AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

FACT SHEET
for health service organisations and clinicians

Recommendations for safe use of medicines terminology

ACCEPTABLE TERMS, ABBREVIATIONS AND DOSE DESIGNATIONS

This fact sheet supports the *Recommendation for safe use of medicines terminology*.[1] To eliminate the use of ambiguous 'error-prone' terms and promote patient safety, this document promotes the use of safe, clear and consistent abbreviations and terminology via a set of Best Practice Principles (the Principles). This fact sheet includes a summary of the Principles and tables listing acceptable terms, abbreviations and dose designations. The *Recommendation for safe use of medicines terminology* provides detailed information on the Principles and includes lists of 'error prone' or unacceptable terms, abbreviations and symbols.

Background

Medication errors are one of the most reported clinical incidents in acute health care settings and, while rates of serious harm are low, their prevalence is of concern particularly as many are preventable. **A recognised major cause of medication errors is the use of potentially dangerous abbreviations and dose expressions**, with 'error-prone' abbreviations being used in 8.4% of inhospital handwritten medication orders.[2]

'Error-prone' terminologies are a critical patient safety issue due to the potential for misinterpretation and **should never be used in any communications about medicines** (verbal, digital or handwritten), including policies, guidelines, posters or presentations.

An abbreviation, term or symbol used by a prescriber may mean something quite different to the person interpreting the medicine order, for instance, for dispensing or administration; or for patients (their family and/or carers) or other prescribers. Abbreviations that are unclear, ambiguous or incomplete may be misunderstood, and have been identified as 'error-prone'. In addition, when combined with words or numerals, the information may appear as something altogether unintended.

All medicines information is recommended to be presented in full within digital displays, without abbreviation.[3] However, there are some situations, such as small screen devices where abbreviations are required. In addition, abbreviations and acronyms may be helpful in accelerating the entry of clinical data, such as 'sig codes'. However, the resulting information should be displayed using the full name or terminology. **Any keystroke combinations or shortened forms to enable rapid data entry should be unambiguous** and displayed using the full name or terminology to achieve correct digital presentation.

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Application of the recommendations and Best Practice Principles

The Best Practice Principles and list of acceptable terms, abbreviations and dose designations apply to all medicine orders and medicines documentation and are relevant to the Australian context. This includes all handwritten, pre-printed or electronically generated or displayed medicine-related resources used in Australian hospitals or health services.

Verbal communications should also avoid use of abbreviations and outmoded or truncated language when relaying clinical information about a person's medical treatment. Effective communication, in all forms, supports safe and high-quality care.[4] This includes effective communication of critical information during clinical handover.[5]

Since 2016, many health services have moved from paper-based to digital medication management systems where efforts have focused on integrating principles from the Commission's *National Guidelines for On-screen Display of Medicines Information*.[3] Hybrid versions of these systems may also be in use, for example, where medicine orders are digitally generated and printed to paper which is used to record administration of these medicines.

Limitations, implementation and risk management

The ***Recommendation for safe use of medicines terminology***[1] is not an exhaustive list of all terminologies relating to medicines. Rather, it provides standardised guidance for the most frequently used terms and abbreviations in the Australian context. The absence of a term, abbreviation or symbol does not imply that it is safe to use.

Wherever possible, all medicines information should be presented in full, with no abbreviation.[2] Where full presentation is not possible due to limitations of space, such as small screen devices, then the standard terms and abbreviations described here may be used.

This guidance applies to all formats of medicines information presentation where space is provided for a full description. Refer to the ***Recommendation for safe use of medicines terminology***[1] for further information on limitations, implementation and risk management. This includes monitoring the use of 'error-prone' terminology.

Note: Some medicines catalogue data bases that support digital medication management systems do not align with this guidance. In these circumstances risk management principles will also need to be applied by health service organisations.

