Medicines Use Review (MUR)

- Principles
- Boundary Determinants
- Competence Standards
Principles of Medicines Use Review

1  Medicines Use Review is undertaken in a structured and systematic manner by an accredited Medicines Use Review pharmacist. The pharmacist is accountable and responsible for the delivery of the Medicines Use Review service to the patient.

2  Medicines Use Review aims to help the patient find out more about the medicines they are taking; identify any problems they may be having with their medicines and improve the effectiveness of the medicines being taken. This includes complementary medicines and relevant lifestyle issues.

3  Medicines Use Review is undertaken within the context of the national and local healthcare strategies and requires collaboration and teamwork with the local community healthcare team.

4  Medicines Use Review is a therapeutic relationship between the pharmacist and the patient. The pharmacist actively elicits the patient’s viewpoint/perspective. There is mutual agreement between the pharmacist and the patient in determining the recommendations. Any changes arising from the Medicines Use Review are agreed with the patient.

5  Medicines Use Review requires formal documentation of the review process including problems identified, goals set, the action plan, recommendations made (to patient, GP or other health professionals) implementation of any changes and follow-up. The impact of any change should be evaluated and documented.

6  Medicines Use Review assists in identifying patients who require referral to other Medicines Management Services or to other health professionals.
<table>
<thead>
<tr>
<th>Boundary Determinants</th>
<th>Name of Service</th>
<th>Medicines Use Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of MM Service</td>
<td>Level B</td>
<td>Medicines Use Review is a structured, systematic, documented and consultation-based service undertaken by an accredited pharmacist. Medicines Use Review aims to improve the patient’s understanding of their medicines-related health outcomes by identifying access, adherence, and day to day management issues a patient has with their medicines and setting goals with the patient to resolve these issues.</td>
</tr>
<tr>
<td>Definition of Service</td>
<td>Structured/Formal</td>
<td>The pharmacist meets with the patient to: 1. Help the patient find out more about the medicines they are taking 2. Identify any problems the patient may be having with their medicines 3. Improve the effectiveness of the medicines being taken</td>
</tr>
<tr>
<td>Documentation Process</td>
<td>Formal documentation</td>
<td>Documentation of the process taken to conduct a Medicines Use Review is mandatory. This could be through a nationally developed template which includes patient details, prescribed and non-prescribed medicines details (including complementary meds), allergies, results of the screening questions, action taken and any correspondence with the healthcare team of the patient. The reason for having formal documentation is to ensure transparency of the process and to ensure all relevant information can be communicated and picked up by other members of the patient's healthcare team including pharmacists.</td>
</tr>
<tr>
<td>Reactive or Proactive Service</td>
<td>Proactive</td>
<td>The medicines use review as a service is a partnership between the patient and the pharmacist and therefore a 2 way process. The service will proactively identify any problems the patient has which are associated with medicines use. It is based on patient needs and therefore requires proactive identification of the patient/group in need.</td>
</tr>
<tr>
<td>How instigated</td>
<td>Referral (self/health practitioner)</td>
<td>For the medicines use review service patients may be able to self refer, or be referred to pharmacists via other health practitioners or the local DHB/PHO.</td>
</tr>
<tr>
<td>Service Users</td>
<td>For individuals or groups</td>
<td>The service can be for targeted individuals or others i.e. those at risk of medicine-related problems e.g. taking four or more medicines every day, where non-adherence is suspected, specific patient groups e.g. older people, physical problems like arthritis or patients where there is an opportunity to improve care e.g. new formulation which may be easier for patient to take, new compliance aids available.</td>
</tr>
<tr>
<td>Access to Individual patient information</td>
<td>Limited access to patient medical information from healthcare team</td>
<td>This service may take place with without full access to the patient’s medical information from the healthcare team. It must however have full access to the patient’s medicines record (PMR). The patient must be present whenever possible as dictated by best practice, unless, due to disability or geographical isolation within New Zealand as well as the inability to visit a pharmacy regularly, this is impractical. In this case the pharmacist must document the reason that a face-to-face interview did not take place and conduct the same detailed consultation with the patient by telephone or electronic means as they would have had the patient been present. Medicines Use Review will be also be helpful in identifying anomalies and help identify patients who require referral to other Medicines Management Services or to another Healthcare professional.</td>
</tr>
<tr>
<td>Support Provider ( to pharmacist)</td>
<td>Peer Support required</td>
<td>Peer support would require pharmacists providing Medicines Use Review services to maintain a formal network with other pharmacists providing similar services in order to learn from each others experiences e.g. PSNZ (Inc) Branch Meetings, E-mail discussion groups etc. Peer support will also be required from the local healthcare team.</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Collaboration with healthcare team</td>
<td>Collaboration is required with the patient’s healthcare team in order to recommend/implement any changes, e.g. patient is not taking some medicines, patient may require to be referred to other medicines management services, patient needs to be referred back to the GP, patient needs support to take/use medicines.</td>
</tr>
<tr>
<td>Accreditation/Competence</td>
<td>Some services may require provider accreditation</td>
<td>An Accredited Medicines Use Review pharmacist can provide this service in any practice location. The pharmacist: o Must be registered in the pharmacist scope of practice and hold a current APC without conditions o Must be participating in recertification and be meeting the Medicines Use Review recertification requirements as set by the Council i.e. undertake CPD to accumulate a minimum of 2 Outcome Credits in Competence Standard 2 (Contribute to the Quality Use of Medicines) per year. o Must demonstrate competence in all current Competence Standards for the Pharmacy Profession except not necessarily Competence standard 8 (dispense medicines) and 7 (prepare pharmaceutical products) o Must be assessed as competent in the Medicines Use Review competencies as defined by the Pharmacy Council of NZ through an accredited provider organisation.</td>
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</table>
# Medicines Use Review Competence Standards

<table>
<thead>
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<th>Understand Medicines Use Review in the context of Medicines Management Services</th>
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<td>Establish and maintain effective working relationships</td>
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<td>Document the Service</td>
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<td>MUR 4</td>
<td>Maintain Ongoing Quality</td>
</tr>
</tbody>
</table>

## MUR 1: Understand Medicines Use Review in the context of Medicines Management Services

### 1.1 Differentiate between the levels of Medicines Management Services

1.1.1 Describes the Pharmacy Council of NZ competence framework for medicines management services
1.1.2 Describes the boundary determinants of levels of medicines management services in the Council framework

### 1.2 Describe the principles, aims and scope of the Medicines Use Review Service

1.2.1 Describes the principles of Medicines Use Review
1.2.2 Describes the limitations of the Medicines Use Review Service
1.2.3 Demonstrates the application of the boundary determinants of Medicines Use Review
1.2.4 Takes responsibility for patient care
1.2.5 Assesses and interprets information gained and applies its relevance to the individual patient

### 1.3 Describe the place of Medicines Use Review in the wider context of national and local healthcare goals

1.3.1 Understands the goals of the relevant national health care strategies e.g. Primary Health Strategy, Maori Health Strategy
1.3.2 Identifies local area support and facilitation to assist with meeting local healthcare needs
1.3.3 Identifies the roles and responsibilities of members of the local community healthcare team
1.3.4 Informs and advises patients of the members of the local community healthcare team
MUR 2  ESTABLISH AND MAINTAIN EFFECTIVE WORKING RELATIONSHIPS

