National In-patient Medication Chart

Introduction and Rationale

Safer prescribing, dispensing and administration of medicines to minimise patient harm

Government of Western Australia Department of Health

Objectives

The objectives of this session is to provide you with an understanding of:

- why a standardised chart is needed;
- the benefits of a standardised chart;
- the main features of the chart.

Principles

- We all make errors

"all human beings without exception whatsoever, make errors….. And such errors are a completely normal part of human cognitive function"

Allnutt M.F. Human factors in accidents. *Br J Anaesth.* **Jul 59(7):856-64, 1987.**

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CAT

Principles

- The health-care system is making errors

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The Washington Post

Tuesday, July 29, 2003

Donald M. Berwick

Invisible Injuries

We need a better system for tracking and preventing medical errors.

The Institute of Medicine, our nation's most respected adviser on medical science, says that at least 100 patients will die in hospitals in the United States today because of injuries from their care, not from their diseases.

How many will die tomorrow?

Tom Nolan, one of the leading quality-improvement scholars of our time, identifies three essential preconditions for improvement of anything: will, ideas and execution. When it comes to reducing medical errors, America's will and ideas are increasing steadily now, following the Institute of Medicine's lead.

And yet, so far I see no evidence that health care in the United States is becoming safer. The ingredient we seem to be missing most is the third one on Nolan's list: execution. Who will change the care? And when? At least four major roadblocks appear to lie between will and ideas, on the one hand, and execution, on the other.

First, in local hospital settings, our health care workforce largely remains blind to the enemy—patient injury. People who work in hospitals and clinics cannot easily see, day by day, the errors and injuries that large-scale research studies have found.

A simple calculation shows why: If 100 patients die from injuries in U.S. hospitals each day and there are 5,000 hospitals, that is very roughly one death per hospital every two months. From the viewpoint of individual doctors and nurses, this is an unobservably low rate, even if every death caused by error is known to be so, which is far from the case.

It's like most public health burdens. About 43,000 Americans die every year in automobile accidents, but most of us never actually witness such a death.

Of course, nonlethal injuries to patients are far more frequent, like "fender benders," but for so

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doing what other competent, caring people would do.

■ They believe that analyzing errors will allow them to find a single root cause, even though in fact the very idea of a "root cause" is misleading. Most system failures come from complex interactions between latent failures (the little things that go wrong all the time) and specific actions. Saying that one factor is a "root cause" is usually an illusion created by hindsight bias. It is Monday morning quarterbacking.

■ They believe that adding complexity improves reliability

tant hope for long-term returns or vague calculations about how much patient injuries are costing today don't often seem to carry the day in hospitals and clinics facing large and immediate financial losses.

Finally, improving safety is hard, not easy. A hospital that wants to make patients truly safer has to involve almost all departments, support systems and patterns of activity. Dozens of habitual

cars & airbags
pts & helmets

More deaths blamed on medical error

Tom Noble
Health Editor

More than one death a week reported to the Coroner by Victorian hospitals may be due to medical mistakes, according to a new investigative unit based at the Coroner's office.

In the first six months of this year, the Victorian Institute of Forensic Medicine identified about 30 cases in which medical errors may have caused or contributed to the patient's death, said the unit's acting director, David Ranson.

"About 20 cases a week come from hospitals. Of those we would probably pick up one or two a week that need in-depth analysis," Dr Ranson said.

The Age revealed yesterday that the state's hospitals reported to the Health Department 16 deaths due to medical mistakes for the year to June 30, 2003, the second year hospitals have been required to report such incidents.

Almost a dozen other people suffered injury due to medical staff treating the wrong patient or body part, instruments being left behind after surgery and neurological damage.

A range of errors led to the deaths, including three cases in which patients, including a child, were given the wrong medication. Medical experts regard the 16 reported deaths as only a small proportion of the actual number.

Dr Ranson said about 4000 deaths in Victoria were reported to the Coroner each year, including about 1000 from hospitals.

