# Safe Medicine Administration: An approach that goes beyond policy content

On behalf of

- project lead independent contractor – Shelly Jones reporting to EDONM

- and the multidisciplinary reference group

- also the 50 nursing and midwifery staff who told us how practice was and what helped keep them and their patients safe

- Capability Development team – final product

For a variety of reasons, around 20% of patients during their stay in hospital experience some degree of harm from their medications
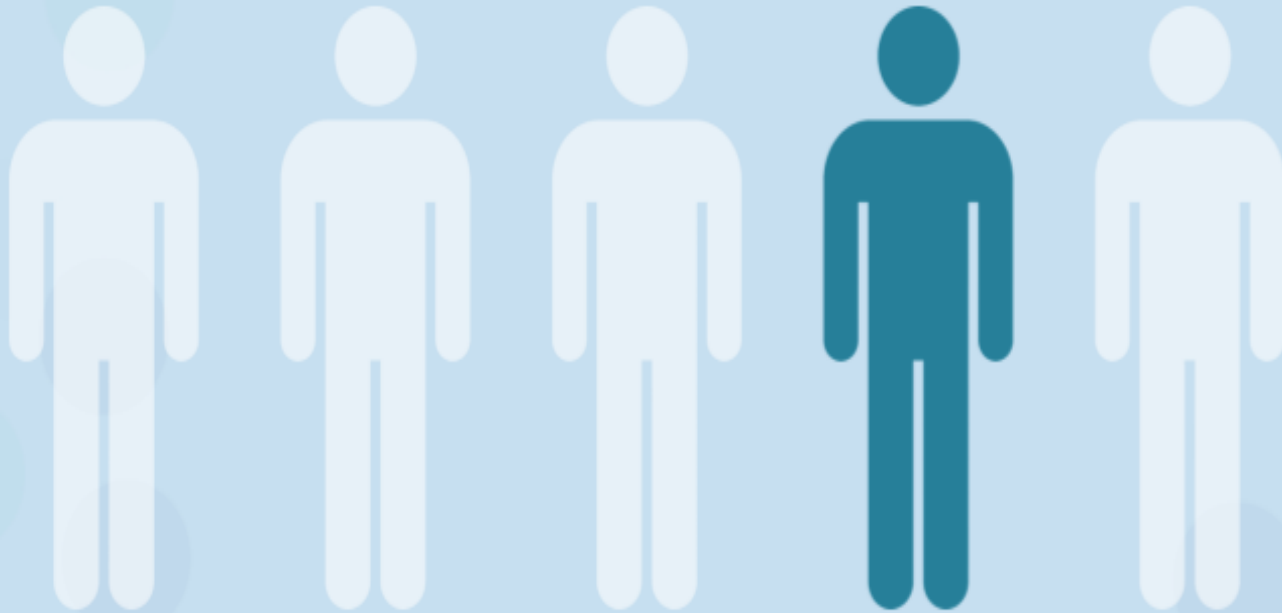
around 1 in 5

And about 1-2% of inpatients will suffer serious harm related to medicines

The checking steps or "rights of medication administration"

- ..require HCP to use critical thinking with their clinical knowledge and judgement as well as effective communication with patients and colleagues involved in medicines management.

The nine rights of medication administration: an overview

THE '5+3 RIGHTS'

Rethinking the 5 rights
of medicine administration

'Final' policy purpose … is to ensure

- safe and effective medication administration that complies with legislation, CCDHB polices and best practice to **prevent harm and promote good patient care outcomes**.

- Medication errors can potentially occur at any point in medication management.

- The HCP administering medicines have the final opportunity to prevent medication errors that can result in serious harm or even patient death.

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An evidence-based approach directs our attention to high risk medicines

