

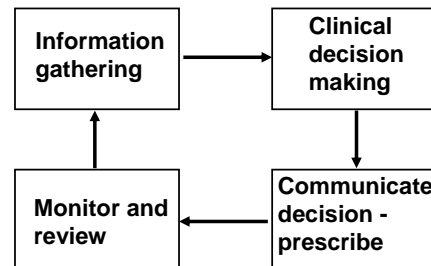
Medication History

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Four components of prescribing



Case 1

- 45y man with long standing asthma & OA hip
- Presents to ED with exacerbation of asthma; FEV1 1.5 litres, increases up to 2.4 litres after salbutamol

What else do you want to know?

Case 1

- 45y man with long standing asthma & OA hip
- Presents to ED with exacerbation of asthma; FEV1 1.5 litres, increases up to 2.4 litres after salbutamol
- Deteriorated over 4 days
- No obvious URTI
- Usual treatment Seretide pMDI 250/25 ii bd
- Took Brufen for OA over last week

Case 1

What else would you do?

What treatment would you suggest?

Case 2

- 64y man with past AMI, angina, CCF presents with increasing SOB and ankle oedema (recent S Cr 150mmol/l)
- Usual treatment: frusemide 40mg bd, lisinopril 10mg a day, Imdur 60mg one a day (recently 2 a day), GTN prn

What else do you want to know?

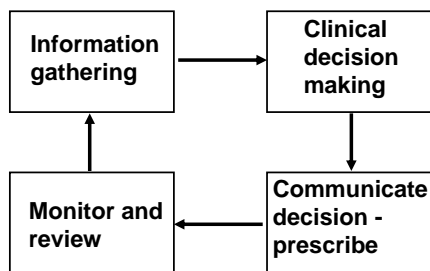
Case 2

- BP 140/90
- Signs and CXR show moderate LVF
- Medication
 - Not taking other meds
 - Frusemide taken 8am & 12MD
 - Anginine not working
 - Imdur taken 8am & 8pm
 - Not taking a β blocker

The Importance of Medication Histories

- 14.5% of consumers are on ≥ 4 medicines (ABS)
- On admission, up to 65% of patients have an incomplete medication history, and medicines not being administered during the hospital stay
- 5-20% of medical admissions drug related
- Worst in ESRD: 48 of 52 patients had at least one drug-related problem; of the 199 drug-related problems identified, 130(65%) were linked to incomplete or inaccurate medication histories
- Pharmacists detect most of the omitted drugs

Four components of prescribing



Information gathering

- Take and/or review medical and medication history and undertake physical examination and investigations where appropriate
- Compare the medical and medication histories to determine appropriate links and discrepancies
- Assess adherence to current and past medication and risk factors for non-adherence
- View and assess the patient's needs holistically (psychosocial, physical)

Information gathering

- Access and interpret all relevant patient records to ensure knowledge of the patient's past management
- Review the nature, severity and significance of the symptoms/clinical problem/diagnosis
- Consider the natural history of the clinical problem/diagnosis
- Request and interpret relevant diagnostic tests

Adherence - definition

The extent to which a person's behaviour (taking medication, following a diet, &/or executing lifestyle changes) corresponds with agreed recommendations from a clinician

After Haynes, 1979; and Rand, 1993

Adherence - definition

- Contrast with “Compliance” where no requirement for patient to agree. The patient does as they are told.
- However, in many adherence studies not clear if agreement reached.
- Contrast with Informed Consent for procedures
 - Consider potential benefit and harm of appendicectomy and warfarin
 - Rogers and Whittaker

Adherence - cost

- Adherence predicts outcomes in many trials, including diabetes & hypertension, dyslipidaemia,
 - But so does adherence to placebo
- In USA, 33-69% of medication-related admissions due to NA
 - At a cost of US\$100 billion/year

Adherence - prevalence

In clinical trials, averages

- ?

In practice,

- ?

Adherence - prevalence

In clinical trials, averages

- 43-78%

In practice,

- Statins: 25-65%
- Hypertension: 25-65%
- Asthma: 30-70%
- Smoking/weight: <10%

One sixth of patients take...

- Treatment exactly as prescribed
- All medicines, but missing occasionally
- Most of time but miss on single days
- Drug holidays of >3 days a few times a year
- Drug holidays frequently
- Few or no doses at all

Urguhart J. Br J Clin Dermatol 2002;34:487-9.

Adherence

- Yet, virtually all patients say they take all the time
- Most clinicians detect less than 50% of poor adherence
- If important, how do you best detect non-adherence?

Predictors of Poor Adherence

- ??
- ??

Predictors of Poor Adherence

- Asymptomatic disease
- Psychological illness
- Cognitive impairment
- Lack of belief of benefit
- Belief in complementary treatments
- Complexity of medication
- SE of medication
- Cost of medication
- Poor prescriber-patient relationship

Measures of Adherence

Practical (indirect)

Impractical (direct)

Measures of Adherence

Practical (indirect)

- Ask the patient (adherence & SE)
- Treatment response
- Appointment attendance
- Drug levels
- Prescription refills

Impractical (direct)

- DOT
- Electronic medication monitors

What might work (1)

- More verbal, written and visual material
- Counselling on benefits of treatment and adherence
- Telephone follow-up
- Convenient care
- Simplified regimens

Haynes et al, Cochrane Review 2005

What might work (2)

- Self-monitoring of outcomes
- Reminders – cue/link to daily habits
- Dose-dispensing units
- DOT by health workers or family
- Psychological therapy, incl CBT

Haynes et al, Cochrane Review 2005

The Four Dimensions of Any Benefit or Harm

- Its **nature**, described by its quality, its intensity, and its time course (onset, duration, and reversibility).
- The **probability** that it will occur.
- Its **importance to the person experiencing it**.
- How the benefit can be **maximised**, or the harm **prevented or minimised**.

Explaining risk

- 1997 study at the Cleveland Clinic
- 116 patients viewed one of two videos on angioplasty and its associated risks.
- 63 told **99% safe**
- 53 told likelihood of **complication 1 in 100**.
- No significant difference when told to ↓ the risk of future heart attack.
- Significant differences when told to ↓ chest pain but no survival benefit ($p < .001$).

Gurm and Litaker, Academic Medicine, 75:840-842, 2000

Explaining risk

Gurm and Litaker, Academic Medicine, 75:840-842, 2000

	Patients would definitely or probably have procedure
"99% of patients undergoing this procedure do not have any complications"	52%
"Complications are seen in 1 out of 100 people who undergo this procedure"	27%

What are the key components of Information Gathering?

What are the key components of Information Gathering?

- Medical history, PE and investigations
- Diagnoses and key symptoms
- Medication history
 - Reconciliation with diagnoses
 - Adherence
 - ADRs
 - Previously tried but did not work

Questions?