By law, hospitals must report to the Coroner cases that involve trauma, accident, people in care, a sudden natural death or an unexplained death. "We know there is a level of under-reporting to the Coroner as well," Dr Ranson said.

The investigations by the clinical liaison unit — set up late last year — were independent of the Health Department and would reinforce confidence in the Coroner's office, Dr Ranson said.

He said the unit's weekly examination of cases would counter criticism that suspected medical error cases were slow to be investigated. "Instead of being looked at the end of the process, they are being looked at near the start of the process."

The six-member unit, which includes two doctors and two nurses, advised which medical specialists should be consulted for expert advice. "They go out and help police investigators ask the right questions from the beginning." If medical error was suspected, an inquest would follow.

Dr Ranson said that in most medical error cases, individual doctors or nurses could not be blamed. "The reality is most of the issues are system issues," he said.

A key aim of the unit was to identify structural issues that would prevent incidents recurring, and provide hospitals with research findings to help them eliminate mistakes.

He said if the unit used broader guidelines to determine whether a medical error possibly contributed to a death, it could investigate 150 deaths a year. "If you take a middle view it might be 60," he said.

Australian Medical Association federal vice-president Mukesh Haikerwal said that the deaths reported by hospitals in 2002-03 needed to be put in the context of more than one million people seeking hospital treatment in the same period.

"We are at the safest time in history to be in hospital and have procedures done, but there's always room for improvement," he said. "One death is one too many, and 16 is 16 too many."

Dr Haikerwal said the State Government needed to ensure that medical equipment in hospitals was at a high standard to help prevent medical mistakes. "A lot of things need refurbishing and replacing," he said.

The Government said yesterday it would not release information on which hospitals were involved in medical errors as it did not want to encourage a safety "league table".

"The emphasis of the program is to identify systems shortcomings and issues — not to

The Age Newspaper

12 August 2003

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Ref:

Principles

- We are making a significant number or errors when prescribing, dispensing, documenting and administering drugs

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- Estimated that:
  - 140,000 hospital admissions each year are associated with medication problems.
  - medication errors account for up to 20% of adverse events in Australian health care and
  - medication errors cost $380 million per year in the public hospital system.

Australian Council for Safety & Quality in Health Care, "Second National Report on Medication Safety", 2002, Commonwealth Dept of Health, Canberra

