NSW DEPARTMENT OF HEALTH
Pharmaceutical Services Branch

Key Principles for the Production and Use of Computer-generated Medication Charts in Residential Aged Care Facilities

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Summary Rationale

The provision of care in residential aged care facilities is supported by the Federal Government's Accreditation Standards, which relate to quality of care and quality of life for residents. The residential aged care program is administered under the (Commonwealth) Aged Care Act 1997 and governs all aspects of the provision of residential care. In order to assist facilities in achieving the Standard related to medication management, the Australian Pharmaceutical Advisory Council (APAC) developed *Guidelines for medication management in residential aged care facilities (November 2002, 3rd Edition).*

The APAC *Guidelines* recommend that:

All residents in residential aged care facilities, including respite residents, should have a chart for recording administered medicines (the medication chart). Residents who self-administer should have a list of their medications…………….

and the Guidelines state further that the chart should be……. *re-written by the prescriber at a time determined by the facility and the Medication Advisory Committee.*

The Key Principles provided below are intended to establish a best practice process for the use of an electronic system by a medical practitioner to generate printed charts for use in a residential aged care facility. These Principles are designed to minimise the possibility of inadvertent errors and to ensure that the prescriber's intentions are communicated safely and accurately to the person administering the patients' medication.

Definitions

In the following *Key Principles*:

- The term "**computer-generated chart**" refers to a paper chart that provides printed medication orders and that is produced by the prescriber by use of electronic (computer) clinical software.
- The term "**printed chart**" refers to a computer-generated medication chart that is produced by the prescriber per patient, and is not a pre-printed chart.

- The term “**current chart**” refers to a medication chart for a patient that is in use at the facility at that time.

- Wherever the term “**medical practitioner(s)**” is used, the term includes nurse practitioner(s) or dentist(s), within their context of practice.

- The term “**prescriber**” refers to a medical practitioner, nurse practitioner or dentist who is prescribing medication for the treatment of a patient in a residential aged care facility.

Key Principles

1. The Medication Advisory Committee (MAC) of the residential aged care facility should agree to the use of computer-generated medication charts in that facility.

2. The clinical **software** should be designed so that only medical practitioners can:
   - access patients’ electronic medical files for the purpose of updating information on patients’ medication;
   - prescribe medication for patients; and
   - generate patient medication charts.

3. The **software** should be designed so that the prescriber’s full name (first and last name) and professional designation (eg *Dr*) is automatically generated onto the chart.

4. The **software** should be designed so that it allows for the generation of the following **particulars** onto the chart, as a minimum:

   (a) The <u>name of the residential aged care facility</u>. The address of the facility should be included if possible (may be expressed as the patient’s address).

   (b) The <u>patient’s full name and other identifying information</u>, including as a minimum their date of birth, address and/or medical records number that has been issued by the facility. The patient’s ward/unit location should be included. No adhesive label containing the patient’s details should be adhered over the prescriber’s computer-generated patient details, unless a risk management system is in place at the facility to prevent an incorrect patient sticker being applied.

   (c) The <u>age of the patient</u> in years, in addition to their date of birth, for prominence.

   (d) The <u>weight</u> of the patient. The weight should have been recently measured.

(e) Known allergies/adverse drug reactions. Where there are no known allergies/adverse drug reactions, "Nil known" should be stated. This section of the chart should allow for free text entries.

(f) *Clear and unambiguous medication orders* that provide:

- The name of the medication. If a brand name is used, the generic name should also be included, in brackets.

- The strength and form of the medication, where applicable;

- The route. If the software does not allow for the prescriber to enter the route, he or she should enter it by hand on the chart (unless already evident in the medication order, for example, *salbutamol inhaler*);

- The dose and adequate directions for use, in full and in plain English.

  Ambiguous abbreviations and the use of Latin terms should be minimised. The software should *default* to express the directions for use in full even if the prescriber selects an abbreviated term on screen. Conversely, if the prescriber selects the full term on screen, the software should not default to print an abbreviated version on the chart.

  Numbers of tablets/capsules should be stated in words eg *One capsule at night* instead of *1 nocte*.

  Avoid fractions. *Half a tablet* should not be expressed on the chart as *1/2 tablet* as it may be misinterpreted as *one to two tablets*. Express in words or in numbers of units (eg 2.5mg).

