

UNSW research centre for **primary health care and equity**

Who does what for the chronically ill in primary health care?

Sarah Dennis

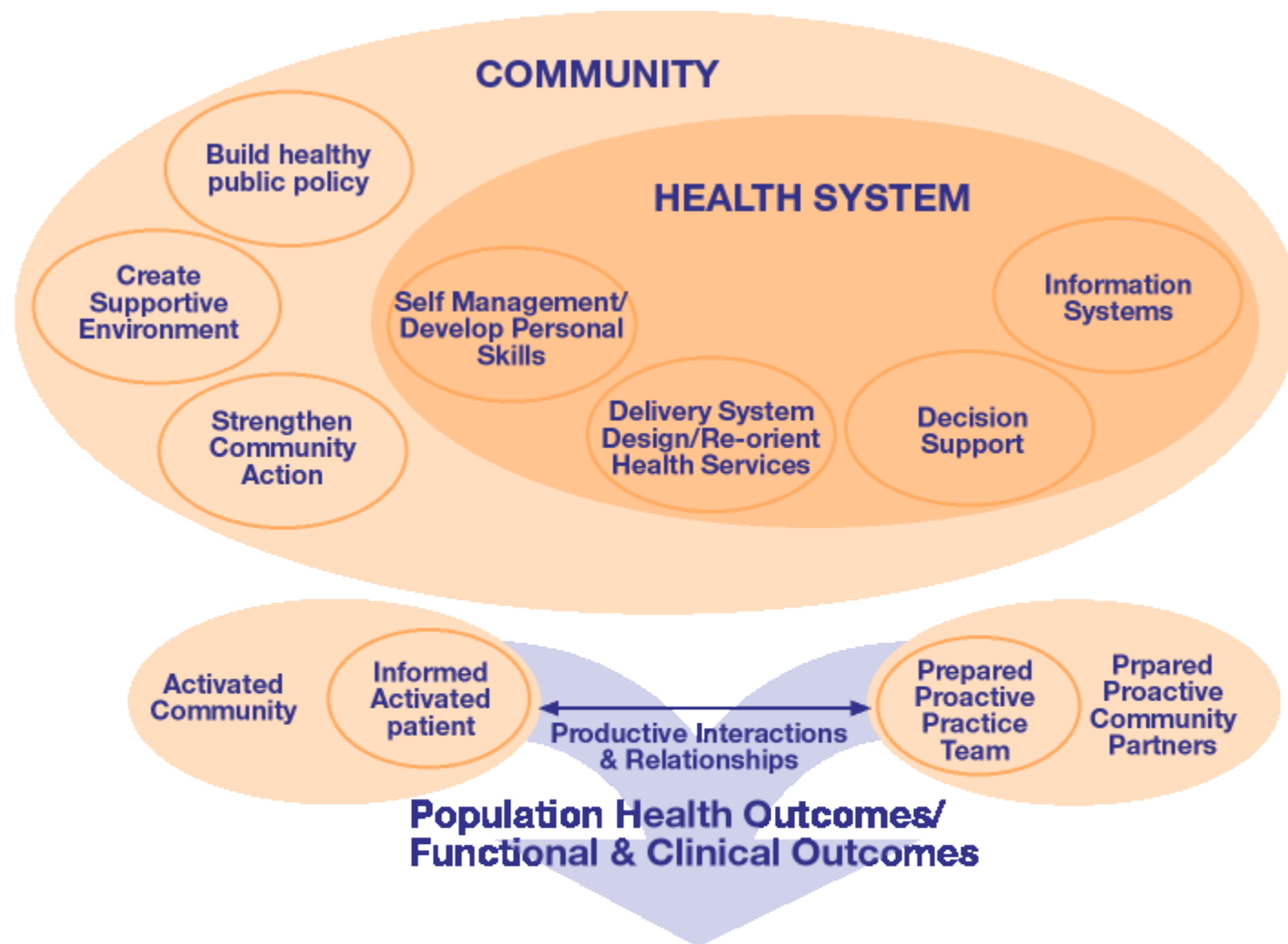
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UNSW
THE UNIVERSITY OF NEW SOUTH WALES

Review question 1

- To determine the effectiveness of chronic disease management interventions in the primary care setting.