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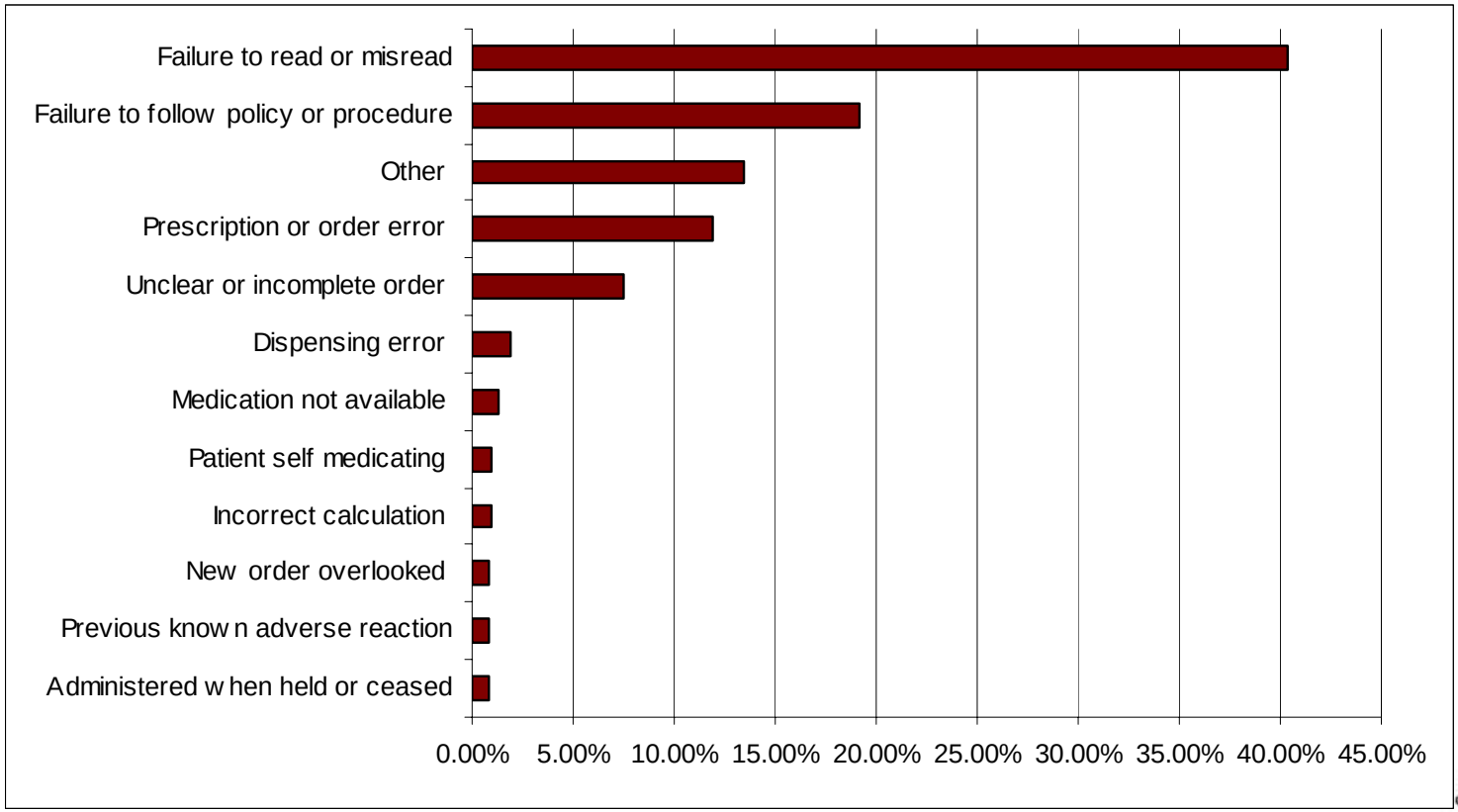
- Medication errors are the 2nd most common incident reported to AIMS (WA).
- Types of medication errors reported are:



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Principles

- We need to design systems to reduce the potential for error

"Human beings make mistakes because the systems, tasks and processes they work in are poorly designed"

Prof. Lucian Leape, Harvard School of Public Health

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ONE WAY
ONE WAY
ONE WAY
ONE WAY
SPEED LIMIT 40
ONE WAY
ONE WAY
ONE WAY
ONE WAY
ONE WAY
http://go.to/funpic

So what are we doing ?

- Participation in the Medication Safety Breakthrough Collaborative
- Distributing alerts on high risk medications eg. KCl, Vincristine
- Adverse Medicines Events Line - 1300 134 237
- Pharmaceutical Review
- Implementation of a standardised medication chart

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Standardised Medication Chart

- Australian Council for Safety and Quality in Health Care considered the introduction of a common medication chart a significant quality improvement strategy, through
  - standardising processes of communication
  - optimising workflow patterns
  - introducing functions to improve safe use of medicines

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Background to the NIMC

- July 2003, Australian Council for Safety and Quality in Health Care established a multidisciplinary working group to look at medication errors
- April 2004, Australian Health Ministers' Conference agreed that a common medication chart be in use in all public hospitals by June 2006, to assist in standardisation and consistent documentation of medications
- Queensland already commenced development and implementation of standardised chart

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Background to the NIMC

- August 2004, NIMC developed
- Jan – May 2005, pilot of national chart undertaken in 31 sites across Australia, including 3 in WA - Joondalup, Broome and Kalgoorlie
- December 2005 Area Chief Executives endorsed implementation of the NIMC in WA public hospitals

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What evidence did they use to design the NIMC?

