Clinical decision support tool for low back pain in community pharmacy
(logic for decision support v3.1)

Query: Pain history

- Patient age
- Patient gender
- Follow-up visit?
- Pain duration
- Pain progression

Query: Screen for pathology

- **No** features of pathology present
- Features **INFLAM** present
- Features **MALIG** present
- Features **N.ROOT** present
- Follow up visit?
  - "first visit"
  - "repeat visit"
- *Watchful waiting: recommend referral to GP in 1 week if no progress*
- Features **INFECT** present
- Features **FRACT** present
- Features **CES** present

Query: Current medicines

- Currently taking medicine?
  - "No" → Pain progress?
    - "Much better"
    - "A little better" / "No change" / "A little worse"
    - "Much worse"
  - "Yes" → Pain progress?
    - "Much better"
    - "A little better" / "No change" / "A little worse"
    - "Much worse"
- Medicine:
  - Type
  - Dose
  - Time

Decision support: 1st line pharmacy care

- Stay Active ✓ | Bedrest ✗ | Heat Wrap ✓

Decision support: 2nd line pharmacy care ± referral

- NSAID ✓ | PARACETAMOL ✗
- NSAID ✓ | PARACETAMOL ✗ | GP
- NSAID ✗ | PARACETAMOL ✗
- NSAID or PRESCRIPTION ✓ | Modify dose as required | CHIRO PHYSIO ✓ (Consider if pain duration ≥2w) | GP (Consider if prescription ≥1w)
- NSAID or PRESCRIPTION ✓ | Modify dose as required | CHIRO PHYSIO ✓ (Consider if medication ≥1w) | GP
- GP | CHIRO PHYSIO ✓
- GP
- GP | CHIRO PHYSIO ✓
- ED

- NSAID = Medication containing NSAID *(check for contraindications)*

Evidence based decision support logic

Decision support logic considers over 400 unique scenarios:
- Initial or follow-up visit
- Pain duration
- Pain progression
- Results of pathology screening
- Medicine type, dose, and time on medication
- Can handle decisions for up to 3 concurrent medicines
- Triggers warnings for multiple similar medicines

Patient handout: Individualised evidence based support

Recommendation Letter

From: DIRKS DRUGS.

Contact: 02 9850 4444
Pharmacist: Harry Houdini

Dear Aron,

The advice on this page is intended to help you manage your low back pain and is based on information you have given to your pharmacist. If you are taking medication, please follow the advice printed below or ask your pharmacist.

Self-care Advice:
Most new episodes of low back pain will improve over time regardless of treatment. The following advice will help you to manage your pain.

Stay active: Graded resumption of normal activities such as walking on a level surface can assist with healing, and may help to reduce your pain intensity. Remain active even if you have some pain. If you are unsure what type or intensity of activity to undertake, ask your pharmacist or other health professional.

Avoid bed rest: Current guidelines recommend that you avoid extended bed rest where possible. Immobility can delay healing and increase your pain intensity.

Medicine Advice:
Your pharmacist recommends that you use a heat wrap to help manage your low back pain for up to 2 weeks. When worn correctly, heat wraps can reduce pain intensity and assist with movement. Follow the advice from your pharmacist and the directions on the packet when applying heat.

Your pharmacist also recommends that you may not be taking the optimal dose of medicine for your low back pain. Ensure you follow directions recommended by your pharmacist, or instructions on the medicine packet. Do not exceed the recommended dose for medication on any one day. Use only for a short period of time (up to 2 weeks).

Referral Advice:
Your pharmacist recommends that referral to another health profession may NOT be necessary unless your symptoms increase or persist for more than 2 weeks.

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