2.1 Understand the principles of privacy and consent
2.1.1 Describes the principles of gathering patient consent
2.1.2 Ensures privacy of patient is maintained

2.2 Build a relationship with the patient
2.2.1 Acknowledges patient partnership and involvement of family/whanau/caregiver
2.2.2 Takes into account patient’s individual circumstances and preferences including cultural and health beliefs
2.2.3 Maintains an effective relationship with the patient and family/whanau/caregiver

2.3 Build a relationship with the healthcare team
2.3.1 Explains partnership with and involvement of healthcare team
2.3.2 Takes into account individual healthcare team members circumstances and preferences including cultural and health beliefs
2.3.3 Maintains an effective working relationship with the healthcare team

2.4 Communicate effectively with the patient
2.4.1 Understands and applies the concept of the concordance/adherence model
2.4.2 Agrees and sets goals with the patient
2.4.3 Communicates accurate and relevant information to the patient in a timely manner
2.4.4 Describes the principles of consultation skills including the structure of the consultation process
2.4.5 Describes the principles in motivating and facilitating behavioural change
2.4.6 Monitors and follows up on patients appropriately

2.5 Communicate effectively with the healthcare team
2.5.1 Identifies appropriate communication skills needed to work collaboratively with the healthcare team
2.5.2 Communicates accurate and relevant information with the healthcare team in a timely manner
2.5.3 Acts on feedback received by the healthcare team in a timely manner
2.5.4 Refers or consults appropriately with other health professionals
MUR 3 DOCUMENT THE SERVICE

3.1 Develop effective recording systems
3.1.1 Documents the process including prioritisation of recommendations, goal setting, planning and writing of report or action plan, implementation of action plan and follow up.
3.1.2 Ensures records are relevant and up to date
3.1.3 Contributes to other health professionals records where appropriate

3.2 Maintain patient records
3.2.1 Records patient information and updates patient records in the MUR setting
3.2.2 Maintains privacy and security of patient information
3.2.3 Records goals set and recommendations

MUR 4 MAINTAIN ONGOING QUALITY

4.1 Undertake professional development
4.1.1 Uses the continuing professional development (CPD) cycle to evaluate and identify learning needs
4.1.2 Recognises limitations and works within them
4.1.3 Achieves a minimum of 2 (two) Outcome Credits each year in Competence Standard 2

4.2 Maintain peer support
4.2.1 Maintains a formal network with other pharmacists providing similar services to share and learn from each other’s experiences

4.3 Implement a quality improvement procedure
4.3.1 Describes the principles of Quality Improvement Procedures
4.3.2 Uses standardised documentation e.g. questionnaires/surveys to evaluate the service
MEDICINES USE REVIEW (MUR) TRAINING
Information Sheet

MUR is a new service for pharmacists as specified in the DHBNZ National Framework for Pharmacist Services

The Medicines Use Review (MUR) Training Course provided by the New Zealand College of Pharmacists (NZCP) will enable and support pharmacists to provide MUR services. The NZCP MUR training course is being accredited by the Pharmacy Council.

Pharmacists providing these services must comply with the Pharmacy Council Competence Standards for MUR, which require the pharmacist to complete an accredited training course. All pharmacists wishing to complete the NZCP course will be required to complete the pre-course study, attend the workshop and pass the course assessment.

The Pharmacy Council MUR Competence Standards are: (details overleaf)

MUR 1 Understand Medicines Use Review in the context of Medicines Management Services
MUR 2 Establish and maintain effective working relationships
MUR 3 Document the Service
MUR 4 Maintain Ongoing Quality

The NZCP MUR training course consists of a one day face to face workshop, with a pre-workshop distance study pack and post course assessment, including one MUR review.

Course content covers compliance / adherence, context, privacy, culture, peer support, CPD, quality, communication, process and documentation.

Presenters are experts in the fields of MUR, communication and pharmacy practice.

Assessment
1. Pre-course Distance Study Pack on Compliance / Adherence (Part A) must be completed prior to attending the workshop.
2. Assessments A, B and C must be passed (70%) prior to the first review.
3. Final assessment includes the documentation of the first review (Part D).

A strong part of the Pharmacy Council’s approach to MUR is in the formation of peer support groups, which are seen as a necessary mechanism for the profession to achieve a sustainable and high quality service. The College aims to facilitate this development as an encouraging network that will benefit those pharmacists taking up the MUR initiative.
Pharmacy Council MUR Competence Standards

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1. Pre-course distance pack:

Topic is Compliance and Adherence  
Presenters: Diane Harries and Elizabeth Johnstone, pharmacists  
50 page booklet of reading (cover shown next page below left)  
1/2 hour of audio-recording with handout  
Short quiz of 40 questions (Part A)  
Estimated time to complete 2 hours  
Reading, listening and quiz must be completed prior to workshop

**Key issues in booklet:** the difference between compliance, concordance and adherence with medication regimens; the factors affecting adherence to medication regimens in terms of the five dimensions: socio-economic, health system, therapy, condition and patient; unintentional and intentional non-adherence to therapy; ways to recognise non-adherence; strategies and communication skills that may assist patients to learn about their medicines or illnesses, and thereby overcome non-adherence.

**Key issues in recording:** patient issues including priorities, perspectives, empowerment, competence, stereotyping; markers for non-adherence; process for analysis.

2. Face-to-face one-day workshop

Planned for 9am until 5pm on Sunday; Local venue; Lunch provided  
Six hours face-to-face interactive teaching session  
Short quiz of 40 questions (Part B)  
Short written answer questions (Part C)  
Must be completed before undertaking first review in practice

**Content:**
- Context, privacy, culture, peer support, quality issues;  
  (90 minutes) (Bob Buckham and Elizabeth Johnstone, NZCP/PSNZ)
- Communication skills module appropriate to MUR with practice of the skills taught to gain experience in a simulated fashion and for formative assessment.  
  (180 minutes) (Dr Richard Fox, Dr Susan Hawken, Dr Renske van den Brink or Dr Fiona Moir of Connect Communications)
- Process of MUR using case studies to demonstrate application of theory to practice. Completion of appropriate documentation.  
  (90 minutes) (Ann Privett or Marie Bennett, MUR pharmacists)

**Key Issues:**
- Context relates to: Pharmacy Council Competence Framework for Medicine Management Services; tasks, limitations, responsibilities and boundaries for MUR; Government Strategy documents; local area healthcare organisations.
- Code of Health and Disability Services Consumers’ Rights and the Health Information Privacy Code relevant to MUR.
- Cultural awareness and diversity; looking for assumptions and concepts that impact on cultural and health beliefs.
• Quality issues in terms of Continuing Professional Development requirements for pharmacists undertaking MUR services, including recognition of professional limitations; quality improvement plans and evaluation of the service provided; the what, why, where and how of peer support networks.