World Health Organization

The third global patient safety challenge: tackling medication-related harm

HIGH RISK MEDICATION AND RELATED SITUATION LIST
FULL INDEPENDENT TWO PERSON (DOUBLE) CHECK {INDEPENDENT MEDICINE TWO PERSON (DOUBLE) CHECK **PLUS** INDEPENDENT TWO PERSON (DOUBLE) PATIENT ADMINISTRATION CHECK}
Adrenaline IV/IM (excludes local anaesthetic preparations)
All child health parenteral (not Gastrointestinal tract) medication administration
All medication with area specific administration guidelines/policy requiring full double check
All medications via epidural, intrathecal, intraosseous and intra-arterial routes
Blood components/ products
Controlled and restricted medicines - all routes continuous or intermittent NOTE: An exception is oral route (adult) when only independent medicine double check is required
Changing the rate of a high risk medication or in related situations NOTE: An exception to this is when the FULL medication and patient check has been undertaken and the medicine is being titrated in ED, PACU, ICU & flight transport
Changing care providers (e.g. change of shift, bedside report, transfer between units) while a patient is on a continuous/intermittent infusion from the high risk medication or related situations list
Enteral and parenteral chemotherapeutic and biologic therapies including methotrexate
Hypertonic dextrose >20% - IV
Hypertonic sodium chloride >0.9% - IV
Insulin IV/SC refer In-patient self medication policy for exceptions NOTE: An exception to this is when the SC route can be checked with the (adult) patient BEFORE administration as then only an independent medicine double check is required
IV anaesthesia agents including ketamine
IV anticoagulants and thrombolytics NOTE: An exception to this is with anticoagulation used in renal haemodialysis
IV inotropes and vasoactive medicines NOTE: An exception is titrating after the FULL Independent check and as protocols
IV radiocontrast agents
IV sedation (moderate)agents
Liposomal formulations
Magnesium sulphate injection
Neuromuscular blocking agents
Potassium preparations (excluding oral)
Syntocinon IV/IM
Total parenteral nutrition (TPN)

Background

- Initial policy roll out was based on policy content

- A new policy *Safe Medicine Administration 1.964* requiring changes to practice:

  - in identifying patients prior to medicine administration

  - a two person independent checking process in defined situations (certain drugs, routes and contexts).

- No learning "fundamentals" to support RN practice

- Recognised there is a gap between WAI and WAD and the context - requires a total quality improvement perspective

Administering medicines safely: understanding the context

This important task is carried out in a demanding work environment, where nurses identify these as the top reasons for medication administration errors:

- distractions and interruptions

- nurse-patient ratio

- multiple patients needing multiple medicines.

Principles for the eLearning module

Patient safety perspective

- Humans are a source of error, therefore we should strengthen systems.

- Systems cannot completely cater for complexity, therefore we need to recognise that resilience comes from the human element.

Positive approach vs deficit model

- Most medicines are given safely – we are not overemphasizing reporting.
- We ask learners to affirm their good practices and identify any areas they want to work on.

Practice wisdom

- The core material is reality-based practice wisdom based on Input from 50+ nurses/midwives in focus groups and learning sessions.

Administering medicines safely

"People are in hospital because they need the skilled care of health professionals – otherwise they'd be at home. Many of our patients have complex and unstable conditions, and as their medicines have multiple actions, administering medicines safely is a real challenge.

We know you need medicines to be prescribed accurately and appropriately. We know it can be frustrating if you are having to wait to use the Pyxis machine. And we know that there are many pressures and distractions in your day.

We talked to 50 nurses and midwives about what you do to keep your patients safe, keep yourself safe and your colleagues safe around administering medicines. What they said is the reality-based practice wisdom you'll find in this eLearning module and the course resources.

Thank you, and welcome to the course."

Andrea McCance
Executive Director of Nursing and Midwifery, CCDHB

By the numbers:

Medicines administered to patients everyday

Over 6,000 medicines are administered to patients at Wellington Regional Hospital

Nearly 3,000 medicines are administered to patients at Kenepuru Hospital

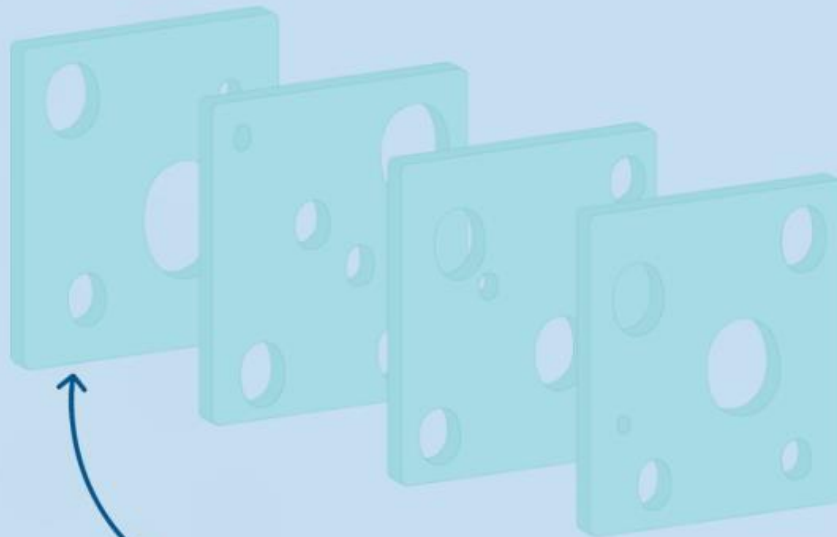Approximately how many medicines would you administer on an average shift?

