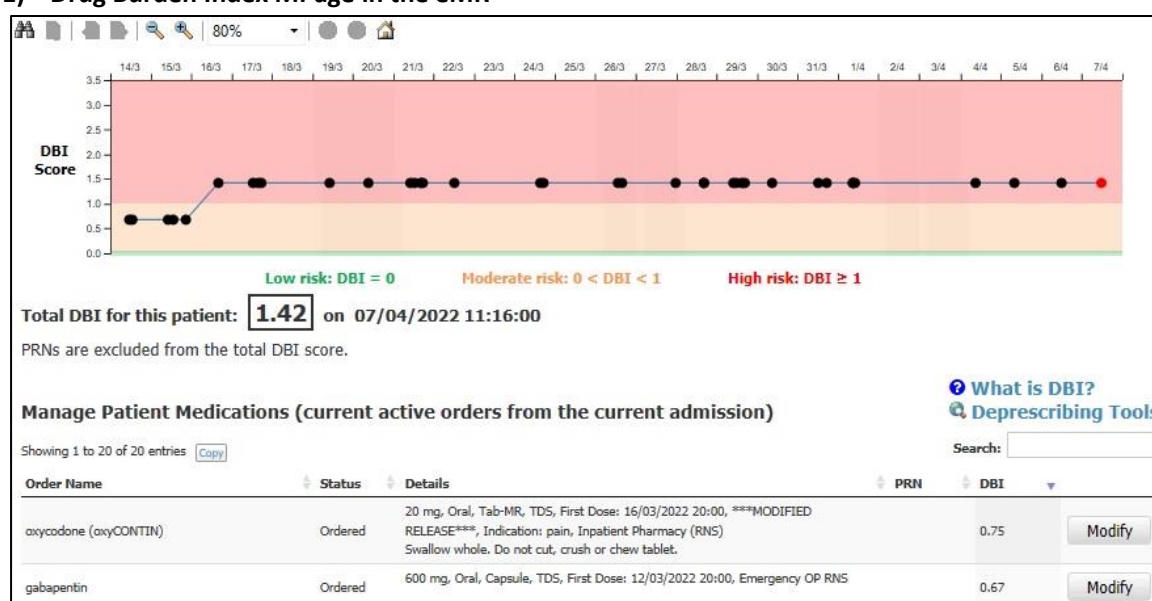


Using The Drug Burden Index to Reduce Inappropriate Polypharmacy in Older Inpatients

Sedative and anticholinergic drugs are commonly associated with harm in older adults. The Drug Burden Index (DBI) developed by Professor Sarah Hilmer, is a validated clinical risk assessment tool which measures exposure to anticholinergics and sedatives. A bundle of resources, including the DBI in the electronic Medical Records (eMR) have been implemented in Northern Sydney Local Health District (NSLHD) and Central Coast Local Health District (CCLHD) hospitals in NSW, to help clinicians identify and prioritise high-risk older patients for medication review and facilitate deprescribing of DBI-contributing drugs where appropriate.

DBI Resources Bundle:

1) Drug Burden Index MPage in the eMR



The DBI MPage is available for inpatients aged ≥ 65 years. It is colour coded to show the risk of medication-related functional impairment. The DBI score calculates based on medications prescribed. Clicking on any point on the graph lists the exact DBI score and which sedative and anticholinergic drugs are contributing to the DBI at that time, prompting clinicians to consider deprescribing these drugs.

2) Deprescribing Guides and Leaflets

There are evidence based Deprescribing Guides to help clinicians decide whether to deprescribe and if so, how to do it. There are also Consumer Information Leaflets to communicate deprescribing decisions with patients and carers. These resources are freely available via the NSW Therapeutic Advisory Group (NSW TAG) website: <https://www.nswtag.org.au/deprescribing-tools/>

3) Pharmacists' Patient List

The DBI has been incorporated into the pharmacists' patient list allowing pharmacists to sort patients by DBI scores and prioritise medication review of high-risk patients.

4) Stewardship Pharmacists

Stewardship Pharmacists provided staff education and patient-level deprescribing advice to doctors, pharmacists and nurses to increase uptake of the DBI resources bundle and deprescribing of sedatives and anticholinergics. This role was undertaken by Dr Nashwa Masnoon in NSLHD and Ms Gauri Godbole and Ms Kate Woods in CCLHD.



Nashwa Masnoon reviewing the DBI MPage with a medical officer and ward pharmacist



Kate Woods and Gauri Godbole reviewing deprescribing guides with a registered nurse

Evaluating the DBI Resources Bundle in Clinical Practice

A successful pilot testing the DBI bundle was completed at the Royal North Shore Hospital in General Medicine and Aged Care services in 2021. The pilot showed i) high uptake and actioning of the stewardship pharmacist's deprescribing advice by the medical team after using the DBI bundle and ii) significant increase in deprescribing in hospital after implementation of the bundle compared to before implementation. Following the successful pilot, a randomised controlled trial (RCT) has just been completed testing the DBI bundle across multiple sites and services from March 2022- July 2023.

Sustaining Use of DBI Resources After the Trial

To ensure sustainability of DBI bundle use after the RCT, several strategies have been co-designed and implemented. These include having local champions in each discipline, service and site to ensure ongoing education of new and existing staff, establishing a clinical nurse consultant to ward pharmacist referral pathway to identify and prioritise high risk patients for medication review and setting up audits of DBI use in patients with falls and delirium by junior medical officers and pharmacists to ensure ongoing momentum and education.

To use the DBI in your LHD, please contact your local eMeds Teams.

A DBI calculator is also available via the following website:

<https://gmedss.com/landing>

For questions please contact:

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