Best Practice Principles for safe, clear and consistent terminology for medicines

Best Practice Principle 1: Use plain language – avoid jargon

Best Practice Principle 2: Write or display all characters clearly – especially when handwriting medicine details

Best Practice Principle 3: Write, display or speak instructions and routes of administration in full

Best Practice Principle 4: Instructions must be clear

Best Practice Principle 5: Use active ingredient medicine names

Best Practice Principle 6: Write, display or speak medicine names and/or the chemical names of medicines in full – do not abbreviate

Best Practice Principle 7: Write or display days of the week names in full – or at a minimum the first three letters

Best Practice Principle 8: Incorporate safety features within digital systems to address unavoidable use of abbreviations

Best Practice Principle 9: Do not include the salt of the chemical unless it is clinically significant

Best Practice Principle 10: Use 'mixed-case lettering' for 'look-alike, sound-alike' medicines

Best Practice Principle 11: Express the dose, preferably as whole numbers, using words or Hindu-Arabic numbers. Apply metric units and do not use trailing zeros

Best Practice Principle 12: Use 24 hour time/clock format for time of day administration

Best Practice Principle 13: Express fractions in words

Best Practice Principle 14: Do not use symbols

Best Practice Principle 15: Do not use acronyms or abbreviations for medical terms and procedure names on orders or prescriptions

Best Practice Principle 16: Express numbers of 1,000 or more clearly

Best Practice Principle 17: Use acceptable circled codes on paper-based medication charts

List of acceptable terms, abbreviations and dose designations

Table 1: Dose frequency or timing

Intended meaning	Acceptable terms or abbreviations
(in the) morning	morning, mane*
(at) midday	midday
(at) night	night, nocte*
(at) bedtime	bedtime
once daily, once a day, daily, every day	'once a day' (preferably specifying the time of day)†, 'daily'
twice a day	bd*, BD*
three times a day	tds*, TDS*
four times a day	qid*, QID*
hourly, every hour	hourly, every hour
every two hours	every 2 hrs, every 2 hours
every 4 hours	every 4 hrs, 4 hourly, 4 hrly
every 6 hours	every 6 hrs, 6 hourly, 6 hrly
every 8 hours	every 8 hrs, 8 hourly, 8 hrly
every 12 hours	every 12 hrs, every 12 hours
once a week	'once a week' and specify the day, for example, 'once a week on Tue' (or Tuesdays)
twice a week	'twice a week' and specify the exact days, for example, 'twice a week on Mon and Thu'
three times a week	'three times a week' and specify the exact days, for example, 'three times a week on Mon, Wed and Sat'
every second day, on alternate days	every 2 days
every two weeks, per fortnight	every two weeks, every 2 weeks
days of the week	Mon, Tue, Wed, Thur, Fri, Sat, Sun
before food	before food
after food	after food
with food	with food
when required	prn*, PRN*
immediately	stat*
single dose	once
for one day only	for 1 day
for three days	for 3 days

* Considered acceptable abbreviations only in written presentations, such as, handwritten prescriptions or medicine orders.
† Once a day in the morning at 08:00 am OR once a week on a Tuesday.

Table 2: Routes of administration

Intended meaning	Acceptable terms or abbreviations
buccal	buccal
ear or eye (specify left, right or each/both)	right/left, or each/both, ear or eye
epidural	epidural
inhale, inhalation	inhale, inhalation
intraarticular	intraarticular
intradermal	intradermal
intramuscular	IM
intranasal	intranasal
intraosseous	intraosseous
intraperitoneal	intraperitoneal
intrathecal	intrathecal, IntraTHECAL*
intravenous	IV, IntraVENOUS*
irrigation	irrigation
left	left
naso-gastric	NG
nasojejunal	NJ
nebulised	NEB, ('nebulised' preferred on-screen)
oral	PO
per rectum	PR
per vagina	PV
percutaneous endoscopic jejunostomy	PEJ
percutaneous enteral gastrostomy	PEG
peripherally inserted central catheter	PICC
right	right
subcutaneous	subcut
sublingual	subling, under the tongue
topical	topical

* Mixed-case lettering applied to align with the ***National Standard for User-applied Labelling of Injectable Medicines, Fluids and Lines***.[6]