• Communication: the importance of the therapeutic relationship between the pharmacist and the patient, with the pharmacist actively eliciting the patient’s viewpoint and perspective; mutual agreement between the pharmacist and the patient in determining the recommendations and creating the action plan.

• Developing an effective working relationship with the healthcare team; attitudes; referrals and feedback; appropriate styles.

• Process and documentation of the MUR consultation with the patient; record keeping; using practice-based cases with experienced MUR pharmacists.

3. Accreditation

(a) Short quizzes Parts A and B (above) must be passed at 70% or over
(b) Short answer questions (Part C) must be completed and passed.
(c) Then pharmacist completes one real MUR review in their practice
(d) Documents from practice (Part D) submitted for final accreditation
(e) Resubmission of incomplete answers if required
(f) Certificate of accreditation issued (see example below right)
(g) NZCP will notify Pharmacy Council when the pharmacist becomes accredited
Time Schedule
- Enrolment must be received two weeks prior to the workshop date, in order to complete the pre-course work, submit the quiz and pass at 70%, prior to the workshop.
- Assessments for Parts B and C must be submitted within two weeks of the workshop.
- Pharmacist carries out first review and completes Part D of assessment within eight weeks of the workshop.
- Pharmacist notified of accreditation between ten and twelve weeks from workshop.

Costs and Refund Policies: Details are on the reverse side of the enrolment form.

Recognition of Prior Learning:

Exemptions
- If the pharmacist has already participated in the audioconference “Supporting Your Patients’ Compliance” in June 2006 or studied using the audiopack, and passed the quiz, they will be exempt from the pre-course study pack.
- If the pharmacist has already been carrying out MUR type reviews, one of these may be used for the documentation required in Part D assessment.

Portfolio
- If a pharmacist is seeking recognition of prior learning for MUR, an assessment tool is available from the NZCP to assist with this pathway to accreditation. This competence tool is for self assessment against MUR 1-4 (given above) and involves the submission of a portfolio of evidence that demonstrates competence in every one of the MUR standards and activities. The cost of assessment via this pathway will be $1,050 plus gst with a minimum processing time of three months.
- It is mandatory for pharmacists to be active members of peer support groups and these will be established at the NZCP training sessions. If a pharmacist intends to claim recognition of prior learning, this requirement needs to be in place and described in the evidence submitted.
MUR Demographic History

Date: __________/________/________  Pharmacist: __________________________

Patient Details

Title: Mr / Mrs / Miss / Ms / Other: __________  Surname: _______________________

First Names: __________________________

Date of Birth: __________/________/________  Male ☐  Female ☐

Ethnicity: European ☐  Maori ☐  Pacific ☐  None declared ☐

Other: __________________________

Street Address: __________________________

Postal Address (if different): __________________________

________________________________________

Phone Nos:  Hm: __________  Wk: __________  Mob: __________

e-mail: __________________________

Health Services Details

PHO in which the patient is enrolled: __________________________

Principal Primary Health Care Service:
(e.g. General Practice, Community Clinic, Health Clinic, etc)

Usual GP: __________________________

Usual Practice Nurse: __________________________

Care Plus Provider: __________________________

Other Relevant Health Providers: __________________________

Office Use Only

Confirm that all have been done before proceeding

☐ Service information has been provided and consent process has been completed
☐ GP has been contacted
☐ Pharmacy medicine record has been printed
☐ All current medicine (incl. OTC, alternative, complimentary, rongoa, etc.) has been made available

Patient Record Number: ☐

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Criteria for Provision of Medicines Use Review

Confirm that your patient meets the following prerequisites:

☐ Lives independently in the community and has one or more chronic disease states

Indicate which of the following criteria apply for your patient:

☐ Takes three or more medicines or 12+ doses of medicine per day
☐ Has multiple prescribers
☐ Has had a recent admission to hospital, e.g. within the last 4 weeks
☐ Takes or is about to commence taking a medicine with a high risk of adverse effects
☐ Has a particular medicine related problem, e.g. adverse reaction, non-adherence.
☐ Experiences or is at risk of experiencing sub-optimal response to pharmacotherapy
☐ Has literacy/language difficulties, dexterity problems, impaired sight, or cognitive deficiencies that impact on ability to manage medicines.
☐ Takes or is about to commence taking a narrow therapeutic index medicine &/or one requiring monitoring
☐ Taking or is about to commence a medicine being inappropriately used based on regional utilisation data

<table>
<thead>
<tr>
<th>Health Issue</th>
<th>Source of Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patient</td>
</tr>
</tbody>
</table>

Factors that May Influence Medicine Use or Effectiveness

Mobility: ____________________________

Alcohol use: ____________________________

Eyesight: ____________________________

Hearing: ____________________________

Other: ____________________________

SMOKING STATUS

Never ☐ Current ☐ Ex ☐

If Current or Ex:

Number smoked per day: ______ packs

For how long?: ______ yr/mnth/dy

Time since quit date: ______ yr/mnth/dy
### MUR Medicine Record

<table>
<thead>
<tr>
<th>Date: <strong>/</strong>/__</th>
<th>Pharmacist: __________</th>
<th>Venue</th>
<th>Time Taken</th>
<th>Hrs/mins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Consultation:</td>
<td>Pharmacy</td>
<td>Patient's home</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>First Follow Up:</td>
<td>Pharmacy</td>
<td>Patient's home</td>
<td>Telephone</td>
<td>Other</td>
</tr>
<tr>
<td>Second Follow Up:</td>
<td>Pharmacy</td>
<td>Patient's home</td>
<td>Telephone</td>
<td>Other</td>
</tr>
<tr>
<td>Third Follow Up:</td>
<td>Pharmacy</td>
<td>Patient's home</td>
<td>Telephone</td>
<td>Other</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Prescribed medicine regimen (List medicine, strength &amp; directions)</th>
<th>Dosage regimen as patient takes it</th>
</tr>
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</table>

#### Prescribed medicine regimen

<table>
<thead>
<tr>
<th>Regular Medicines</th>
<th>Knowledge Score</th>
<th>Perception Score</th>
<th>Adherence Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Why are you prescribed this medicines?</td>
<td>How well do you think this medicine is working?</td>
<td>How often do you miss a dose of this medicine?</td>
</tr>
<tr>
<td></td>
<td>no idea=1, some=2, good=3, superb=4</td>
<td>no effect=1, some=2, good=3, superb=4</td>
<td>always=1, often=2, seldom=3, never=4</td>
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</table>
### As Required Medicines

| Prescribed medicine regimen
(List medicine, strength & directions) | Indication | Dosage regimen as patient takes it | Patient finds it useful? |
<table>
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### OTC, complimentary, Rongoa, etc.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Indication</th>
<th>Dosage regimen as patient takes it</th>
<th>Patient finds it useful?</th>
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<tbody>
<tr>
<td></td>
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</table>
What else can you tell me about your medicines?

