Community Pharmacy - Friend or Foe??

Brendan Duck
Pharmacist Prescriber

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Clinical Director,
GPSI Diabetes

Anna Rufer
Community Pharmacist
Pandemic Estimates

- **2 billion with obesity**
  - biggest rise among women => Egypt, Saudi Arabia, Oman, Honduras and Bahrain.
  - Biggest rise among men => New Zealand, Bahrain, Kuwait, Saudi Arabia and the United States

- **350 million with diabetes**
  - 550 million by 2025

- **65 million with COPD**

- **26 million with Heart Failure**
  - ½ will die within 5 years of diagnosis
The challenges of managing Long Term Conditions

- The need to manage multiple co-morbidities
- On-going monitoring and management decision-making
- Increased numbers of medications
- Workforce Limitations
- The need for expert knowledge

Cost
Multidisciplinary Management
Patient Centred Care

Empowering the person with information/knowledge so that they are able to make their own decisions about how to manage their own disease.

**HbA1c**

- 64 mmol/mol (8%)
- 53 mmol/mol (7%)
- 27% reduction in CVD risk

**Pathology of Asthma**

- Normal airway
- Asthmatic airway
- Asthmatic airway during attack
What Pharmacy Brings to the Patient Centred Care

• Pharmacotherapeutic Knowledge
Changing Face of Pharmacy
Pharmacist Education

- Apprentice (beginning to 1960)
- Diploma (1960 to 1991)
- Bachelor of Pharmacy (1991 – present)
- Postgraduate study (Clinical, Social and Pharmacoeconomics)
What Pharmacy Brings to Patient Centred Care

• Pharmacotherapeutic Knowledge
• Pharmacy model to support Patient Centred Care
  – Medicines management
  – Health Literacy
  – Medicine monitoring
Pharmacist Services

- Comprehensive Medicines Management (CMM)
- Medicine Therapy Assessment (MTA)
- Medicine Use Review (MUR)
- CPAMS*
- LTC Service
- Core Dispensing and OTC medicines

*Community Pharmacy Anticoagulant Monitoring Service

Nationally Funded

Funded by some DHBs
Long Term Conditions (LTC) Service
Identifying LTC Service patients

• Points given according to patient factors:
  – Adherence to patient plan
  – Long-term conditions
  – Medicine factors
LTC Service

• Process/Management strategies
  – Reconciliation
  – Synchronisation
  – Reminders
  – Adherence advice
  – Medicine management planning
Medicine Reconciliation

• True picture of medicines from the patient perspective
Mr Peters

• 48 years old, hypertension, CKD, gout
• GP concerned about how medicines are being taken
  – Multiple prescribers
  – Recent medicine changes
  – Frequently away from home
• Pharmacy action:
  – Medicine Reconciliation
Problems identified during Reconciliation

- 3/12 Rx with no changes – RN + Locum GP
- Renal review 2 weeks ago - low BP and eGFR
  - Inhibace Plus® change to cilazparil
  - No prescription to pharmacy or specialist letter to GP
- Mr Peters did not understand the change
- At risk of AKI
  - ACE-I + Thiazide + NSAID (eGFR 35ml/min/1.73m²)
Outcomes of Pharmacy Reconciliation

- Inhibace Plus® changed to cilazapril 5mg daily
- PMS medicine list updated
- Mr Peters understands reason for change
  - Yellow Card updated
- Avoided potential AKI ??Hospitalisation
- BP and eGFR improved
Synchronisation

Before

1. Pick up
2. Pick up
3. Pick up

After

1. All Meds Single Pick up
# Complexity of Medicine Taking

<table>
<thead>
<tr>
<th>Hour</th>
<th>UMS Regimen</th>
<th>Patient 1</th>
<th>Patient 2</th>
<th>Patient 3</th>
<th>Patient 4</th>
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</table>

○ Drug A ● Drug B ○ Drug C ● Drug D ○ Drug E ● Drug F ○ Drug G
Medicine Management Plans

• Patient orientated plan on taking medicines
• Monthly contact with patient
• Patient held medication record
  – “Yellow card”
• Pharmacy support
  – Education
  – Reminders
  – Blister packs
Mr Jones

• 75 years old, Advanced Parkinson's Disease
• Poor dexterity = dropped doses
• Frustrated with organising medicines
• Multiple prescribers
  – Frequent verbal dose changes
• Rings the GP frequently for new Rx’s
  – $$$$$$ to patient
  – Increased time pressure on practice
Reconciliation and Synchronisation

- Pharmacy + GP updated Sinemet® dose
- Blister packs
- Rx’s synchronised with GP 3m visit
- Yellow card issued
- $$$$ and time saved
- Mr Jones happier and more confident
Benefits to Patients

