Poor health literacy – How can it impact upon aged adults?

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Overview of Presentation

• Chronic disease and adverse drug events
• What is health literacy and how does it impact on health outcomes, adverse drug events and medication compliance
• Some examples of my collaborative research studies involving health literacy and aged care service provision?
Background Information

Chronic Disease
- principal cause of disability
- 70% of health care expenditure

Self-Management Programs
- improve elements of health status
- reduce health care costs

Principal Components of Self Management
- Medication Compliance
- Adherence to treatment guidelines

Lorig 2001
Example: Manage a Chronic Disease

- Change daily habits
  - Food
  - Activity
  - Measures
  - Limitations
- Monitor symptoms
  - Use tools
  - Note changes
- Take medicines
  - Differentiate
  - Follow directions
    - Time, dose, day
    - Refill
- Access Care When Needed
  - Complete forms
  - Make and keep appointments
- Interact with Health Professionals
  - Describe symptoms
  - Report changes
  - Ask questions
  - Comprehend instructions
  - Follow new directions
Adverse Drug Events (ADEs)

- 10-20% of Adverse Events are ADEs
- 2-3% of Hospital Admissions are ADEs
  - 140,000 hospital admissions
  - $350 million per annum
- 400,000 General Practice encounters
- Large proportion “potentially preventable”
  (Australian Council for Safety and Quality in Health Care 2002)
Patients ‘at risk’ of ADEs

- Older patients (Ryan 1999)
- Patients with poor health literacy skills (Feifer 2003)
- Patients from culturally & linguistically diverse (CALD) backgrounds (Davidhizar et al 1999).
- Other ‘at risk’ factors
  - cognitive impairment
  - physical impairment
  - multiple medications &/or co-morbid conditions
Many ADEs are related to poor Compliance

- Compliance – “the extent to which a person’s behaviours in terms of medication, diet or lifestyles coincide with medical advice”

- Estimates of poor compliance range from
  - 20 to 70 % for all medications (Barat et al 2001)
  - 50 to 65 % for long-term medications (Haynes et al 2008)
Health Literacy Definitions

• “to read and comprehend prescription bottles, appointment slips, and other health related materials required to successfully function as a patient” (Report of the Council on Scientific Affairs)

• “is the ability to gain access to, understand, and use information in ways which promote and maintain good health” (Nutbeam 2000)
Health Literacy Skills and Australians

- 2006 Adult Literacy and Life Skills Survey (ABS)
  - 59% of Australians aged 15-74 years had poor health literacy skills and could not locate information on a bottle of medicine or identify the maximum number of days to take the medicine
Patients with poor health literacy skills

- Cannot read and understand written patient information or prescription guidelines
- Cannot fill out consent forms and find it difficult to comply with health information and treatment recommendations
- Don’t know when to seek appropriate health care and are less likely to pursue follow-up
- Increased risk of hospital admission
- Poorer health outcomes
Example: Manage a Chronic Disease

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- Access Care When Needed
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What contributes to the problem?

• Health information often contains a lot of medical jargon, complex graphs, measures & scales etc
• Health practitioners are often very busy
• Most health information is written at a level well above the reading skills of an average high school graduate ≥ grade 12
• Health information for ‘at risk’ groups should be written at grade 6-8 levels
Research study 1: To develop & trial a new warfarin education program

**Phase 1:** Develop the new warfarin patient information booklet and the structured warfarin education program

**Phase 2:** Pilot the new booklet & education program

**Phase 3:** Compare and contrast the new warfarin education program including new booklet with a customary warfarin education program
New Warfarin Booklet

Adapted with permission from "Warfarin medication information booklet for patients and their carers" (Bajorek 2000) & the Boots Healthcare "Warfarin: Important instructions for patients"

Inform other healthcare providers.....

You should inform your:
- doctors, including specialists
- dentists
- pharmacists
- nurses
- physiotherapists
- other health workers and assistants
- friends & relatives who look after you

that you are taking warfarin especially before undergoing any procedure or surgery.

Optional: You can wear MedicAlert jewelry (e.g., bracelets and pendants available from your pharmacy.)
Study 2
RFT2007/08-04 The role of community pharmacy in post hospital management of patients initiated on warfarin

Researchers: Professor Gregory Peterson, Dr Shane Jackson, Dr Luke Bereznicki, Professor Mark Nelson, Dr Manya Angley, Dr Judy Mullan, Mr Luigi Gaetani, Associate Professor Gary Misan, Dr Katherine Marsden, Dr Pauline Warburton, Mr Vaughn Eaton, Dr Sepehr Shakib, Dr John Maddison, Associate Professor Chris Doecke, Associate Professor Arduino Mangoni, Professor Wilf Yeo, Professor Jan Potter, Ms Suzette Seaton, Mr Peter Gee, Ms Kimbra Fitzmaurice, Miss Leanne Stafford, Mrs Ella van Tienen, Mr Geoff Hill