General Notes
## Medicines Use Review and Adherence Support Issues Assessment

### Date of Initial Consultation: 

<table>
<thead>
<tr>
<th>Venue: Pharmacy</th>
<th>Patient's home</th>
<th>Telephone</th>
<th>Other</th>
</tr>
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</table>

### Issues Identified

- Difficulty reading labels
- Difficulty removing medicines from packaging
- Difficulty reading instructions
- Difficulty understanding instructions
- Difficulty using dosage forms/devices/equipment
- Difficulty taking medicines on time
- Difficulty remembering to take medicine doses
- Gaps in knowledge of medicines and their use
- Lack of confidence in prescribed medicines
- Inadequate symptom control
- Experiencing potential adverse effects
  - Significant or unexpected
  - Affecting adherence
- Using OTC/complimentary to supplement prescribed medicines
- Difficulty collecting medicines
- Need for prescriptions/repeats to be in-step
- Expired/unwanted medicines for disposal
- Difficulty storing medicines appropriately

### Solutions Identified

<table>
<thead>
<tr>
<th>Code</th>
<th>Date Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUR level counselling</td>
<td></td>
</tr>
<tr>
<td>Medicines utilisation (CMU)</td>
<td>/ /</td>
</tr>
<tr>
<td>Medicines adherence (CMA)</td>
<td>/ /</td>
</tr>
<tr>
<td>Medicines knowledge (CMK)</td>
<td>/ /</td>
</tr>
<tr>
<td>Other: (CO)</td>
<td>/ /</td>
</tr>
<tr>
<td>Adherence aid provided</td>
<td></td>
</tr>
<tr>
<td>Compliance packaging (ACP)</td>
<td>/ /</td>
</tr>
<tr>
<td>Medicines list (e.g. “Yellow” (AML)</td>
<td>/ /</td>
</tr>
<tr>
<td>Other: (AO)</td>
<td>/ /</td>
</tr>
<tr>
<td>Other Solutions (OS)</td>
<td>Date Provided</td>
</tr>
</tbody>
</table>

### Prescriber action required for:

**Pharmacist name:**

**Pharmacist signature:**

**SEND A COPY OF THIS FORM TO THE PATIENT'S GP**
Appendix B

E-learning themes and methods
<table>
<thead>
<tr>
<th>Table 12 Focus group themes on the e-learning development process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>General</strong></td>
</tr>
<tr>
<td>Relevance to interprofessional education</td>
</tr>
<tr>
<td>Best practice guide format</td>
</tr>
<tr>
<td>Loneliness</td>
</tr>
<tr>
<td>Ownership</td>
</tr>
<tr>
<td>Team aspect</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
<tr>
<td><strong>Planning and preparation</strong></td>
</tr>
<tr>
<td>Briefing/training</td>
</tr>
<tr>
<td>Collaborative process</td>
</tr>
<tr>
<td>Context of use</td>
</tr>
<tr>
<td>Team and roles</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
<tr>
<td><strong>Design and structure</strong></td>
</tr>
<tr>
<td>Navigation</td>
</tr>
<tr>
<td>General</td>
</tr>
<tr>
<td>Aims and objectives</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
<tr>
<td><strong>Content development</strong></td>
</tr>
<tr>
<td>Writing process</td>
</tr>
<tr>
<td>Multimedia</td>
</tr>
<tr>
<td>Chunking</td>
</tr>
<tr>
<td>Image library</td>
</tr>
<tr>
<td>Resources</td>
</tr>
<tr>
<td>Copyright</td>
</tr>
<tr>
<td>Editing</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
<tr>
<td><strong>Delivery</strong></td>
</tr>
<tr>
<td>Delivery</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
</tr>
<tr>
<td>General</td>
</tr>
<tr>
<td>Formalize</td>
</tr>
<tr>
<td>Importance</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
Figure 12 Framework of health professionals’ experience of on-line learning techniques. Carroll, Booth, Papaioannou, Sutton & Wong. (2009, p.239)
<table>
<thead>
<tr>
<th>Criteria</th>
<th>0 marks</th>
<th>1 mark</th>
<th>2 marks</th>
<th>3 marks</th>
<th>4 marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>All relevant details of the case is presented with comments concerning appropriateness but without recommendations for change unless clearly dangerous or related to scenario</td>
<td>No patient history is presented</td>
<td>Only basic patient information presented with no comment on appropriateness of current treatment</td>
<td>Basic information is presented with minimal comment on appropriateness of current treatment</td>
<td>Information is presented with linking of indication and treatment and comment on appropriateness</td>
<td>A correct diagnosis is made based on clinical evidence but inadequate consideration is made of differential diagnoses</td>
</tr>
<tr>
<td>The disorder is correctly diagnosed with consideration of differential diagnoses and an indication of how decisions are made</td>
<td>An incorrect diagnosis is made with no differential diagnosis or justification</td>
<td>Treatment for the diagnosis made by the student is incorrect or is not provided or the patient is referred to the doctor without explanation</td>
<td>Treatment for the diagnosis made by the student is incorrect in most areas or the patient is inappropriately referred to the doctor</td>
<td>Treatment for the diagnosis made by the student is incorrect or is incomplete OR treatment for the diagnosis made is correct or mostly correct, although the diagnosis itself was not correct</td>
<td>Treatment outlined is correct and complete</td>
</tr>
<tr>
<td>Correct treatment for the condition is outlined. If a decision is made to refer the patient this must be justified and an indication made of what treatment would be expected.</td>
<td>The age of the patient is not considered in determination of appropriate treatment</td>
<td>The age of the patient is considered in determination of appropriate treatment or is not relevant</td>
<td>Some of the existing medical conditions of the patient are considered appropriately, but others are omitted</td>
<td>All existing medical conditions of the patient are fully considered in determination of appropriate treatment</td>
<td>All current medication taken by the patient is fully considered in determination of appropriate treatment and correct decisions are made</td>
</tr>
<tr>
<td>Age of patient is considered when determining appropriate treatment when relevant</td>
<td>Existing medical conditions of the patient are considered when determining appropriate management of the condition</td>
<td>Current drugs being taken by the patient and the effect of those drugs on current therapy is considered when choosing appropriate drug treatment</td>
<td>Counselling provides all appropriate information with regard to the condition and its treatment with consideration of patient characteristics, e.g. Age, prior medical history, other medication</td>
<td>Counselling for the patient is provided but is brief or confusing in nature and does not take into account relevant patient characteristics</td>
<td>Counselling for the patient is provided taking into account all relevant patient characteristics and is prioritised</td>
</tr>
</tbody>
</table>
Appendix C

Survey Invitations and Questionnaires
WELCOME TO THE PHARMACY AND MUR SERVICE SURVEY.

The aim of this survey is to get a current snapshot of the MUR service from a pharmacists' perspective. The questions are about the MUR service from you dispensary and includes questions about the barriers to being able to provide more MUF.

If you don't offer the service you will be able to contribute by identifying the reasons for this.

The MUR service operates in a complex and difficult environment. Pharmacists in charge of dispensaries are a part of the and its development because of their contributions to planning and resourcing decisions of dispensary services. Your and current theory and opportunities for blended learning can provide valuable insight into the support professional de provide, in strengthening the MUR service in its different service delivery arrangements in Aotearoa/New Zealand.

