Clinical decision-making for the 21st century pharmacist

Stephen Duffull¹, Daniel Wright¹, & Megan Anakin²

¹School of Pharmacy
²Education Unit, Dunedin School of Medicine
Purpose

Learning outcomes

• Describe a philosophical framework for clinical decision-making and pharmacy practice that can be used to explore the changing roles of pharmacists in the 21st Century.

• Use the framework to analyse the services you provide in your practice and better understand how you make clinical decisions.
Workshop outline

- Introduction (15 min)
- Introduction to clinical decision-making (10 min)
- Discussion about clinical decision-making (20 min)
- Introduction to the philosophical framework (10 min)
- Discussion of the philosophical framework (20 min)
- Group discussion (10 min)
- Closure (5 min)
Clinical decision-making

(and pharmacy practice in the 21st century)
What do we mean by clinical decision-making?

Cognitive processes and skills that allow pharmacists to make patient-centered, therapeutic decisions

(Wright et al RSAP, under review)

~In medicine, the emphasis is on diagnosis not therapeutics~
Key tenets for this workshop

- Some components of clinical decision-making are *tacit*
- Direct responsibility for clinical decisions is not traditionally central to a pharmacists *professional identity*
- Clinical decision-making is a recognised component of *professional competency*
- Clinical decision-making underpins a pharmacists *expanding scope of practice*
- Clinical decision-making skills for therapeutics are *under-developed*
Some components of clinical decision-making are tacit

- Thinking processes are tacit by definition (unless think-aloud)...
  - How do we define and document a tacit process?
  - How can we teach something that is tacit?

- Need to break down the tacit processes into teachable skills (things you can say and do)
Clinical decisions and professional identity

Pharmacists are reluctant to take on responsibility for their decisions and do not feel confident in their clinical decision-making capabilities.

Frankel & Austin Can Pharm J. 2013;146:155-161

These instances of clinical reasoning were however not used in a conscious manner or with specific purpose and were often applied incorrectly and based on assumptions and not on evidence:

Sinopoulou et al J Eval Clin Pract 2017;23(6) 1482-1488

Conclusions: Pharmacists rarely exhibited clinical decision-making and relied heavily on protocol-led questioning strategies.

Akhtar & Rutter RSAP 2015;11:472-479

BOX 1 Pharmacist personality traits related to patient care

- Lack of confidence
- Fear of new responsibility
- Paralysis in the face of ambiguity
- Need for approval
- Risk aversion

Personality traits may play an important role in how pharmacists approach the adoption of new scopes of practice.

Rosenthal et al Can Pharm J. 2010;143:37-42

Clinical decision-making is a recognised component of professional competency

- Pharmacy Council of New Zealand
- Pharmaceutical Society of Australia
- General Practice Council
- National Association of Pharmacy Regulatory Authorities
- American Pharmaceutical Association
- American College of Clinical Pharmacy
- World Health Organisation
- Centre for the Advancement of Pharmacy Education (CAPE) Educational
- Association of Faculties of Pharmacy of Canada
- Accreditation Council for Pharmacy Education
Support for expanding pharmacists roles...

- The design and implementation of treatment plans is a key component of pharmaceutical care \( (\text{Hepler and Strand Am J Hosp Pharm. 1990;47:533-543}) \)
- How are therapeutic decisions made and what skills are required?

---

**Important for expanding roles**

- Medicines review services
- Primary care roles
- Prescribing
- ...

---

**PP 4.1**

Apply professional reasoning and judgment

Recognises priorities and uncertainties when problem solving

---

**PP 4.1.2**

Uses sound reasoning and judgment skills when making decisions/recommendations in everyday and complex situations and resolves issues holistically

---

NZ Pharmacy Council (2010). Prescribing competency framework and standards
Clinical decision-making skills are under-developed...