Qualitative Researcher: Mr Ian DeBoos
Consultant Health Economists: Associate Professor Chris Doran, Mr Thameemul Ansari Bin Jainullabudeen
Study 2

Phase 1: Systematic literature review & qualitative analysis of services for ‘high risk’ patients taking warfarin following discharge from hospital

Phase 2: Implementation, trial and evaluation of the post-discharge warfarin service
Phase 3 Self-testing and self-management of oral anticoagulants – Evaluations currently underway

- Use of point of care INR monitors to enhance warfarin management & ready access to web based warfarin information
- Evidence suggests patient self-monitoring and management increase TTR, with reduced adverse events
- ~25% of warfarin patients could potentially self-monitor
Welcome

We have designed this website to assist you in your understanding of your medication. We want to provide you with the chance to learn at your own pace and the opportunity to regain independence in your life.

Fact Sheets

Downloadable and printable fact sheets about Warfarin, INR, self-monitoring, and documentation for health professionals and studies we’ve run.

About Warfarin

Everything you could want to know about Warfarin, its uses, and important information for those taking it.

http://www.anticoagulation.com.au
Study 3
Evaluation of the New Warfarin Booklet by Australian Hospital Pharmacists

Made possible by UoW HBS FRC Small Grant Funding
Study 4
An investigation into the potential barriers associated with warfarin prescribing in an elderly population residing in Illawarra based Aged Care Facilities

Made possible by UoW HBS FRC Early Researcher Grant

Co-investigator Margaret Jordan
Outcome of Recommendations presented to Illawarra GPs, RNs and Pharmacists

Trial of a warfarin specific medication chart
- which could be faxed
- 1 month expiry
- stated INR range for prescribing decisions
- Provided suggestions for immediate alerts if residents condition changed
WARFARIN VARIABLE DOSE PRESCRIPTION and ADMINISTRATION RECORD

INR record and warfarin prescription
1. Date: write date that an INR result has been received.
2. Current warfarin dose: that is, what dose the patient is taking up until this INR result. If warfarin has been discontinued, write "0 mg".
3. INR result: write the INR result received and the date it was obtained. (In an example on this page, the INR result is 2.5 and was obtained on 1/24/10.)
4. No record of an order to change any aspect of the warfarin prescription is required. If you write in a prescriber's initials or sign within this section, please note the details on the next page.
5. GP ALERT! Purpose: to alert resident's GP if there has been a change in factors that may influence INR or dose of warfarin.
6. RN to complete if necessary any time during warfarin therapy— not just when new order is written.
7. Circle appropriate concern, date and sign and add more details if appropriate.

INR RECORD and WARFARIN PRESCRIPTION

<table>
<thead>
<tr>
<th>Date</th>
<th>Current warfarin dose (mg)</th>
<th>INR result</th>
<th>New warfarin dose (mg)</th>
<th>GP sign &amp; extra instructions (if required)</th>
<th>Date for next INR</th>
<th>INR tested (date, int)</th>
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ADMINISTRATION RECORD

INR: Date: Dose: Sign: Date: Dose: Sign: Date: Dose: Sign: Date: Dose: Sign

TARGET INR (GP to complete)
- Stroke prevention in AF (2 - 3)
- Stroke prevention after MI (2 - 3)
- DVT and/or PE (2 - 3)
- Prosthetic heart valves (2 - 3)
- Other

ADMINISTRATION RECORD
- For RNs to complete
- New column to commence for each change of dose
- (from GP's order in table directly above)
- Record date, dose given and sign
Other HL Related Research Projects

• A preliminary study exploring the effectiveness of a Warfarin-Specific Medication Chart in Residential Aged Care Facilities  M Jordan; Supervisors J Mullan & V Traynor

• Evaluating the provision of warfarin education to older patients  S Nasser; Supervisors B Bajorek & J Mullan

• Prescription medication borrowing and sharing behaviour among elderly Illawarra residents  J Ellis, Supervisors ; J Mullan, T Worsley, W Yeo/ N Pai)
• Health and Service Use in Old Age: Longitudinal Population Based Studies in Taiwan Chun-Min Chen, Supervisors J Mullan, D Griffiths, I Kries, R Clark

• Blister Packed Medication use Amongst Pharmacies in the Illawarra Region J Mullan

• Older Australians’ Perspective on the Use of Complementary and Alternative Medicines (CAM) S Jones, J Mullan, P Crookes

• Exploratory study of older people’s understanding of CAM C Giorgi, Supervisor: J Mullan
- The interaction between health literacy, social networks and attitudes to safe use of arthritis medications
  
  J Ellis; Supervisors: J Mullan, T Worsley, N Pai

- Improving medication information resources for carers of CALD patients diagnosed with dementia
  
  Cultural Diversity Health Enhancement Grants Program 2011-2012, J Mullan; Evelyn Jelercic; C Vanzanen
Thank You & Questions?