The research is being conducted by Michael Bronlund. If you would like to discuss any points further please contact

Michael Bronlund
Phone:03 366 7001 x3694
email: mfb46@uclive.ac.nz

Or the project supervisors

Supervisor – Assoc Prof Ray Kirk
ray.kirk@canterbury.ac.nz

Co-supervisor - Dr Arin Basu
arindam.basu@canterbury.ac.nz

The project has been reviewed and approved and by the University of Canterbury Human Ethics Committee in October 21

YOUR PARTICIPATION

You do not have to participate. You have the right to stop the survey at any time.

It should not take more than 20 minutes to complete. It does not need to be completed in one session though as complete will be saved, for one week. Feel free to add comments and explanations to any question. You can change your response time the questionnaire is submitted.

This survey is anonymous. The record kept of your survey responses does not contain any identifying information about you. The questionnaire no record will be kept of your responses. However once submitted your responses can be used to improve the quality of its services.

By proceeding to complete the questionnaire you are consenting to participate in the survey. Your name and place of work will appear in the results of either the Masters Thesis or any subsequent published literature.

If at any time you wish to withdraw from the survey simply close your browser window.

Click the "next" button below to begin the survey.
Dispensary Details

The following questions are to be completed by the pharmacist in charge of dispensary. They aim to describe a background from which your dispensary operates.

1. Which district health board region are you in?
   - Northland
   - South Canterbury
   - Southern
   - Tairawhiti
   - Waikato
   - Taranaki
   - Waitemata
   - West Coast
   - Whanganui
   - Nelson Marlborough
   - MidCentral
   - Auckland
   - Bay of Plenty
   - Canterbury
   - Capital and Coast
   - Counties Manukau
   - Hawke's Bay
   - Hutt Valley

2. Please indicate the range where total prescriptions dispensed falls, for last 12 months of op
   - Less than 50,000
   - 50,000 - 74,000
   - 75,000 - 99,000
   - 100,000 or more

3. Is dispensary activity over 50% of the overall pharmacy business?
   - Yes
   - No
If so how many have gain accreditation to provide the MUR service?

Enter a whole number

6. Does the pharmacy dispensary offer the MUR service?
   ✗ Yes
   ☑ No
4. **How is your current dispensary work-group (full-time equivalent) made up?**
(Please enter a number to 2 decimal places)

- Registered Pharmacists (including yourself)
- Pharmacists Assistants
- Pharmacy Technicians
- Technicians in Training

5. **Are there pharmacist(s) in the dispensary work group who have competed the MUR course?**

- Yes
- No
10. Who have MURs been referred from? *If all, please only select one.*

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Some</th>
<th>Non</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP's</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Health-care Worker</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

<< Prev
7. Please indicate how important you think the MUR service is for the income it generates as part of financial turnover?
   - Very important
   - Quite important
   - Equal to other income streams
   - Not important
   - Barely noticeable

If the MUR is not important to the dispensary financial turnover, what other reasons are there for prov

8. How much does your business receive for each MUR consultation?
   Enter in approximate dollar value, GST inclusive

9. Describe briefly how the MUR service is organised from your dispensary. (eg: onsite pharmacy consultations, home visit consultations, followup consultations, separate admin for paperwork)
12. For each of the following reasons, please give your opinion as to the usefulness of the MUR service:

<table>
<thead>
<tr>
<th>Reason</th>
<th>Absolutely Useful</th>
<th>Quite Useful</th>
<th>Neutral</th>
<th>Not Very Useful</th>
<th>Nc</th>
</tr>
</thead>
<tbody>
<tr>
<td>For improving communication about prescribing issues with health-care professionals?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>For getting to know patients and their medications?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>For a better understanding of the medication adherence</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>problems of my local community?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Are there any other reasons the MUR service is useful?

13. Who is responsible for completing industry-led professional development courses on medication management in your workplace?

- Individual staff member’s responsibility
- In-house training scheme
- Management decides on a course by course basis.

Please elaborate:

14. What resources and support could your business provide for relevant professional development pharmacists you employ, who have completed the MUR course?
15. What support would you like from pharmaceutical professional bodies to develop the skills of who have completed the MUR course?

16. Please rate how much of an obstacle each of the following factors have been with respect to put MUR service into practice?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Large</th>
<th>Manageable</th>
<th>Small</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MUR accreditation process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The paperwork involved</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The referral process for patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of access to medical records</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of space for consultation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of support for ongoing skill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

devvelopment

Please comment on the role, any of these factors or other factors not mentioned, have had in imped of the MUR service.

You have reached the end of the survey. Thank you for you participation.

If you would like to read a copy of the final report please send a request to mfb46@uclive.ac.nz and your address will go into a file separate from the questionnaire file.

Click here and then the next arrow, to end the survey
These questions are to identify the reasons why you have not offered the MUR

7. Have you been offered a contract to deliver the MUR service?
   - Yes
   - No

8. Did the pharmacy fund (either partly or fully) the MUR course fee for any member of the dispensary group?
   - Yes
   - No
   - Do not know
9. Indicate, by clicking a level of agreement, the impact each of the following reasons have had in you not to offer the MUR service?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is no contract with the DHB to provide the service.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There was no funding offered for staff member(s) to do the course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It has been difficult to hire a MUR accredited pharmacist in this locality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There was no demand for the service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There has been no conclusive evidence that the service improves medication adherence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are better ways to provide support for medication adherence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please add comments below to further elaborate on any answers from above or to add any reasons I identified.

10. If you were in a contract with a funding agency (ie DHB) to offer the MUR service, which is your pathway for MUR referrals?

- Pharmacy
- General Practitioner
- Health-care Network
- All three pathways

<< Prev

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11. Who else might refer MURs?

12. What resources and support can your business provide for on-going relevant professional develop pharmacists who has completed the MUR course?

13. What support would you like from pharmaceutical professional bodies to help develop the skills of pharmacists who have completed the MUR course?

You have reached the end of the survey. Thank-you for you participation.

If you would like to read a copy of the final report please send a request to mfb46@uclive.ac.nz and your address will go into a file separate from the questionnaire file.

Click the "next" button below to submit your answers and finish this survey.
WELCOME TO THE MEDICATION USE REVIEW (MUR) TRAINING SURVEY

As a registered pharmacist who has completed the Medication Use Review training you have been in participate in this survey by completing the following questionnaire. The questions collect data about views on the MUR training and about your expectations for Continuing Professional Development (CPD) area. All opinions are relevant, regardless of whether you have received accreditation to offer the service regardless of the number of MUR you have actually performed. Your answers, together with current information on opportunities for blended learning, can provide valuable insight into the range of content areas and methods for future MUR training.

The research is being conducted by Michael Bronlund. If you would like to discuss any points further please contact:

Michael Bronlund
Phone: 03 366 7001 x3694
email: mfb46@uclive.ac.nz

Or the project supervisors

Supervisor – Assoc Prof Ray Kirk
ray.kirk@canterbury.ac.nz

Co-supervisor - Dr Arin Basu
arindam.basu@canterbury.ac.nz

The project has been reviewed and approved by the University of Canterbury Human Ethics Committee October 2010.