- Extensive literature review focusing on factors that cause prescribing and administration errors
- Learning from human factors and ergonomics
- Observational studies and work practice mapping
- Audits
- Pilots
- National focus groups

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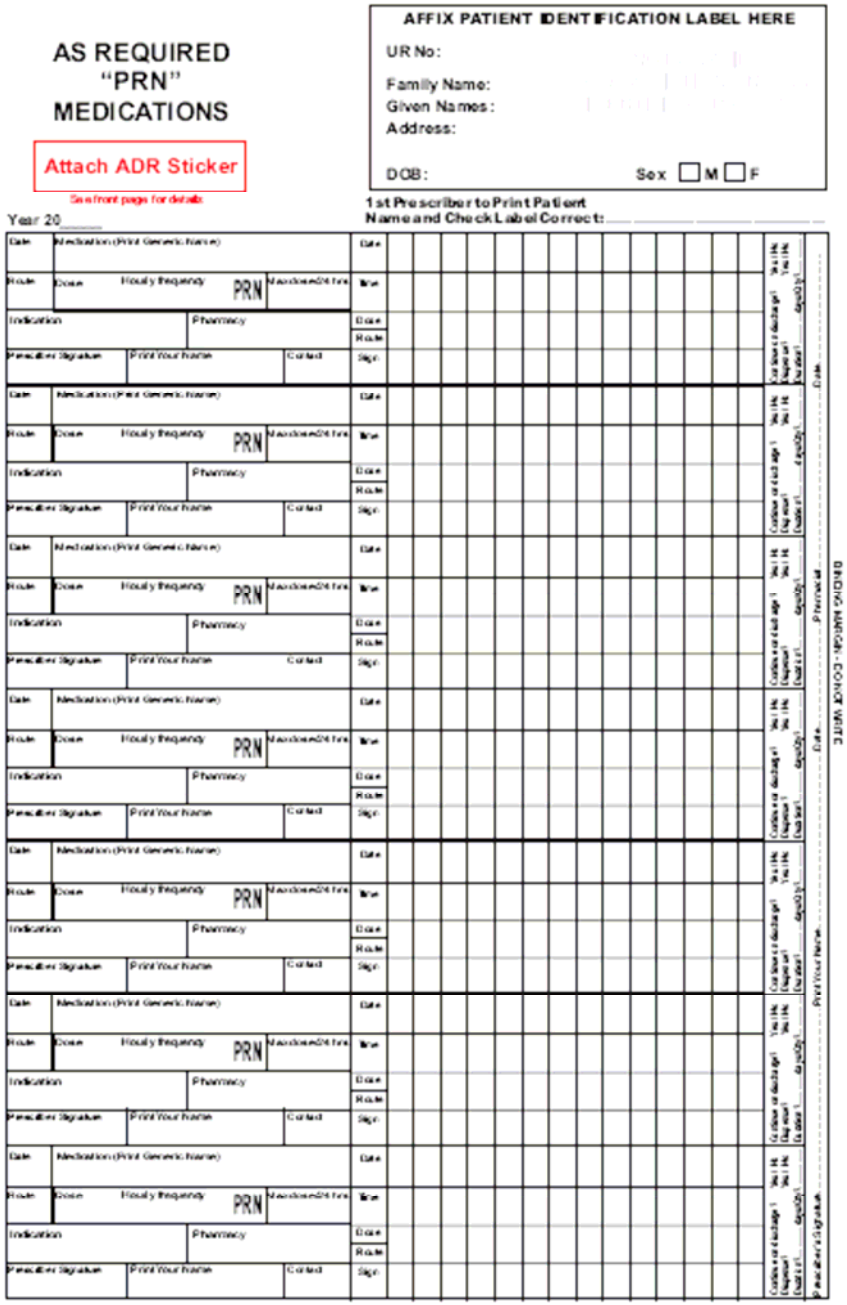
The NIMC

