

Tertiary Resources Comparison

Purpose

This document provides an overview of the similarities and differences between the most commonly-used tertiary and point-of-care (POC) resources. This is to assist MI staff in making purchasing decisions, and deciding which resources may be most useful for different types of enquiry. It is not an exhaustive list.

It is advisable to request a free trial and to carry out local assessment before committing to purchasing a tertiary resource.

Further guidance on the use of Point-Of Care tools is available:

<https://www.ukmi.nhs.uk/Resources?ContentID=3df605e3-ec43-47b7-99ff-aabc3cd91765>

Resources covered in this document:

- **AHFS Drug Information**
- **BMJ Best Practice**
- **Clinical Key**
- **Dynamed**
- **Lexicomp**
- **Martindale: the complete drug reference**
- **Micromedex**
- **UpToDate**

There is a combined resource available: *DynaMed® and Micromedex® with Watson®*. This combines the point of care tool DynaMed® with the drug information of Micromedex®, enhanced with an AI search. This product is not included in the comparison document. The need for inclusion will be under review.

The stand-alone information for Both *Dynamed®* and *Micromedex®* can be used to inform the value of *DynaMed® and Micromedex® with Watson®*.

UKMi Quality and Risk Management Group Tertiary Resources Comparison

	AHFS	BMJ Best Practice	Clinical Key	Dynamed	Lexicomp	Martindale	Micromedex	UpToDate
Publisher	American Society of Health-System Pharmacists	British Medical Journal	Elsevier	EBSCO	Wolters Kluwer	Pharmaceutical Press	IBM Watson	Wolters Kluwer
Available via	Medicines Complete www.medicinescomplete.com/ or IBM Micromedex (as a separate add-on) www.ibm.com/watson-health/about/micromedex [Book published annually]	https://bestpractice.bmj.com/info/ (access in England provided by Health Education England—check Trust library)	https://www.clinicalkey.com/#/	www.dynamed.com Access in Scotland available as part of NHS Education for Scotland Network	http://online.lexi.com/lco/action/login	Medicines Complete www.medicinescomplete.com/ Also available as separate add-on from IBM Micromedex www.ibm.com/watson-health/about/micromedex [Book published every 3 years]	www.ibm.com/watson-health/about/micromedex	https://www.uptodate.com/home
Country of focus	US;	International focus, but generally reflects US dosing	US, Canada, UK	US, but also includes Canadian and European Guidelines	US and Canada	UK, but includes some information on international drugs	US, but includes Canadian and EMA licensed information for some drugs.	US
Frequency of update	Updated monthly, but only a few monographs each time	Evidence evaluated daily; updated at least three monthly; displayed in the 'Recent Updates' tab	Continuously updated. Monthly content changes displayed under 'News and Updates'.	Daily	Frequency not known; only states last updated date	Updated every 3 months, but only a few monographs each time.	Checked weekly for new information; monograph date reflects when new information added.	As new information is published, no specific updating schedule.
Visibility of date of update	'Date of update' at the top of the monograph refers to the entire publication; rather than an individual monograph	Clearly visible	Clearly visible	Included at the bottom of each monograph	Included at the bottom of each monograph	Date the monograph was updated at the top; each section also states when it was last modified.	Included at the bottom of each monograph	At the top of each clinical topic. 'Literature review current through' date also displayed. Drug monograph version number displayed but no date.

UKMI Quality and Risk Management Group Tertiary Resources Comparison

Referencing	Fully referenced	Fully referenced	Clear on which source is being accessed. Referencing included within those sources.	Yes, although some general statements are not	Information sometimes not referenced and more as a bibliography style.	Each individual section of the monograph is referenced	Generally fully referenced, although Drug consults are not always (NB: some references remain listed despite not being used)	References at the end of each clinical topic and (professional) drug monograph.
Includes expert opinion	No. Information only from referenced sources	Mixture of evidence based referenced statements and non-referenced content	Clinical overviews available but these are all fully referenced.	Contains both evidence-based information and expert opinion.	Evidence based information only.	Information only taken from referenced sources.	Contains both evidence-based information and expert opinion.	Clinical topics contain some expert opinion.
Includes 'grey' literature (e.g. guidelines)	Most information taken from American manufacturer's product information. Other references are mostly academic literature, although other sources are used (e.g. FDA alerts)	Information from both academic literature and guidelines. A graded approach for the strength of recommendations is included in many summaries.	Includes book chapters, full text journal articles, guidelines (including NICE), clinical overviews, Medline abstracts, drug monographs (including BNF), images, media clips and patient guides.	Information from both academic literature and guidelines. A graded approach for the strength of recommendations is included in many summaries.	Information from both academic literature and guidelines	Mostly academic literature, although some other sources included (e.g. Drug Database for Acute Porphyria, WHO). Treatment reviews include reference to guidelines (e.g. NICE) and other relevant, e.g. MHRA warnings.	Information from American, Canadian, and European licensing agencies is also included, but not guidelines. A graded approach for the strength of evidence is included.	Includes clinical consensus rather than purely academic literature.
Presentation style	Monographs and topic paragraphs	Topics are condition driven. Dosing guidance comes from the US. There is also a guideline section, split into continent, e.g. Europe.	The 'clinical search engine' searches a collection of clinical resources published by Elsevier. A 'Smart content search' searches <i>all</i> resources available in Clinical Key.	Topic overview with subheadings. Links to related subjects are provided within the content.	Mostly monograph based. Search screen with access to various clinical tools such as intravenous compatibility, Interactions, Drug ID, Patient education, and calculators. Advanced search (under 'more clinical tools') allows searching for keywords within monographs.	Monographs and topic paragraphs.	Mostly monograph based. Search screen with access to various clinical tools such as intravenous compatibility, Interactions, Drug ID, Patient education, and calculators. Two main formats of monograph available: <i>DrugPoints summaries</i> (brief information but include medication counselling and limited toxicology information not found elsewhere)	Referenced topic summaries