YOUR PARTICIPATION

You do not have to participate.

You have the right to withdraw your participation at any time.

If at any time you wish to withdraw from the survey simply close your browser window.

The questionnaire should not take more than 20 minutes to complete. It does not need to be completed in one session though, as completed responses will be saved. Feel free to add comments and explanations for each question. You can change your responses up to the time the questionnaire is submitted.

This survey is anonymous. The record kept of your survey responses does not contain any identifying individual information about you. If you do not complete the questionnaire no record will be kept of your responses. However once submitted your responses can not be extracted from the pool of primary data.

By proceeding to complete the questionnaire you are consenting to participate in the survey. Your name and place of work will not appear in the results of either the Masters Thesis or any subsequent published research.

Click the "next" button below to begin the survey.
Medication Use Review training

The first set of questions are for background data about you in your current pharmacy job and gather MUR related training you completed.

1. Your gender
   - Male
   - Female

2. Please indicate the range where your current age falls?
   - 25 or younger
   - 26 - 35
   - 36 - 45
   - 46 - 55
   - 56 - 65
   - 66 or older

3. Which District Health Board (DHB) region do you work in?
   - Auckland
   - Bay of Plenty
   - Canterbury
   - Capital and Coast
   - Counties Manukau
   - Hawke's Bay
   - Hutt Valley
   - Lakes
   - MidCentral
   - Nelson Marlborough
   - Northland
   - South Canterbury
   - Southern
   - Tairawhiti
   - Taranaki
   - Waikato
   - Wairarapa
   - Waitemata
   - West Coast
   - Whanganui

4. Have you worked in other DHBs?
   - Yes
   - No

If so, which other DHBs have you worked in?

5. Have you received MUR accreditation?
   - Yes
6. If you have, when did you receive MUR accreditation?
   Accreditation received:
   Month   Year

7. How many MURs (not including follow ups) have you completed since your accreditation?
   Estimate a whole number
   Please write how you are defining completed

8. Select the work arrangements you have had. (You can select more than one)
   - Charge Dispensary Pharmacist
   - Sole Pharmacist
   - Locum
   - Pharmacy Assistant
   - Other (please specify)

9. List the skills you think are essential for an MUR consultation.
   (ie: these could be groupings of skills such as planning, conducting the interview and follow up intervie

10. How would you describe a successful outcome of an MUR?
Course Delivery and Continuing Professional Development

The remaining questions collect your opinion on future MUR training options.

11. Please list five areas of practice you think is important for your career development?
   1. 
   2. 
   3. 
   4. 

If MUR related content is not in this list, please indicate a reason.

12. Do you plan to work as a pharmacist overseas?
   - Yes
   - No

If you plan to work overseas, which countries do you intend to work in?
13. Please indicate which of the following specific areas you think is important for further train MUR service provision.

- Information Management
- Networking skills with other health care professionals
- Personal interaction strategies for patient dialogues
- Promoting the service
- Skills for ongoing management of adherence interventions

Please elaborate on any of these options or identify any not listed.

14. Do you participate in a peer group support where you can talk about MUR related issues?

- Yes
- No
Please briefly describe this arrangement:

15. Is there the option to have this peer support on line?
   - Yes
   - No

If it is, please elaborate:
16. Please indicate the strength of your agreement with the following statements about the MU

If you have not been accredited or been accredited and not provided the service please leave not applicable statements blank.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting people on the course was useful for networking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I already had the skills that were covered in the course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The accreditation process is too bureaucratic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It built on existing skills I have</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>There was little focus on the needs of the type of patients targeted in the DHB contract</td>
<td></td>
<td></td>
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<tr>
<td>Transferring the skills to real cases has been possible</td>
<td></td>
<td></td>
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<tr>
<td>I have had to adapt the skills to accommodate the DHB contract requirements</td>
<td></td>
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<tr>
<td>It did not address problems that have prevented performing MURs</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>It was not necessary to hear the presenters at the course in person</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There was little practical training on cultural competencies</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

17. Which of the following do you see as being useful for future development of skills for the MU service? (you can choose more than one)

- Ongoing refresher courses
- Development of the support networks
- Preparation for national MUR audits
- Workshops that include other participating health care professionals
- Interactive on line courses tailored to the region/community I work in
- Interactive on line courses tailored to the way I deliver the service
- Other (please specify below)
18. What level of agreement do you have for the following statements about course delivery?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexibility is important because of time and cost constraints</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face to face seminars are good for networking and meeting people</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On line discussion groups are not effective for learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small group learning is most effective for me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-directed learning allows me to cover course content quickly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On line simulations of case studies would be interesting and rewarding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please add any other comments you have about course delivery

You have reached the end of the survey. Thank you for your participation.

If you would like to read a copy of the final report please send a request to mfb46@uclive.ac.nz email address will go into a file separate from the questionnaire file.

Click the "next" button below to submit your answers and finish this survey.
Research Information

As the Pharmacist in Charge of Dispensary you are invited to participate in the following research project -

Barriers to training and successful delivery of Medication Use Reviews (MUR): Linking the MUR service environment to Continuing Professional Development (CPD).

Project Summary

Welcome to this research project. The MUR service operates in a complex and difficult environment. The aim of this project is to get a current snap shot of the MUR service from pharmacists’ perspective so suggestions can be offered for pathways of relevant, ongoing professional development. As pharmacist in charge of your dispensary you need to be involved in this process because of your contribution to planning and resource decisions for the services offered. The questions in this questionnaire collect data about the MUR service from your dispensary, including the barriers to being able to provide more MURs.

If you don’t offer the service you will be able to contribute by identifying the reasons for this.

Your answers together with current theory and opportunities for blended learning, can provide valuable insight into how support through professional development can strengthen the MUR service in its different service delivery arrangements in Aotearoa/New Zealand.

Why a questionnaire?

The questionnaire is available online and can be completed anytime, anywhere. It has less than 20 questions so should not take more than 20 minutes of your valuable time. Please however take longer if you chose to by adding free text comments. The questionnaire does not need to be completed in one session; you can return to it and your answers from a previous session will be saved. The link to the questionnaire will remain live until XXXXXX. If you would like to discuss any points mentioned further I can be contacted on Phone: 03 366 7001 x3694 or at mfb46@ucilve.ac.nz

1 Barriers to training and successful delivery of MURs: linking the MUR environment to on-going skills development
Your Participation and Data Privacy

The questionnaire can be found at -

http://tinyurl.com/murservice99 Please type this into your preferred browser

Please note that:

● participation is voluntary

● by going to this website and completing the questionnaire there, you are consenting to participate in the survey

● because the questionnaire is completely anonymous,
  ○ once submitted your responses can not be extracted from the pool of primary data
  ○ your answers can not be linked to you. Your name and place of work will not appear in either the Masters Thesis or any subsequent reports

● the Masters Thesis is a public document and can be retrieved from the UC database

● only the researcher, Michael Bronlund, the research supervisor Assoc Prof Ray Kirk, and co-supervisor Dr Arin Basu will have access to the data

● the data will be stored for five years and then destroyed

● this project has received UC ethics approval from the Human Ethics Committee, October 2010.