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A complex system of patient safety

One perspective on patient safety is that in a complex system, humans can make errors – therefore we need to make the system stronger.
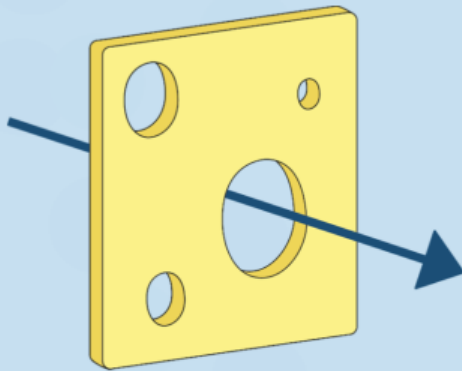
A complex system of safety measures can still fail

Click on the first slice of cheese to see a real historical example.

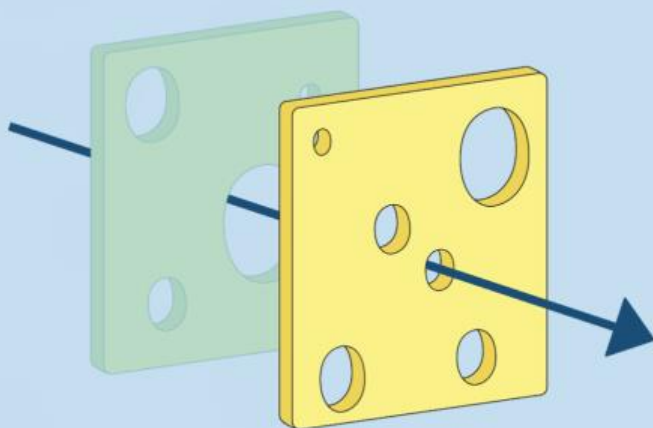# **A complex system** of safety measures can still fail

Outside Factors

All medication is clearly labelled however 10 ml ampoules of sodium chloride 0.9% look similar to ampoules of potassium chloride 750 mg.

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A complex system of safety measures can still fail
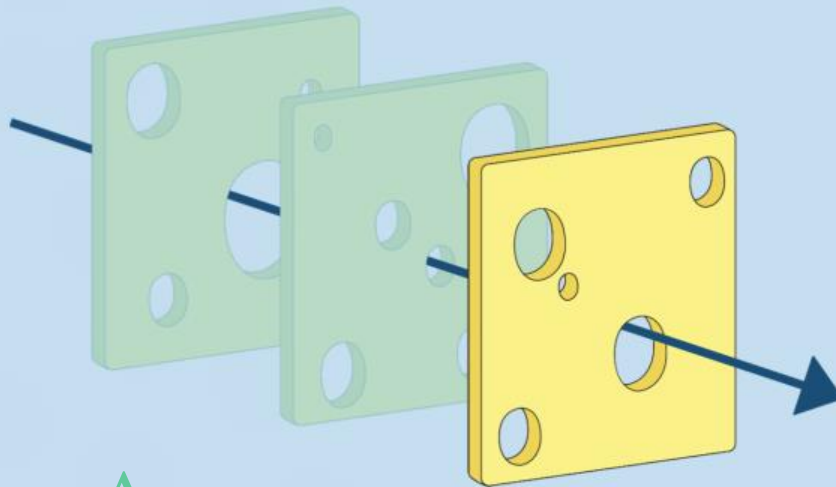

Storage

The ampoules are stored on the ward next to each other.

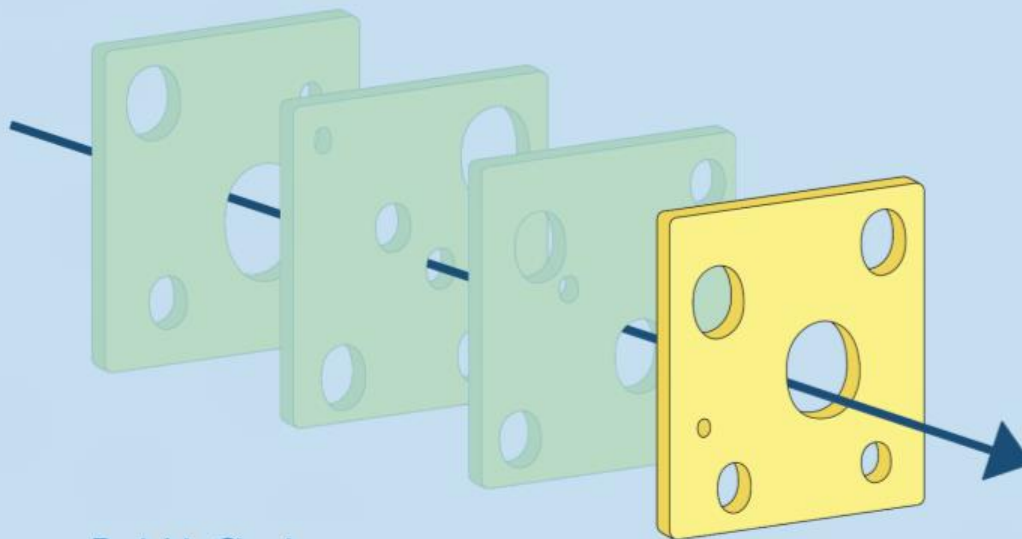# A complex system of safety measures can still fail