Front and Back Pages



AS REQUIRED "PRN" MEDICATIONS

Attach ADR Sticker

See front page for details

AFFIX PATIENT IDENTIFICATION LABEL HERE

UR No:

Family Name:

Given Names:

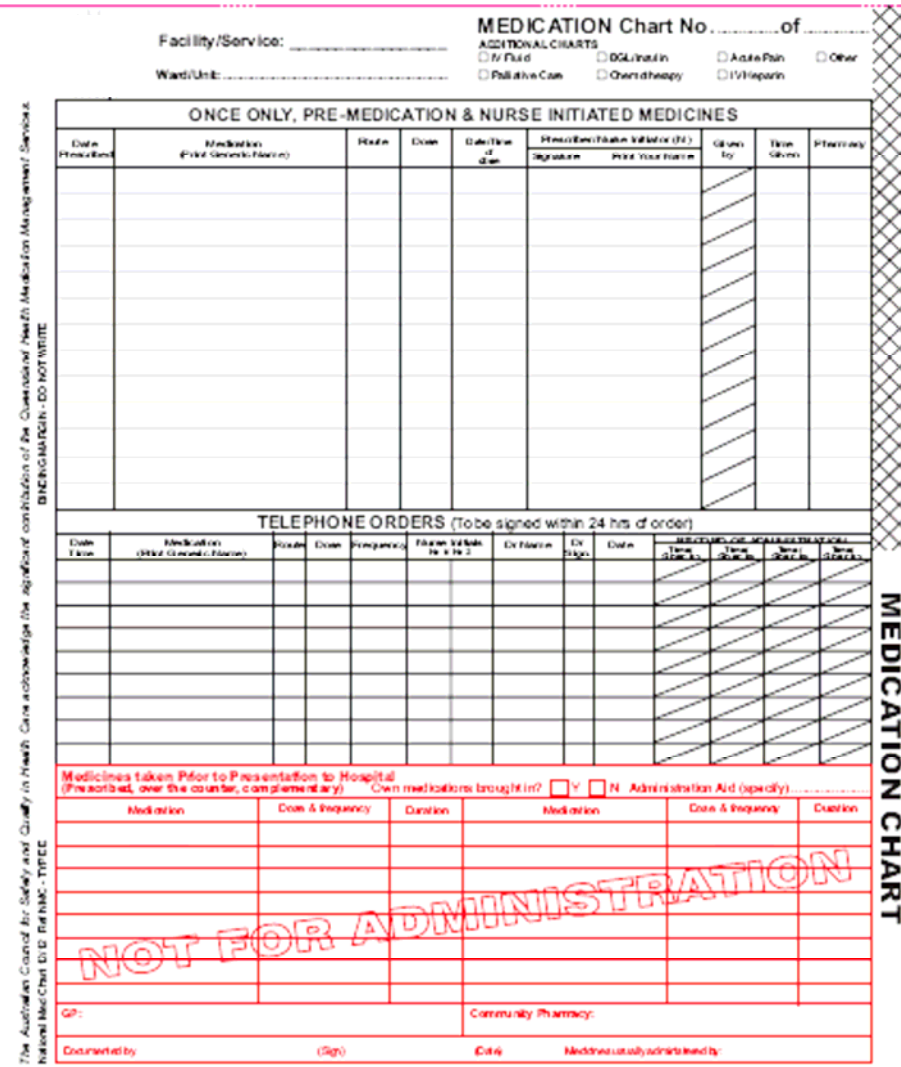
Address:

DOB: Sex ☐M ☐F

1st Prescriber to Print Patient Name and Check Label Correct:

Year 20____

BRING WHEN CHECK MADE



MEDICATION Chart No. ..... of .....

Facility/Service: .....

Ward/Unit: .....