If you would like to read a copy of the final report please send a request to mfb46@uclive.ac.nz and your email address will go into a file separate from the questionnaire file. It will not be possible to link your email to the survey. You anonymity is guaranteed.

Questionnaire on MUR Training

If you have completed the MUR course the second questionnaire to this survey is available to you to complete. It is about the professional development related to MUR skills. It should not take more than 20-30mins to complete. I can send the link in a return email if you contact me at mfb46@uclive.ac.nz

Researcher - Michael Bronlund
For Master of Health Science
Tel.: 0212149794
Health Science Centre
University of Canterbury
mfb46@uclive.ac.nz

Thank you for your participation.

Supervisor – Assoc Prof Ray Kirk
ray.kirk@canterbury.ac.nz

Co–supervisor – Dr Arin Basu
arindam.basu@canterbury.ac.nz

2 Barriers to training and successful delivery of MURs: linking the MUR environment to on-going skills development
Research Information

As a registered pharmacist who has completed the Medication Use Review training you are invited to participate in the following research:

**Barriers to training and successful delivery of Medication Use Reviews (MUR): Linking the MUR environment to on-going professional skills development.**

**Project Summary**

Welcome to this research project. Since finding out about the MUR service and its development in Aotearoa/New Zealand, I have become interested in how on-going training can be provided so healthcare professional are able to maintain skills appropriate to the environment a healthcare service is delivered in.

The aim of this project is to get a current snap shot of the MUR service from pharmacists’ perspective. The MUR service operates in a complex and difficult environment. It is important to have feedback from pharmacists who have completed the MUR course so, as the MUR service evolves, planning of ongoing professional development is better able to be matched to the skills needed by pharmacists.

Your answers together with current theory and opportunities for blended learning, can provide valuable insight into how support can strengthen the MUR service in its different service delivery arrangement in Aotearoa/New Zealand.

**Why a questionnaire?**

The questionnaire is available online and can be completed anytime, anywhere. You will be asked to answer **less than 20 questions** so it should not take longer than 20 minutes of your valuable time. It does not need to be completed in one time period; it can be saved and completed when you next have an opportunity to do so. The link to the questionnaire will remain live until XXXXXX. Please do add comments and if you would like to discuss any points mentioned further I can be contacted on 0212149794 or at mfb46@uclive.ac.nz

**Barriers to training and successful delivery of MURs: linking the MUR environment to on-going professional skills development.**
Your Participation and Data Privacy

The questionnaire can be found at http://tinyurl.com/murcourse99

Please note that:

- participation is voluntary
- by going to this website and completing the questionnaire there, you are consenting to participate in the survey
- because the questionnaire is completely anonymous,
  - once submitted your responses can not be extracted from the pool of primary data
  - your answers can not be linked to you. Your name and place of work will not appear in either the Masters Thesis or any subsequent reports
- the Masters Thesis is a public document and can be retrieved it from the UC research database
- only the researcher, Michael Bronlund, the research supervisor Assoc Prof Ray Kirk, and co-supervisor Dr Arin Basu will have access to the data
- the data will be stored for five years and then destroyed.
- this project has received UC ethics approval from the Human Ethics Committee, October 2010.

If you would like to read a copy of the final report please send a request to mfb46@uclive.ac.nz and your email address will go into a file separate from the questionnaire file. It will not be possible to link your email to the survey. You anonymity is guaranteed.

By Michael Bronlund
For Master of Health Science
Tel: 0212149794
Health Science Centre
University of Canterbury
Christchurch 8140
mfb46@uclive.ac.nz

Supervisor – Assoc Prof Ray Kirk
ray.kirk@canterbury.ac.nz

Co-supervisor - Dr Arin Basu
arindam.basu@canterbury.ac.nz

Thank you for your participation.

Barriers to training and successful delivery of MURs:
linking the MUR environment to on-going professional skills development.
Survey Reminder

Barriers to training and successful delivery of Medication Use Reviews (MUR): Linking the MUR environment to on-going professional skills development.

Welcome to this MUR research project. In late September an invitation was faxed out to pharmacies in New Zealand to complete a questionnaire on the MUR service.

The link to this questionnaire is still live. If you are a pharmacist in charge of dispensary you are welcome to complete this now by following the link below.

MUR Service Questionnaire

If there are pharmacists in your dispensary who have completed the MUR course, they are welcome to complete the MUR Course questionnaire.

MUR Course Questionnaire

Information about the MUR course questionnaire

It is important to have feedback from pharmacists who have completed the MUR course because as the MUR service evolves, planning of ongoing professional development, will be better matched to the skills needed by pharmacists.

Why a questionnaire?

The questionnaire is available online and can be completed anytime, anywhere. You will be asked to answer less than 20 questions so it should not take longer than 20 minutes of your valuable time. It does not need to be completed in one time period; it can be saved and completed when you next have an opportunity to do so within seven days. The link to the questionnaire will remain live until then. Please do add comments and if you would like to discuss any points mentioned further I can be contacted mfb46@uclive.ac.nz
Your Participation and Data Privacy in the Survey

Please note that:

- participation is voluntary
- by going to this website and completing the questionnaire there, you are consenting to participate in the survey
- because the questionnaire is completely anonymous,
  - once submitted your responses can not be extracted from the pool of primary data
  - your answers can **not** be linked to you. Your name and place of work will **not** appear in either the Masters Thesis or any subsequent reports
- the Masters Thesis is a public document and can be retrieved it from the UC research database
- only the researcher, Michael Bronlund, the research supervisor Assoc Prof Ray Kirk, and co-supervisor Dr Arin Basu will have access to the data
- the data will be stored for five years and then destroyed.
- this project has received UC ethics approval from the Human Ethics Committee, October 2010.

The MUR course questionnaire can be found at [MUR Course Questionnaire](mailto:mfb46@uclive.ac.nz)

If you would like to read a copy of the final report please send a request to [mfb46@uclive.ac.nz](mailto:mfb46@uclive.ac.nz) and your email address will go into a file separate from the questionnaire file. It will **not** be possible to link your email to the survey. You anonymity is guaranteed.

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[mfb46@uclive.ac.nz](mailto:mfb46@uclive.ac.nz)

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[arindam.basu@canterbury.ac.nz](mailto:arindam.basu@canterbury.ac.nz)

Thank you for your participation.

Barriers to training and successful delivery of MURs:
linking the MUR environment to on-going professional skills development.
Appendix D  University of Canterbury’s Ethics

Approval
Ref: HEC 2010/136

7 October 2010

Michael Bronlund
Health Sciences Centre
College of Education
UNIVERSITY OF CANTERBURY

Dear Michael

The Human Ethics Committee advises that your research proposal “Medication use review (MUR): Pharmacists’ perspectives on the current state of this services, related course and potential continuing professional development (CPD) opportunities” has been considered and approved.

Please note that this approval is subject to the incorporation of the amendments you have provided in your email of 4 October 2010.

Best wishes for your project.