First Check

A nurse accidentally picks a KCL ampoule instead of a NaCl ampoule and prepares a flush.

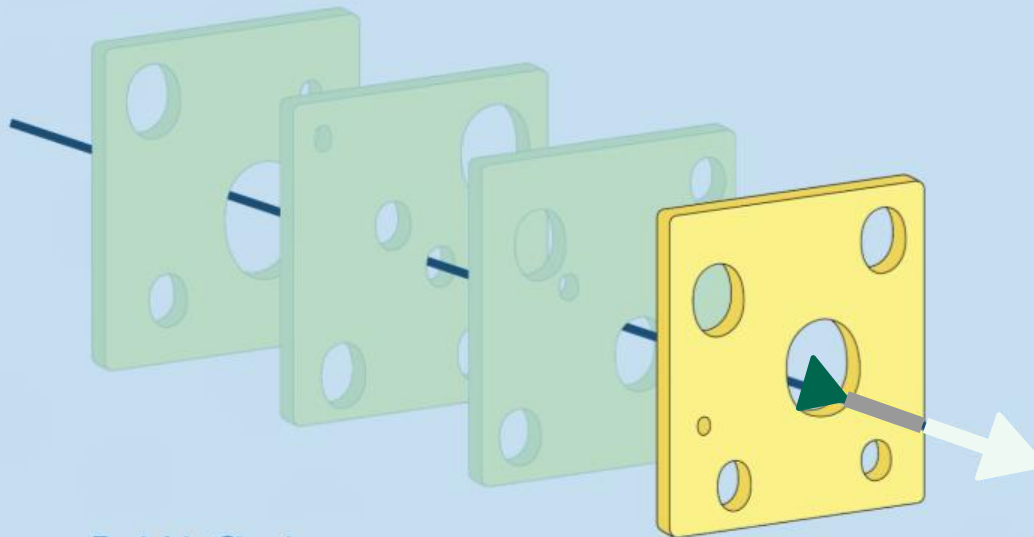# A complex system of safety measures can still fail

Bedside Check

If at the bedside the nurse was distracted, they might not have noticed the incorrect ampoule, and proceeded to administer the flush.
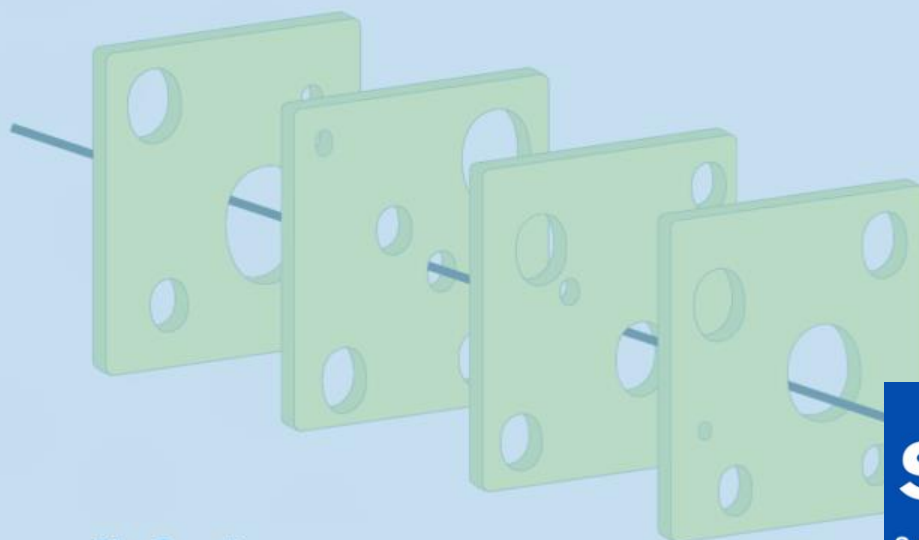
A complex system of safety measures can still fail

Bedside Check

Luckily the nurse noticed the incorrect ampoule while doing the bedside check and prepared a new flush.