UKMi Quality and Risk Management Group Tertiary Resources Comparison

							and DrugDex Evaluations (more detailed information). <i>Drug consults</i> also available providing useful comparative documents and Q & A style questions	
Cross over with other resources	“AHFS DI Essentials” is also available via LexiComp Online	Nothing that indicates this	Drug monographs e.g. from Gold Standard and BNF Journals published by Elsevier eBooks, including Meyler’s Side Effects of Drugs and Schaefer Drugs in Pregnancy. Many UK Guidelines, e.g. NICE, BASHH, BSR	Drug information is provided by IBM Micromedex	More detail available in the comparison document LexiComp Clinical Insights contains content from UpToDate. Briggs’ Drugs in Pregnancy & Lactation information available Access to AHFS Intravenous compatibility information powered by Trissel’s™ 2 Clinical Pharmaceuticals Database	No	More detail available in the comparison document Provides the drug information in DynaMed Includes duplicate copy of individual Martindale monographs Intravenous compatibility information powered by Trissel’s™ 2 Clinical Pharmaceuticals Database	Drug monographs powered by Lexicomp.
Focus of the resource	General drug-focused	Point of care evidence based medicine resource focusing on disease management.	General reference and repository to other information sources	Point of care evidence-based resource focusing on a wide range of diseases, not always covered elsewhere	Designed to be an all-in-one tool for prescribing and administering drugs. Information is mainly drug focused.	Mostly drug-focused but has some disease-focused monographs (“treatment reviews”).	Designed to be an all-in-one tool for prescribing and administering drugs. Covers FDA-approved prescription and non-prescription medicines	Information is disease focused though does have some general drug information.

UKMi Quality and Risk Management Group Tertiary Resources Comparison

Enquiry types it is valuable for	Pharmacokinetics	Treatment pathways and management of conditions. To establish whether international guidance is available for a particular condition.	Some specialist enquiries e.g. ADRs, pregnancy Literature searching	Choice of therapy for a particular disease state and evidence to support therapy.	Useful for unlicensed indications and dosing Alternative/herbal medicine information. Drug identification Paediatric Lexi-Drugs and Geriatric Lexi-Drugs provides useful tailored information for these age groups	Pharmacokinetics (Drugdex has more); Identifying of foreign medicines; Chemical structures; Molecular formulae; Pharmacopoeial information – e.g. storage instructions, solubility	Information on unlicensed/niche uses often not found elsewhere. Pharmacokinetic data. Alternative/herbal medicine information. Drug identification Additional pregnancy databases (extra cost) provide information not found elsewhere.	Disease focused enquiries. Drug interactions tool can be useful—gives referenced detail to interactions.
Enquiry types not (very) useful for	Limited information for non-US licensed drugs	Drug driven data such as PCKs, adverse effects, interactions etc.	Drug driven data such as PCKs, adverse effects, interactions etc.	Limited information on drugs not licensed in the US In depth pharmacokinetic and pharmacodynamic drug information not provided	Lacks depth for all specialist areas. Not useful for new drugs.	'Niche' uses of drugs, (Drugdex is better for this)	Limited use for treatment pathways	Drug driven data such as pharmacokinetics
Unique selling point	Small section on chemistry and stability	Available as an App for point of care use; link to available guidelines is particularly useful	Access to ebooks and journals	Available as an App for point of care use	App available 'Administration and Storage Issues' has some useful advice. Patient information leaflets available in 20 languages.	Foreign brand names Chemical structures Molecular formulae Pharmacopoeial information	App available	Available as an App for point of care use
Further comments	Little additional material in AHFS that is not available elsewhere	-	Huge information repository	Useful resource, particularly regarding medical conditions and their treatment	Taster site and training site available: https://www.wolterskluwer.com/en/solutions/lexicomp/resources/lexicomp-user-academy	Not a 'complete' drug reference, but a very good general reference source. The treatment reviews are basic.	The AI Assistant is too basic for the detailed needs of MI services.	Useful for disease info not found easily in other resources.

Disclaimer

You should always consult local policies and/or guidance. This document is intended to supplement these, not to replace them.

The information and opinion in this document are general information. The information and opinion are not legal advice, and should not be treated as such.

The information is provided without any representations or warranties, either express or implied.

Although we have attempted to ensure that the information and opinion are true, accurate, complete, current and non-misleading, to the best of our ability, we do not warrant that we have succeeded.

You must not rely on this document as an alternative to legal advice from a legal professional.

If you have any specific questions about a legal matter, you should contact your legal services provider.

Nothing in this disclaimer will:

- Limit or exclude any liability for death or personal injury resulting from negligence;
- Limit or exclude any liability for fraud or fraudulent misrepresentation;
- Limit or exclude any liabilities in any way that is not permitted under applicable law.

Contact

Author QRMG

QRMG.ukmi@nhs.net