- Improved Health Literacy
- Reduced ADR’s
- Improved QOL
- Reduced complexity

Improved Outcomes
Pharmacist Services

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CPAMS

Community Pharmacy Anticoagulation Management Service
## Setting the scene

<table>
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<tr>
<th>Safety Questions</th>
<th>Yes</th>
<th>No</th>
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<tr>
<td>Has the patient missed any tablets since their last test?</td>
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<tr>
<td>Has the patient had any bleeding or bruising since their last test?</td>
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<tr>
<td>Has the patient started any new medication since their last test?</td>
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</table>

**i** Please enter drugs started:

**Drugs:**

<table>
<thead>
<tr>
<th>Has the patient been admitted to hospital since their last test?</th>
<th>Yes</th>
<th>No</th>
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</thead>
</table>

**i** Please enter the following information:

**Date admitted:**

**Hospital name:**

**Reasons:**
Testing

A capillary (finger prick) blood test using the CoaguChek meter, provides an instant result.
Reviewing result

INR Online

Date of Test: Tuesday, 02 June 2015
INR: 2.66
Average dose: 3
Weekly pattern: (S M T W T F S)
Tablet Choice: change tablets
Full dose: (pick numbers to add)

Previous Results

Next Test: Tuesday, 07 July 2015

Result Notes:

Check later  Confirm

2015 by Anna Rufer
Result added.
Next Test (02 Jun 15 to 07 Jul 15)
Patient contacted.
3 more days Augmentin. Will reduce dose slightly until course complete then return to normal.

Result added.
Daily Dose (2.5 to 2.66)
Result reviewed.
Daily dosing (2.5 to 2.66)
Patient started new medication
Augmentin.
Result created.
Reviewing results

INR, on 06/08/2014 at 11:45
- Order number: [Redacted]
- Facility: inronlin
- Observation date/time: 06/08/2014 11:45 AM
- INR: 2.7 (1.5 - 2.5)

POC Test at Pharmacy 44 by Anna Rufer
DOSE: 2.2mg, NEXT TEST: 03-09-2014
Missed tablets, Started new medication
Has been stable on same dose for a long time so will leave as-is. Level is slowly coming down from Augmentin & Tramadol last week. AR

INR: 2.5 (2-3) H
DOSE: 6mg, NEXT TEST: 08-05-2013
Ordered by: CLAIRE HILL
Lab Test Results Interpreted by: SMITH
Laboratory: inronlin
Observation date: 17-Apr-2013
Take-away dosage charts
Supporting Patient Centred Care

Patients are involved in their own care

• Immediate, individualised care

• The ability to view result graph on the computer screen

• Improved understanding
Feedback from Patients

This way is so much better! I understand my results now, and the chart helps me remember to take my tablets every day.

I wasn’t very good at getting my tests done before. You could wait an hour or more in the mornings at the lab.

The best bit is getting the results straight away. No more having to wait for the phone to ring.....

The dose-chart helps me remember to take my other medicines too!
Supporting Patient Centred Care

Convenience and acceptability

• Test can be any time of the day and is fast
• A dosing calendar is provided to take away
• Automatic e-mail dosage charts and test-due reminders
• Virtually pain-free finger prick
• “One-stop shop”
Which would you prefer?

Conventional test

CPAMS fingerprick test
Supporting Patient Centred Care

Health benefits

• Improved Time in Therapeutic Range (TTR) and significantly less delay in getting test done.
• Reduced complications / adverse events
• Issues identified at time of test can be addressed immediately. (eg drug/food interactions)
MARThA! THIS warfarin drug REALLY WORKS!

FINALLY! A cardiac drug that suits Tom!

.... CAUSEs OF SUBThERAPUTIC IRRS
Benefits for GPs and their practices

• Support of patient centred-care
• Increase in TTR → the potential to reduce complications
• Improved patient outcomes
• Test results received in the Provider In-Box
• Frees up practice staff time
Feedback from practice nurses

• “Love it! The patients love it – having a finger prick instead of having to go to the lab. It is a one-stop-shop. I love it because it frees up my time to do other jobs.”

Fabulous communication between Pharmacy and Surgery

Assistance in tracking down erratic patient

Patients love it!

Surgery is kept completely in the loop
Conclusions

• Community Pharmacy is a “Friend” of General Practice
• Community pharmacy services have changed focus
• Funding mechanism to support change
• Education to deliver medicine management services
• National pharmacy organisations committed to supporting pharmacists in providing patient centred care
• Patient centred pharmacy services benefit patients
Any Questions?

Disclosures

• Brendan Duck is a director of Totara Health Limited Hastings and employed by Hawkes Bay District Health Board as a Clinical Pharmacist Facilitator.

• Dr Janet Titchener is the Clinical Director of GPSI Diabetes.

• Anna Rufer is a Pharmacist employed by Pharmacy 44 Rotorua.
Laboratory Variation

chart from: Jacobson, A.K. et al. (2000)
CoaguChek® XS Accuracy vs WHO Reference Method

Plesch, W., Roche In-House Data 2006 (available on request)
CoaguChek® XS accuracy

NZ Study Rotorua Diagnostic Laboratory

Majority of CoaguChek XS results were within 0.5 INR units of the laboratory result.