern Ireland Formulary. [http://niformulary.hscni.net](http://niformulary.hscni.net)
2. Macular subgroup of the Specialist Services Commissioning Team
3. UKMi. Clostridium difficile infection – is use of Proton Pump Inhibitors a risk factor? UKMi Q&A 244.3, 2015.

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Every effort has been made to ensure that the information included in this newsletter is correct at the time of publication. This newsletter is not to be used for commercial purposes.