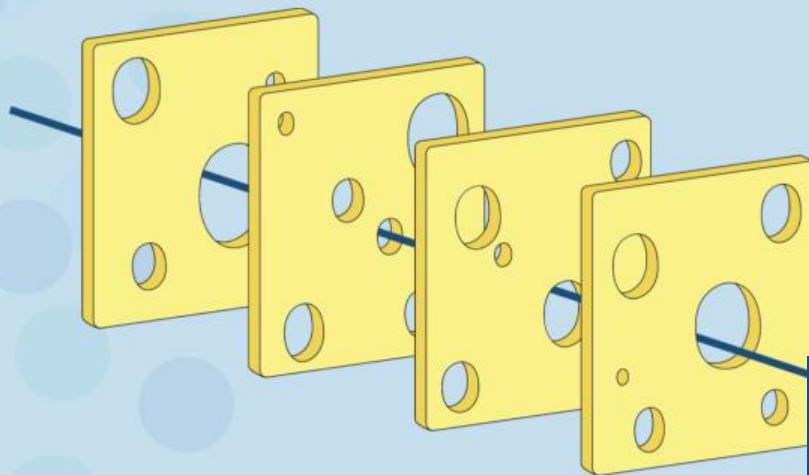# **A complex system** of safety measures can still fail

The Result

In this case, three of the four layers failed and it was a good catch at the last layer due to the practice of the health professional

3DHB
SQUARE
Safety Quality And Reportable Events

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A complex system of safety measures can still fail

3DHB SQUARE
Safety Quality And Reportable Events

Making it Safer

A number of reported incidents and 'near misses' across DHBs where potassium chloride was unintentionally given as a bolus has led to a system change, with the withdrawal of KCL ampoules and supply of premixed solutions.

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A complex system of patient safety:
The human element

Another perspective is that health professionals are skilled in noticing and anticipating when things could go wrong or are going wrong.

Therefore we need to support their practice to take the actions that actually make systems resilient.

Maria

Stacey

Key themes and messages

Internalised values

Know your patient, know the drug, involve your patient.

Rethinking the 5 rights of medicine administration as a protective guideline

Ask yourself: What makes it the right patient/drug/ dose/time/route?

Ask yourself: Have I done the right documentation?

Good practices

Keep your patient safe, keep your self safe, keep your colleague safe.

3 important values

KNOW YOUR PATIENT

KNOW THE DRUG

INVOLVE YOUR PATIENT

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The human elements of system resilience

| CLINICAL JUDGEMENT | CRITICAL THINKING | SITUATIONAL AWARENESS |

Click on each of the above elements for more information.

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Scenario One
What has my patient already had?

Scenario Two
What is the whole picture with my patient?

Scenario Three
Has my patient any allergies or had any adverse drug reactions?

Learning from the experience of being a patient

Learning from being involved in a medication error

Nurses have multiple demands on their time and attention, but keeping focus on the patient when giving medicines is critical:
Abina's story

NEXT

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WHAT IT LOOKS LIKE IN PRACTICE
One perspective

In an ideal world I review my patients' charts at the beginning of the shift and plan out the medications I expect to give. My planning includes checking the patients allergies, and preferences e.g. liquids only). If it is a drug I do not know I look it up. Then at the first interaction with the patient I go over the plan with them. It is not uncommon for the patient to change the plan a little. This is not a problem.

In the real world I am often checking drugs out for patients I do not know. I use the Pyxis history a lot. And I check with the patient what they are expecting. On many a day this has saved me from making an error - especially when they have been given a drug but it is not recorded in the drug chart.

I know I have a better chance of doing medications safely if I can prepare and give drugs without interruptions.

CCDHB RN/RM

Job aids/performance support

- Best practice in supporting performance is to provide help screens, prompts, checklists or cheat sheets when the task is complex and there is a lot to remember.

- We've used colleague wisdom 'What others are saying' in two print-and-fold pocketcards.

KNOW YOUR PATIENT

KNOW THE DRUG

INVOLVE YOUR PATIENT

RE-THINKING THE 5 RIGHTS OF MEDICINE ADMINISTRATION

Without your clinical judgement, critical thinking and situational awareness, the 5 rights are just an empty idea.

But you can use the 5 rights checking procedure as a protective guideline, by asking at each step:
What makes it right?

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Acknowledgments

Thank you

- to the many nurse educators who've been involved
- to the nurses and midwives in focus groups and test sessions
- to the nurses who were photographed.