Created by: Victoria Barr, Sylvia Robleson, Brenda Marin-Link, Lisa Underhill, Anita Dotts & Darlene Ravensdale (2002)
 Adapted from Glasgow, R., Orleans, C., Wagner, E., Curry, S., Solberg, L. (2001). Does the Chronic Care Model also serve as a template for improving prevention? *The Milbank Quarterly*, 79(4), and World Health Organization, Health and Welfare Canada and Canadian Public Health Association. (1986). Ottawa Charter of Health Promotion.

Method

- **A systematic review of the literature**
 - To identify reports of professional, financial or organisational interventions designed to improve the care of people with chronic conditions including:
 - asthma, diabetes, chronic obstructive pulmonary disease, hypertension, heart disease, lipid disorders, arthritis (RA and OA) or osteoporosis
 - Delivered by health professionals (doctors, nurses, pharmacists, allied health) or others (lay workers, admin staff) involved in the care of non-hospitalised patients in a primary care or community care setting

Systematic reviews: chronic disease and types of intervention

	CIS	DS	DSD	SMS	HCO	CR	Total
Asthma (4)	0	1	1	2	0	0	4
COPD (2)	0	0	1	1	0	0	2
Diabetes (12)	1	1	4	6	0	0	12
Heart disease (2)	1		1		0	0	2
Hypertension (3)	1	0	1	1	0	0	3
OA (1)	0	0	0	1	0	0	1
All (23 reviews)	3	1	8	11	0	0	24

Results of review of reviews

Elements of Chronic Care Model	Outcome Measures								
	HCP Adhere to GL	Pts Adhere to Rx	Pt service use	Pts PMOD	Pts Risk Behav	Pts QOL	Pts Health Status	Pts Med use	Pts know-ledge
DSD	4(4)		1(5)	5(7)	1(1)	2(5)			1(1)
DS	0.5(2)		1(1)		0(1)				
SMS	1(1)		0(3)	9.5(11)		2(3)		2(3)	5(5)
CIS	2(2)			1(2)					

Primary research papers: chronic disease and types of intervention

	CIS	DS	DSD	SMS	HCO	CR	Total
Asthma (21)	5	10	11	21	1	0	48
COPD (6)	0	3	3	12	1	0	19
Diabetes (54)	16	33	29	42	5	0	125
Heart disease (19)	2	4	11	25	0	0	42
Hypertension (24)	3	13	7	36	0	0	59
Lipid disorder (12)	4	8	7	10	2	0	31
OA (8)	0	0	0	11	1	0	12
Others (2)	0	3	1	3	0	0	7
All (145)	30	74	69	160	10	0	343

Primary research papers results

Elements of Chronic Care Model	Outcome Measures								
	HCP Adhere to GL	Pts Adhere to Rx	Pt service use	Pts PMOD	Pts Risk Behav	Pts QOL	Pts Health Status	Pts Satis	Pts func status
DSD	4(8)	4 (16)	12(22)	18(27)	2(6)	6(18)	3(6)	3(7)	0(3)
DS	18(26)	3(5)	1(5)	9(16)	0(2)	4(8)	2(2)	1(2)	
SMS	2(2)	3(4)	9(13)	13(20)	12(15)	12(18)	7(8)	6(6)	6(7)
CIS	4(7)	1(2)	1(3)	1(6)	1(1)	0(1)			

CPHCE Chronic Disease Stream Research

- **Self management**
 - Review of primary care linkages for self-management programs
 - Moving-On evaluation
 - Self management in SW Sydney
 - Patient centred care / shared decision making
- **Delivery system design**
 - Teamwork
 - Team Link
 - Nurse case management of COPD
- **Decision support / clinical information system**
 - Care plans in diabetes
 - Asthma 3+

<http://notes.med.unsw.edu.au/CPHCEWeb.nsf/page/Chronic+Disease>

Key findings – delivery system design

- **Beneficial effects**
 - Improvements in disease outcomes (HbA1c) and adherence to guidelines, health service use
- **Types of delivery system design intervention**
 - Multidisciplinary team care, making full use of the practice nurse, nurses acting as case managers and providing self management support
 - Making use of patient reminders and encouraging proactive follow-up of the patient
 - Many of the interventions are design to support and increase opportunity for self management support
- **Chronic diseases**
 - Improved patient outcomes with diabetes, hypertension, lipid disorders
 - Evidence less clear for arthritis, COPD and asthma

Key findings - decision support

- **Beneficial effects**
 - Most improvements in health professional adherence to guidelines with improvements in some patient outcomes
- **Types of delivery system design intervention**
 - Use of evidence based guidelines
 - Educational meetings and support of primary health care professionals
 - Distribution of educational materials to health professionals
- **Chronic diseases**
 - Improved process and some patient outcomes for diabetes
 - Some evidence for improved adherence to guidelines for asthma

