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Integrating Pharmacists within Aboriginal Community Controlled Health Services to improve Chronic Disease Management (IPAC)

Core role 4

Medication Appropriateness Audit

NATIONAL ABORIGINAL COMMUNITY CONTROLLED HEALTH ORGANISATION
NACCHO

JAMES COOK UNIVERSITY AUSTRALIA

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Medication Appropriateness Index (MAI)

- Internationally validated
- Assesses potential for improvement in prescribing
- To be conducted for 30 consented participants per pharmacist 1 FTE
- Measured twice for each participant
- Does not require the participant to be present
- Pharmacist will communicate the findings to the prescribing team

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MAI - General Instructions

- The MAI comprises 10 questions
- Each question relates to individual participant & medicine in question
- For combination drugs, complete the MAI for each individual drug
- List of the participant's medical conditions and medicines is required
- Clinical judgement must be applied
- Take account of additional clinical information
- If unsure, consult an evidence-based clinical reference

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MAI - Scoring

- For each question, the pharmacist answers by selecting A, B, C or Z
- A, B or Z are scored zero by the evaluators
- If C, evaluators will assign a weighted score for that question
- Pharmacists' logbook will facilitate the date and pharmacist's rating (A, B, C or Z) of the MAI for each medicine
- Calculation of mean score will be done by the evaluators

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MAI Q1 - Is there an indication for the drug?

- Assesses whether there is sufficient reason to use the drug
- Sufficient reason may include not only curative or palliative therapy but also preventive therapy for a disease or condition
- Requires list of medical conditions documented for the participant
- A drug is not indicated if no condition exists for its use
- A=indicated,
- B=marginally indicated
- C=not indicated (score 3)
- Z=do not know

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MAI Q2 - Is the medication effective for the condition?

- Assesses whether the medication prescribed is capable of being effective for the indication in a population of patients
- A=effective
- B=marginally effective
- C=ineffective (score 3)
- Z=do not know

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MAI Q3 - Is the dosage correct?

- Does the prescribed dose fall within the dosage range noted in evidence-based reference texts
- Take into account known age-related changes in drug pharmacokinetics and pharmacodynamics
- Some participants may have drug levels, laboratory results or vital signs to help assess whether the dosage is appropriate
- A=correct
- B=marginally correct
- C=incorrect (score 2), specify C+
  if dose too high, C- is dose too low
- Z=do not know

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MAI Q4 - Are the directions correct?

- Assesses the appropriateness of instructions
- Take into account route of administration, relationship to food and liquid, the schedule and time of day
- A=correct
- B=marginally correct
- C=incorrect (score 2)
- Z=do not know

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MAI Q5 - Are the directions practical?

- Assesses whether the directions for use are capable of being put into practice by the patient or caregiver
- Reflects the potential for patient adherence without sacrificing efficacy
- A=practical
- B=marginally practical
- C=impractical (score 1)
- Z=do not know

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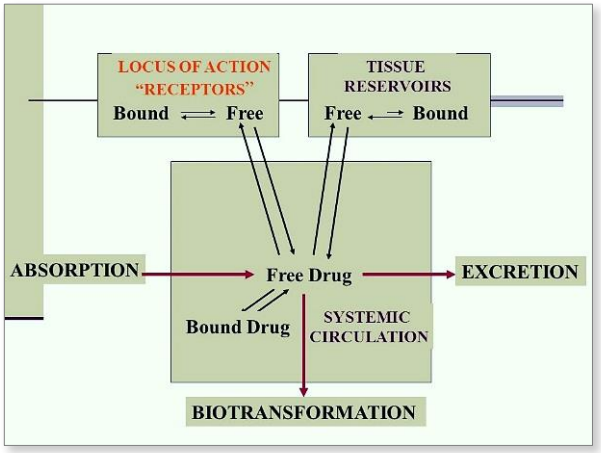
MAI Q6 - Are there clinically significant drug-drug interactions?

- Assesses the effect that the administration of one medication has on the pharmacokinetics or pharmacodynamics of another medication
- A=insignificant (where no interaction exists)
- B=marginally significant (where an interaction exists but there is no clinical evidence for toxicity or adverse effects)
- C=significant (score 2)
- Z=do not know



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MAI Q7 - Are there any clinically significant drug-disease/condition interactions?

- Assesses the effect that a drug has on a pre-existing disease or condition
- A=insignificant (where no interaction exists)
- B=marginally significant (where the reference indicates an interaction but the patient shows no sign of worsening disease)
- C=significant (score 2, where the drug is contraindicated for the condition and/or the patient shows clinical evidence of disease with use of the drug)
- Z=do not know

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MAI Q8 - Is there unnecessary duplication with other drugs?

- Defined as risky or non-beneficial overlap of drugs
- Assesses whether two drugs from the same chemical or pharmacological class are prescribed simultaneously
- A=necessary
- B=marginally necessary
- C=unnecessary (score 1)
- Z=do not know

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MAI Q9 - Is the duration of therapy acceptable?

- Assesses whether the length of time the patient has received the drug is acceptable
- A=acceptable
- B=marginally acceptable
- C=unacceptable (score 1)
- Z=do not know

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MAI Q10 - Is this drug the least expensive alternative compared to others of equal utility?

- Assesses how the cost of the drug to the patient compares to other drugs of equal safety and efficacy
- A drug is considered more expensive if it costs >10% more than alternatives (medications within the same therapeutic class) of equal utility
- A=least expensive
- B=equally expensive
- C=most expensive (score 1)
- Z=do not know

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MAI - Recording

- Enter in electronic logbook using patient's unique ID
- This links GRHANITE de-identified data extracts to the MAI scores
- Reasons for a rating of B or C should be added in the comments section of the logbook pertaining to that question

- Also record in patient's medical records in ACCHS CIS that the MAI has been conducted

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Recording the MAI in the logbook

- Patient ID
- Date MAI conducted
- Date of data entry
- Generic name of medicine
- What type of medicine is this? (drop-down box)
- Then add the answers to the 10 questions of the MAI for that medicine
- Then prompted to repeat for another medicine if necessary

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Recording the outcomes of the MAI in the logbook

- After completing the MAI (for all regular medicines), what were your recommendations?
- After completing the MAI, were you recommendations discussed with the prescriber?
- Is your MAI complete?
- Have you recorded that an MAI was completed in their electronic health record?

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Thank you!

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