  When a dose in mL or mg is prescribed as a decimal value, the software should default to print that dose with a leading zero. For example, *0.3mL* rather than *.3mL* (even if the prescriber may enter the dose on screen as *.3mL*. In this case, the intention is to prevent the decimal point being missed and the dose misread as *3mL.*

  A few further examples are as follows (the correct expression is underlined):

  every six hours instead of *6/24* – misinterpreted as "six times a day"
  for one day per week on Tuesdays instead of *x 1/7*– misinterpreted as "once daily for 7 days".
  4 Units insulin instead of *4 I.U.insulin* – misinterpreted as "41 Units".

  The term *prn* or *when necessary* should always be qualified by the indication for the use of the medicine and state a maximum number

of doses, if needed. For example, *Nitrazepam 5mg One tablet at night when needed for sleep.*

- Where applicable, the date of cessation or total/maximum number of doses or finite time period of administration. Examples are where a finite course of an antibiotic is prescribed, or a limited number of doses of a medicine is indicated, such as prn paracetamol (*max 8 tablets per day).*

4. The **software** should be designed so that, where there is more than one chart generated for a patient, the number of charts in use is automatically generated onto the chart, in a prominent place. For example, the first chart generated of a total of three charts might say “1 of 3 charts”. This information should be amended by hand if the number changes due to an extra chart generated or a chart ceased.

5. The **software** should be designed so that the medication orders and other particulars are generated directly onto a patient’s medication chart and are not generated onto a sticker (or other form) that is subsequently attached to a patient’s chart (due to the significant risk of attachment to the wrong patient’s chart).

6. The **software** should provide a section for the recording of administration of the medicine, directly adjacent to the medication order.

7. The computer **system** should allow space, where required, on the printed chart for attachment in a binder folder (a common practice in residential aged care facilities), so that key data is not effaced.

8. The computer **system** should include provision for data back up in case of system failure/sabotage.

9. The **prescriber** should not divulge any password or other unique identifier that he/she uses to access the computer system, to any other person. In order to enhance security, the **software** should allow for limiting the duration of password validity, requiring the prescriber to change their password at regular intervals, say three monthly.

10. The **prescriber** should check that the patient details and medication orders on the printed chart are correct before signing.

11. The **prescriber** should sign each medication order in his or her own handwriting. The date of prescribing of each medication should be shown on the chart, either printed by the system or entered by the prescriber by hand when signing.

12. Computer-generated medication orders should not be altered in any way by hand after printing, other than in the case of ceasing the medication**.** *Refer to principle 13 for prescribing of changes.*

13. Where changes to a patient's medication regimen are required during the life of a printed chart, a new chart should be produced following amendment to the patient's electronic medication profile.

    If this is not possible, new orders could be handwritten in a spare space on the current chart, signed and dated by the prescriber. If the new order replaces a printed order, such as a change in dose or drug, the printed order should be clearly ceased by the prescriber who should verify this with their signature. The original printed order should not be altered.

    Where new handwritten orders are made by a medical practitioner who is not the original prescriber, the medical practitioner should print their name next to their signature.

14. The **prescriber** should ensure that he/she updates patients' electronic medication profiles at their surgery following changes made to the patients' medication on site at the facility. As the need arises to generate a new chart to enable continued treatment, the prescriber should verify that the medication orders on the newly generated chart are up to date against a copy of the patient's current chart.

15. To avoid the risk of mix-up of charts, if a chart is generated before the chart it is replacing has finished, the **facility** should keep the newly generated chart apart from the chart in use, until the day of commencement.

Other Desirable Features

(a) The **software** should provide for the recording of administration of doses of nurse-initiated medication or medication prescribed by telephone on the computer-generated chart (by hand). This could be provided on the reverse side of the computer-generated chart or on a separate chart.

If these records are made on a separate chart, the chart should be kept together with the computer-generated chart.

(b) The **software** should provide a space for recording that a comprehensive medication review has been carried out by the prescriber or pharmacist.

(c) The **software** should allow for the generation of the following particulars onto the chart by the **prescriber**:

- The times of administration. These should be entered according to a set of standardised times agreed with the facility's MAC, in order to minimise the risk of error due to misinterpretation of the prescriber's intentions regarding frequency of administration.

- ➢ The <u>indication</u> of the medication for the information of nursing staff, and pharmacists undertaking medicines reviews. (Stated simply, for example: blood pressure, fluid, antibiotic, diabetes…..). This is particularly relevant where a medication is prescribed for a less common indication.

(d) The **software** should be designed to provide prescribing decision support, such as:

- ➢ alerts for significant drug interactions
- ➢ flagging of drugs requiring therapeutic monitoring
- ➢ links to therapeutic guidelines.