Key findings – self management support

- **Beneficial effects**

- Improvements in disease outcomes (HbA1c), quality of life, health and functional status, satisfaction and health service use

- **Types of self-management intervention**

- Patient education, motivational counseling, intensive, specific, group or community based to one, empowerment
- Difficult to sustain, increased knowledge does not always translate into improved health outcomes

- **Chronic diseases**

- Improved patient outcomes with diabetes, hypertension, lipid disorders and to lesser extent arthritis
- Evidence less clear for COPD and asthma

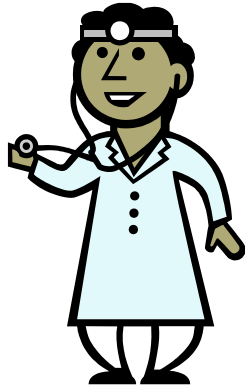
Key findings – clinical information systems

- **Beneficial effects**
 - Most improvements in health professional adherence to guidelines with improvements in some patient outcomes
- **Types of delivery system design intervention**
 - Use of evidence based guidelines in clinical computer systems
 - Systems to encourage audit and feedback
 - CIS most often supported decision support
- **Chronic diseases**
 - Most evidence to support use of CIS in the management of diabetes

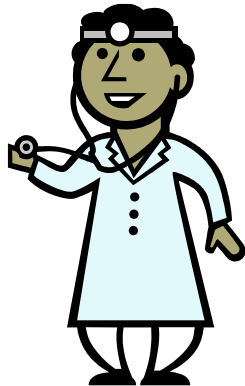
Review question 2

What does the literature tell us about the optimal skill-mix to meet the needs of older community dwelling Australians?