ADDITIONAL CHARTS

☐ IV Fluid ☐ BGL/Insulin ☐ Acute Pain ☐ Other

☐ Palliative Care ☐ Chemotherapy ☐ IV Heparin

ONCE ONLY, PRE-MEDICATION & NURSE INITIATED MEDICINES

TELEPHONE ORDERS (To be signed within 24 hrs of order)

Medicines taken Prior to Presentation to Hospital (Prescribed, over the counter, complementary) Own medications brought in? ☐ Y ☐ N Administration Aid (specify) .....

NOT FOR ADMINISTRATION

GP: Community Pharmacy:

Document ed by (Sign) (Date) Medicines usually administered by:

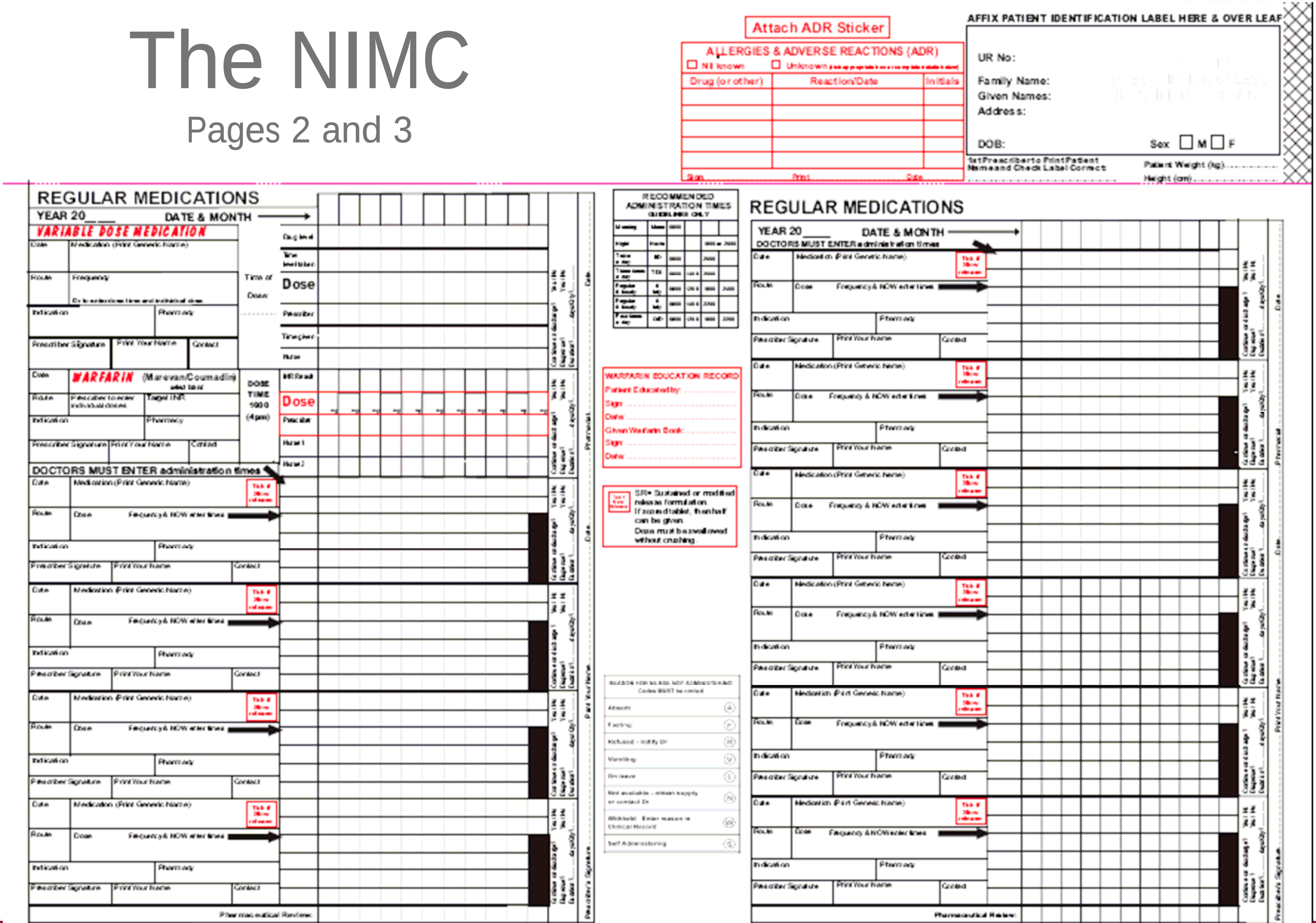
The Australian Council for Safety and Quality in Health Care acknowledges the significant contribution of the Queensland Health Medication Management Services National Med Chart DID for NIMC - TIPEE