Yours sincerely

Dr Michael Grimshaw
Chair, Human Ethics Committee
Appendix E

DHB inviations to offer the MUR service.
Dear --------

Medicines Use Reviews –South Canterbury District Health Board Update 07 July 2010

In February 2009 SCDHB facilitated Medicines Use Review (MUR) training for all interested South Canterbury community pharmacists. Later in 2009 contracts were initiated with the nine community pharmacy providers expressing an intention to provide MUR services. In addition SCDHB funded the uLearnCare data base to support the administration and monitoring of the MUR process. To date only a few MURs have been provided and SCDHB is aware of only one pharmacist completing the prerequisite Pharmacy Competence Standards requirement for providing MURs.

The new SCDHB primary care structure is expected to be in place by August 2010 and will take over the contractual and relationship management of community pharmacy services including discussions around future development of MUR. However until future developments are considered SCDHB is continuing to contract for MUR services as specified in the current model. If your community pharmacy wishes to provide MUR services please contact Judy Walker to vary the contract which had an expiry date of 30 June 2010. Varied contracts will also need to take account of the non availability of the uLearnCare database (see attached correspondence).

Reimbursement of course fees for participants of the February 2009 MUR course remains available. Invoicing must now be within the timeframes listed below to receive funding from SCDHB (no contract is required for providers to invoice for this funding).

MUR Course fee reimbursement

1. Following attendance at the workshop on 22nd February 2009 pharmacy providers may invoice the SCDHB for $240.00 gst inclusive for each participant. Invoices must be received by the SCDHB no later than Monday 9th August 2010 to be eligible for this first level of funding.

2. Following each course participant achieving the required accreditation pharmacy providers may invoice the SCDHB:

   • $240.00 gst inclusive for the remaining portion of the course fee plus
   • $231.00 gst inclusive for one MUR required to be completed as part of the training

   Invoices must be received by 1st December 2010.

All invoices should be sent to:

South Canterbury District Health Board: Attention Strategy, Planning and Accountability, Private Bag 911, Timaru.
If you have any questions about this letter please contact Judy Walker at SCDHB (DD 03 6841385).

Yours sincerely

Judy Walker

PRIMARY CARE PORTFOLIO MANAGER
Dear --------

Medicines Use Reviews –South Canterbury DHB Update November 2009

This letter is to update proposed MUR community pharmacy providers on implementation timeframes including contract details and MUR training reimbursement.

Since the MUR training in February 2009 South Canterbury DHB has yet to receive confirmation from course participants that they have attained the necessary Pharmacy Competence Standards for MUR. I urge you to contact me at the DHB as soon as staff complete the required training and also remind providers that South Canterbury DHB has agreed to fund the training course for approved pharmacists (no contract is required for providers to invoice for this funding).

MUR Course fee reimbursement

1. Following successful completion of the workshop on 22nd February pharmacy providers may invoice the SCDHB for $240.00 gst inclusive for each participant.

2. Following the full completion of the course and the gaining of the required accreditation pharmacy providers may invoice the SCDHB for each participant:

   • $240.00 gst inclusive for the remaining portion of the course fee plus
   • $231.00 gst inclusive for one MUR required to be completed as part of the training

All invoices should be sent to SCDHB: Attention Judy Walker, Primary Health Care Portfolio Manager, Planning and Funding, SCDHB, Private Bag 911, Timaru.

MUR Contract Implementation

1. Nine community pharmacy providers have indicated they wish to provide MUR services in South Canterbury. The 360 available MUR volumes have been divided equally between these providers resulting in an allocation of 40 MURs per pharmacy.

2. The price per MUR is made up as follows:
   a. Initial consultation = $100.00
   b. Subsequent three follow-up consultations = $35.00 per consultation
   c. Total price per completed MUR = $205.00 gst exclusive
3. MUR contracts will be posted to providers for signing within the next few weeks. The contract term is from 1 November 2009 to 30 June 2010. However if a provider has delivered MURs prior to November 2009 the DHB will arrange for reimbursement. Please contact me to discuss if required.

4. South Canterbury DHB has contracted with Des Adams of uLearn Care Ltd to utilise the uLearn Care web-based software service to support MUR implementation. All South Canterbury providers implementing MUR services will utilise the uLearn service which is being directly funded by the DHB.

5. Once we have confirmed that pharmacists are trained and ready to deliver MUR services it will be important that the DHB and PHO support the implementation of MURs by working with you to provide information to GPs and practice teams concerning the service.

I look forward to receiving an update from your service concerning MURs. If you have any questions about this letter please contact me at South Canterbury DHB (03 6841385).

Yours sincerely

Judy Walker

PRIMARY CARE PORTFOLIO MANAGER

SOUTH CANTERBURY DHB
29 April 2009

Address

Dear Community Pharmacy Provider

Implementation of Medicines Use Reviews and Invitation to attend Medicine Use Reviews Information Session

Following the MUR training in February South Canterbury DHB wishes to progress implementation of the MUR service. If your community pharmacy did not participate in the local SCDHB funded MUR training there is still the option that SCDHB could contract with your pharmacy to provide an MUR service if you are able to access appropriately trained staff. Please contact me urgently if you would like to discuss this option as this will affect the overall allocation of MUR volumes.

South Canterbury DHB has available approximately 360 MUR volumes for the first 12 months of service and we propose to divide this volume equally between the pharmacy providers that commit to participating in the MUR programme. If your service wishes to participate in this programme can you please contact Judy Walker by the 18th May to confirm details.

South Canterbury DHB have been in discussion with Des Adams of uLearn Care Ltd and we are proposing to utilise the uLearn Care web-based software service to support MUR implementation. All South Canterbury providers implementing MUR services would utilise the uLearn service which would be directly funded by the DHB. Attached for your information is a uLearn March 2009 Report which provides background information about this service.

Des Adams will be in Timaru to provide an information session about implementing MUR services and the uLearn software and we hope that your pharmacy team is able to attend.

When: Tuesday May 12th 2009-04-29

Time: 6.15pm

Where: Room 2 Education Centre Timaru Hospital (Please access Education Centre via the main hospital entrance and ask for instructions at the ground floor hospital reception as hospital side doors are locked after hours)

A light meal will be provided from 6.15pm with the session due to commence at 6.30pm.

For catering numbers please RSVP to Judy Walker by Friday 8th May.

If you have any question concerning this letter please contact Judy Walker at South Canterbury DHB (03 6841385).
Appendix F

Service Arrangement Summary Table
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** Correlation is significant at the 0.01 level (1-tailed).
* Correlation is significant at the 0.05 level (1-tailed).
Correlation for strength of opinion on future skills and course delivery

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* Correlation is significant at the 0.05 level (1-tailed).
** Correlation is significant at the 0.01 level (1-tailed).
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* Correlation is significant at the 0.05 level (1-tailed).  
** Correlation is significant at the 0.01 level (1-tailed).
Appendix G

Population per pharmacy by region.

This graphs show a breakdown of population per the number of pharmacies in each DHB region.
### Table: Population per Region for North Island

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Figure 14: Population by pharmacy by DHB - South Island.