1. Processes required for drug therapy decisions are poorly understood
   – Assumed to be the same as diagnostic reasoning
2. Errors in drug therapy decisions need to be defined and recognised
   – Not straightforward – there may be multiple solutions
3. Optimal teaching for drug therapy decisions are lacking
   – Particularly around handling uncertainty
4. Strategies to support clinical decision-making in practice need to be identified and implemented

Cook et al. JAMA 2018;319(22):2267-2268
CLINICAL DECISION MAKING

01 INFORMATION GATHERING
- Understanding the patient
- Recognising the issues

02 CLINICAL REASONING
- Contextualising goals
- Therapeutic options

03 CLINICAL JUDGEMENT
- Weighing up the options

04 CLINICAL DECISION
- Enacting the decision
- Reflecting on the outcome
A non-clinical decision-making example
Workshop

• A clinical decision you have made
• Unpack the decision to Information gathering – Clinical Reasoning – Clinical Judgement – The Decision
• Concentrate on Reasoning and Judgement
• Who is the recipient of your decision?
A framework for clinical decision making
CLINICAL DECISION MAKING

01 INFORMATION GATHERING
02 CLINICAL REASONING
03 CLINICAL JUDGEMENT
04 CLINICAL DECISION
Some pharmacy services...

• Dispensing
• Adherence support
• Vaccination
• Medicines reconciliation
• Over the counter prescribing
• Therapeutic drug monitoring
• Mental health services
• Medicines information
• De-prescribing
• Anticoagulation
• Hypertension clinics
• Clinical checking
• Prescribing
• ...

... what are the common threads?
Common threads to pharmacy services

• Clinical services can be divided into three main types
  – *Checking* for clinical safety
  – *Advising* healthcare professionals or patients about health and optimal use of medicines
  – *Prescribing* for promoting health and wellness
**PHARMACY**

**DECISION FRAMEWORK**

**CHECK**
- Clinical check
- Reduces harm to patient

**Non-maleficence**

**ADVISE**
- Optimising care
- Supports a clinical process

**Secondary beneficence**

**PRESCRIBE**
- Initiating care
- Creates a clinical process

**Primary beneficence**
HOW DOES THIS PLAY OUT INTO PRACTICE?
General practitioner chooses an antibiotic for Strep throat
**Pharmacist identifies patient has an allergy to the chosen antibiotic**

The non-maleficent framework: The role of the pharmacist carries negligible additional risk to the patient.

**General Practitioner chooses an antibiotic for Strep. throat**
General Practitioner wishes to choose a drug for treating an infection during pregnancy
The secondary-beneficent framework: The role of the Pharmacist informs the clinical decision-making process of the General Practitioner.

General Practitioner wishes to choose a drug for treating an infection during pregnancy.

Medicines information pharmacist identifies preferred choice and notifies the General Practitioner.
The primary-beneficent framework: The clinical decision-making models of the Pharmacist and General Practitioner work in concert to optimise patient care.

General practitioner works with the pharmacist to manage and optimise medical treatment of the patient.
PHARMACY
DECISION FRAMEWORK

CHECK
- Clinical check
- Reduces harm to patient

Non-maleficence

ADVISE
- Optimising care
- Supports a clinical process

Secondary beneficence

PRESCRIBE
- Initiating care
- Creates a clinical process

Primary beneficence
Workshop

• What services do you provide and how do these align with different components of the philosophical framework?
• Discuss one service and how it links with the *Reasoning* and *Judgement* part of the Clinical Decision-Making framework.
• As a preceptor, mentor, educator, how does knowledge of service type influence your trainee programme?
Group discussion

Insights
Issues
Challenges
Next steps
Closure

• Concluding statements
• Take home messages
• Opportunity for reflection
• Request for feedback
References


Wright DFB, Anakin MG, Duffull SB. Clinical decision-making: an essential skill for 21st century pharmacy practice *Res Social Adm Pharm* Under-review
Thank you

stephen.duffull@otago.ac.nz
dan.wright@otago.ac.nz
megan.anakin@otago.ac.nz

School of Pharmacy
Te Kura Mātauraka Wai - whakaora
Dunedin School of Medicine
Te Kura Whaiora o Ōtepoti