ENDING MARCH - DO NOT WRITE

MEDICATION CHART

The NIMC

Pages 2 and 3



Attach ADR Sticker

ALLERGIES & ADVERSE REACTIONS (ADR)

☐ Nil known ☐ Unknown

Drug (or other)	Reaction/Date	Initials

Sign Print Date

AFFIX PATIENT IDENTIFICATION LABEL HERE & OVER LEAF

UR No:

Family Name:

Given Names:

Address:

DOB: Sex ☐ M ☐ F

1st Prescriber to Print Patient Name and Check Label Correct:

Patient Weight (kg)

Height (cm)

REGULAR MEDICATIONS

YEAR 20__ DATE & MONTH →

VARIABLE DOSE MEDICATION

Date | Medication (Print Generic Name)

Route | Frequency

Indication | Pharmacy

Prescriber Signature | Print Your Name | Contact

Time of Dose

Drug level

Dose

Prescriber

Nurse

WARFARIN (Marevan/Coumadin)

Route | Prescriber to enter individual doses | Target INR

Indication | Pharmacy

Prescriber Signature | Print Your Name | Contact

DOSE TIME 1600 (4 pm)

INR Result

Dose

Prescriber

Nurse 1

Nurse 2

DOCTORS MUST ENTER administration times

Date | Medication (Print Generic Name)

Route | Dose | Frequency & NOW enter times

Indication | Pharmacy

Prescriber Signature | Print Your Name | Contact

Pharmaceutical Review:

RECOMMENDED ADMINISTRATION TIMES

WARFARIN EDUCATION RECORD

Patient Educated by:

Sign:

Date:

Given Warfarin Book:

Sign:

Date:

SR= Sustained or modified release formulation. If scored tablet, then half can be given. Dose must be swallowed without crushing.

REGULAR MEDICATIONS

YEAR 20__ DATE & MONTH →

DOCTORS MUST ENTER administration times

Date | Medication (Print Generic Name)

Route | Dose | Frequency & NOW enter times

Indication | Pharmacy

Prescriber Signature | Print Your Name | Contact

Pharmaceutical Review:

Benefits of the NIMC

- Potential to reduce medication error
- Standard chart in all public health services
- Improved understanding of safety principles
- Improved completion of prescriptions
- Reduction in need for interpretation
- Reduction in the need for education of staff as they move between sites
- Proven template for use in electronic medication management

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What are the main features?

In summary:

- Initial clinician (doctor/nurse) needs to print the patient's name under their ID label
- All once off orders on front
- All regular orders in the middle section
- All PRN orders on back
- Variable dose drugs and Warfarin with regular medicine (middle section)

What are the main features?

In summary:

- Adverse drug reaction (ADR) information is clearly visible from 3 pages of the Chart
- **Doctors write administration times**
- Use of generic drug name only
- Must write hourly frequency and maximum dose for PRN orders

Other features

In summary:

- Prompt to ensure patients are provided with information about the use of Warfarin
- Prompt to remind prescriber to indicate a sustained or modified release
- Space for a patient's medication history prior to admission
- Space to clearly identify prescriber
- Daily review of chart by clinical pharmacists

NIMC - what it can do

Significantly reduce the types of errors we have identified

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NIMC - what it can't do

Eliminate these errors

Department of Health

Success is dependent on

Clinicians recognising the importance of good communication through the medication chart

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Where do I find more information?

www.health.wa.gov.au/nimc

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