Task substitution



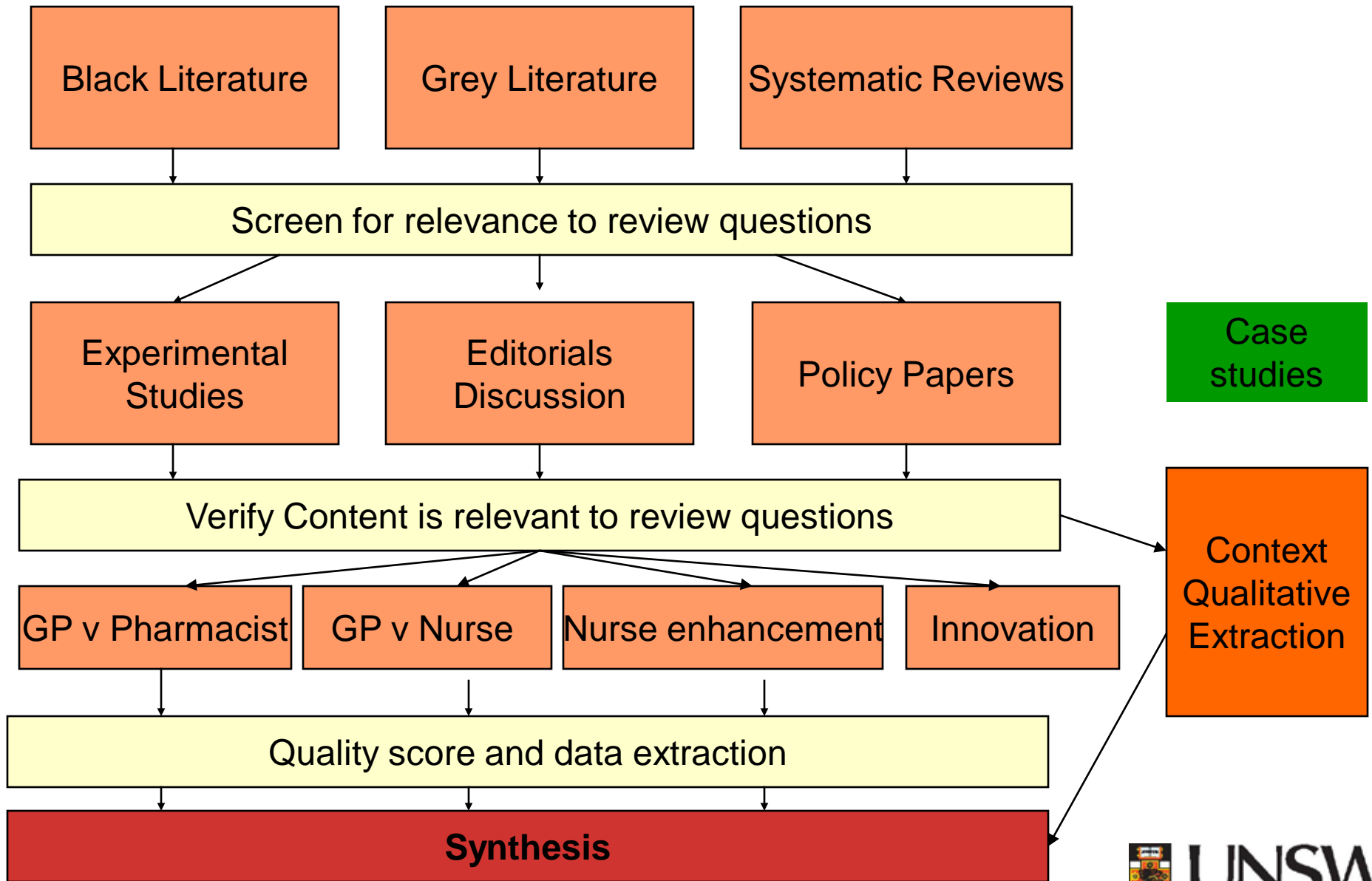
versus



versus



Methods



	Outcome measures							
	Prof adherence to guidelines	Patient adherence to treatment	Patient service use	Physiological measure of disease	QoL	Patient health status	Patient satisfaction	Patient functional status
Skill mix								
Dr subs by nurse	8 (10)	0 (1)	2 (12)	6 (9)	3 (8)	2 (8)	3 (8)	0 (2)
Dr subs by pharmacist	6 (6)	8 (11)	2 (11)	13 (14)	3 (9)	4 (5)	5 (6)	
Nurse enhance	1 (2)	3 (4)	3 (7)	2 (4)	2 (3)	3 (6)		4 (5)
Innovation				0 (1)	0 (1)	1 (1)		

Contextual factors

Practice level	Professional level	Health system level
<p>Doctors trained to see “whole” patient.</p> <p>Nurses not trained to make diagnosis.</p> <p>More to nursing than performing a task.</p> <p>Fee for service model no incentive to change.</p> <p>Indemnity.</p> <p>Teamwork not easy in practice.</p> <p>Patients would not understand skill mix.</p>	<p>Safety and indemnity.</p> <p>Minimum standards for health professionals.</p> <p>Need to define roles in order to identify things to delegate.</p> <p>Doctors see themselves as team leaders</p> <p>Continuity of care.</p> <p>Train health professional separately and then expect to work together.</p>	<p>Increasing skills in team = higher salaries.</p> <p>Must consider shortages in other professionals.</p> <p>GP concerned that they will lose “catch up” time.</p> <p>Large teams hard to manage.</p> <p>Career ladders</p> <p>Low status of aged care</p>

Conclusion

- Chronic Care Model provided useful framework for analysis
- Patient outcomes improved
 - Self management support, delivery system design, decision support
- Process outcomes improved
 - Delivery system design, decision support and clinical information systems
- Little evidence for the most effective interventions to support the role of community resources and health care organisations in chronic disease management
- Skill mix may be *one* solution to workforce shortages in primary care
- Task substitution of GPs by nurses or pharmacists is effective for disease management or health promotion but may not reduce health service use (i.e. may not save money)

Challenges Ahead

- Education of primary health care team
- Practice level data / IT systems
- Management of PHC teams – avoid duplication
- Current MBS item numbers
- Including families and communities
- Opposition to skill mix
- Integration of self-management into PHC
- Culturally appropriate
- Who is responsible for care - ? registration

Acknowledgements

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Stream 4, 6 and 7 grants

The full reports are available from:

Chronic Disease Management

<http://www.anu.edu.au/aphcri/Domain/ChronicDiseaseMgmt/index.php>

Skill Mix

http://www.anu.edu.au/aphcri/Domain/Workforce/Zwar_1_final.pdf

Travel Fellowship to explore CDM in UK

http://www.anu.edu.au/aphcri/Spokes_Research_Program/Documents/Dennis_AP_CRI7_Report_30308.pdf

Paper

Dennis S, Zwar N, Griffiths R, Roland M, Hasan I, Powell Davies G, et al. Chronic disease management in primary care: from evidence to policy. MJA. 2008;188 (8 Suppl):S53-S6.

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