Table 3: Dose designations: Units of measure, concentration and rates of administration

Intended meaning	Acceptable terms or abbreviations
centimetre, millimetre	cm, mm
gram(s)	g
hour, minute	hour, minute **Exception:** Where 'hrs' and 'hrly' are acceptable abbreviations.
kilogram	kg
litre(s)	L
metre	metre
microgram(s)	microgram, MICROg, microg
microlitre, micromol, millimolar	microlitre, micromol, millimolar
milliequivalent	mEq
milligram(s)	mg
milligram per litre	mg/L
millilitre(s)	mL
millimole	mmol
millimole per litre	mmol/L
nanogram	nanogram (note: usual abbreviation 'ng' is not acceptable as it can potentially be confused with 'naso-gastric')
parts per million	ppm
percentage, percent	%
square centimetre, square metre	sq cm, sq m **Exception:** For digital display cm^2 and m^2 may also be acceptable if superscript is clearly shown
unit(s)	unit(s)
International unit(s)	unit(s) **Exception:** The amount of bleomycin can be referred to in international units. Other exceptions such as ELISA units and D antigen units, should be explicitly stated.
units per kilogram	units/kg
milligram per minute	mg/min
millilitre per hour	mL/hr
units per hour	units/hr

Table 4: Dose forms

Intended meaning	Acceptable terms or abbreviations
capsule	capsule, cap*, CAP*
cream	cream
ear drops	ear drops
ear ointment	ear ointment, ear oint
eye drops	eye drops
eye ointment	eye ointment, eye oint
injection	injection, inj, INJ
metered dose inhaler	metered dose inhaler, inhaler, MDI
mixture	mixture
nebule	NEB
ointment	ointment, oint
patient-controlled analgesia	PCA
pessary	pess
powder	powder
solution	solution
suppository	supp
suspension	suspension
tablet	tablet, tab*, TAB*

Find out more

For more information, please visit: **safetyandquality.gov.au**

You can also contact the project team at: **medsafety@safetyandquality.gov.au**

References

1. Australian Commission on Safety and Quality in Health Care. Recommendations for safe use of medicines terminology. Sydney: ACSQHC; 2024. Available from: **www.safetyandquality.gov.au/publications-and-resources/resource-library/recommendations-safe-use-medicines-terminology**
2. Dooley MJ, Wiseman M, Gu G. Prevalence of error-prone abbreviations used in medication prescribing for hospitalised patients: multi-hospital evaluation. Internal Medicine Journal; 2012 Mar; 42(3):e19–22. **onlinelibrary.wiley.com/doi/full/10.1111/j.1445-5994.2011.02697.x**
3. Australian Commission on Safety and Quality in Health Care. National Guidelines for On-screen Display of Medicines Information. Sydney: ACSQHC; 2017. Available from: **www.safetyandquality.gov.au/publications-and-resources/resource-library/national-guidelines-screen-display-medicines-information**
4. Australian Commission on Safety and Quality in Health Care. Health literacy: Taking action to improve safety and quality. Sydney: ACSQHC, 2014. Available from: **www.safetyandquality.gov.au/publications-and-resources/resource-library/health-literacy-taking-action-improve-safety-andquality**
5. Australian Commission on Safety and Quality in Health Care. Communicating with patients and colleagues. Communicating for Safety resource portal. [Internet] **c4sportal.safetyandquality.gov.au/communicating-with-patients-and-colleagues**
6. Australian Commission on Safety and Quality in Health Care. National standard for user-applied labelling of medicines, fluids and lines. Sydney: ACSQHC; 2017. Available from: **www.safetyandquality.gov.au/publications-and-resources/resource-library/national-standard-labelling-dispensed-medicines**

* 'TAB', 'tab', 'CAP' and 'cap' are considered acceptable abbreviations in written presentations. However, the expectation is for 'tablet' and 'capsule' to be expressed in full in digital displays, on dispensed medicine labels, and when communicated verbally.