SOUTHERN CROSS CARE WA Inc

Nurse Practitioner Clinical Protocol

HEALTH SCREENING AND MANAGEMENT OF CHRONIC HEALTH CONDITIONS

Advisory panel

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STATEMENT OF INTENT

This clinical protocol will guide NP (NP) practice in health screening, including diagnostic investigations for older people in the Designated Area, and provide a formulary of drugs that may be prescribed (collaboratively) for chronic health conditions.

This clinical protocol is based on published guidelines that were current at the time of writing (June 2007). It is expected that the NP will apply evidence-based approaches to his or her advanced nursing practice through ongoing consultation and collaboration.

The assumption underpinning this clinical protocol is that the patient's therapeutic regime will have been established by a medical practitioner. Ongoing diagnostic testing and pharmacotherapy will be managed collaboratively by the NP and medical practitioner(s). Comprehensive health assessments may lead to further diagnostic testing by the NP, and further consultation with the patient's general medical practitioner (GP) may lead to changes in the patient's pharmacotherapeutic regime, including drug or dose changes, cessation of particular drug therapies, and/or introduction of new drug therapies.

Three main sources of evidence were used for this clinical protocol, and will be used by the NP for ongoing reference:

- Australian Medicines Handbook Drug Choice Companion: Aged Care (2006). <http://www.amh.net.au>
- Australian Medicines Handbook (electronic – pAMH, 2007)
- Therapeutic Guidelines (electronic – miniTG, March, 2007. http://www.tg.com.au

INTRODUCTION

Many older people experience ill health and a high proportion of them have chronic conditions, or at least risk factors for chronic illness. The Australian Institute of Health and Welfare (AIHW) published data extracted from the 2001 Australian Census and stated that: "Many factors determine and influence the health of individuals and populations. Disease, disability and death are the result of the interaction of human biology, lifestyle and environmental (including social) factors, modified by health care interventions." (AIHW, 2002, p.29.)

There have been large volumes of reports and published literature about our ageing population and the "burden of disease" (AIHW, 2002, p.32) experienced by older people. To quote AIHW again:

> "In order to encourage individual behaviours and treatment practices that lead to healthy ageing of the Australian population, it is advantageous to have an understanding of the size and impact of health problems in the population, including information on how subgroups of the population are differently affected and the causes of loss of health. This knowledge is important in optimising opportunities for people to have physical, social and mental wellbeing throughout their lives".
>
> (AIHW, 2002, p.32)

Older people are usually defined as over 65 years (50 years for aboriginal and Torres Strait Islander people). However, it is recognised that chronological age is not a good indicator of the development of ill health, and Street (2004) used the concept "frailty" to define the subgroup of people who experience chronic ill-health. "The term frailty describes a state of vulnerability

along a number of axes encompassing physical, cognitive, psychological and social parameters, without implying an underlying diagnosis" (Street, 2004, p.136).

Murtagh (2003) stated that the problem of disuse was a major contributing factor in deterioration of health in older people. He listed the common diseases encountered by general practitioners (Murtagh, 2003, p.56), including:

- Hypertension
- Heart disease/failure
- Depression
- Type 2 diabetes
- Dementia
- Osteoarthritis
- Urinary incontinence
- Locomotive disorders involving neurological, vascular, and skeletal processes.

The NP role will focus on the consequences of those diseases translated into a general range of nursing problems, including (but not exclusively):

- Knowledge deficits related to the effects of the disease process(es)
- Skills deficits (i.e. blood glucose monitoring)
- Altered motivation associated with depression
- Impaired perception (vision, hearing, sensation, etc.)
- Impaired health management (planning, etc) secondary to confusion, impaired memory
- Reduced ability to avoid risk for injury (falls, etc.)
- Activities of daily living self care deficits
- Bladder and/or bowel incontinence, constipation
- Impaired mobility secondary to stroke, pain, joint degeneration, etc.
- Reduced ability to effectively manage pain
- Impaired skin integrity (i.e. chronic ulcers, etc.)

CLIENT POPULATION

The prospective health care recipients will be the older people living in Residential Care facilities and Community Care clients of Southern Cross care WA.

HEALTH SCREENING

Health screening will identify people at risk for health problems, those whose chronic health conditions may worsen due to lifestyle factors, as well as those in the early stages of disease and those whose health behaviours or disease management is suboptimal. For example people with uncomplicated essential hypertension, hyperlipidaemia and obesity are at high risk for a number of conditions including heart disease, cerebrovascular events, and diabetes (Murtagh, 2003). Screening is also used to identify disease in people who are asymptomatic, e.g. bowel, prostate, breast, and cervical cancers. Older people with existing conditions may also benefit from screening to assess their compliance with treatment regimes, and also to detect developing co-morbidities.

Health screening is an important, but time-intensive health service and is particularly important in older people because they tend to have non-specific disease presentation, including feeling 'unwell', 'not coping", having falls and balance problems, being confused, etc. (Street, 2004). It

can present opportunities to intervene in situations where poor health behaviours are contributing to ill health (e.g. low fluid intake leading to constipation, urinary incontinence, confusion, poor medication compliance, etc.). Underlying declining renal and liver function also contribute to overall morbidity, and frail older people are particularly at risk for 'deconditioning' following a few days of inactivity, which leads to functional decline and falls (Hoenig & Rubenstein, 1991).

The New Zealand Guidelines Group (NZGG, 2003) published an evidence-based guideline of *Assessment Processes for Older People.* The domains of assessment identified in the guideline were physical health and functions, safety, polypharmacy, mental health, personal care, social functioning and context, and the presence and roles of carers.

The "key messages" include:

- "Assessment of older people should be comprehensive and multidimensional as this leads to provision of services to improve health and well-being of the older person and their carers.
- Screening of the asymptomatic general population aged 75 years and over has been shown overseas to produce the greatest improvement in health and well-being." (NZGG, 2003, p.xvii)

COMPREHENSIVE ASSESSMENT

The algorithm at Appendix 1 shows the intended approach to comprehensive assessment. Following consultation with the client/representative and the GP, consent will be obtained from the client/representative to access health information from various sources.

Health screening assessment will usually include four areas of data collection, depending on the current health profile of each client:

- ❖ Retrieval of health information
- ❖ Review of available data, and gap analysis
- ❖ Comprehensive health assessment of physical, emotional, social, cognitive, and spiritual domains.
- ❖ Diagnostic investigations, including routine blood testing, urine and sputum culture and sensitivity, metabolic and therapeutic drug monitoring tests, and some imaging.

The rationales for these assessment phases are shown in Table 1 below.

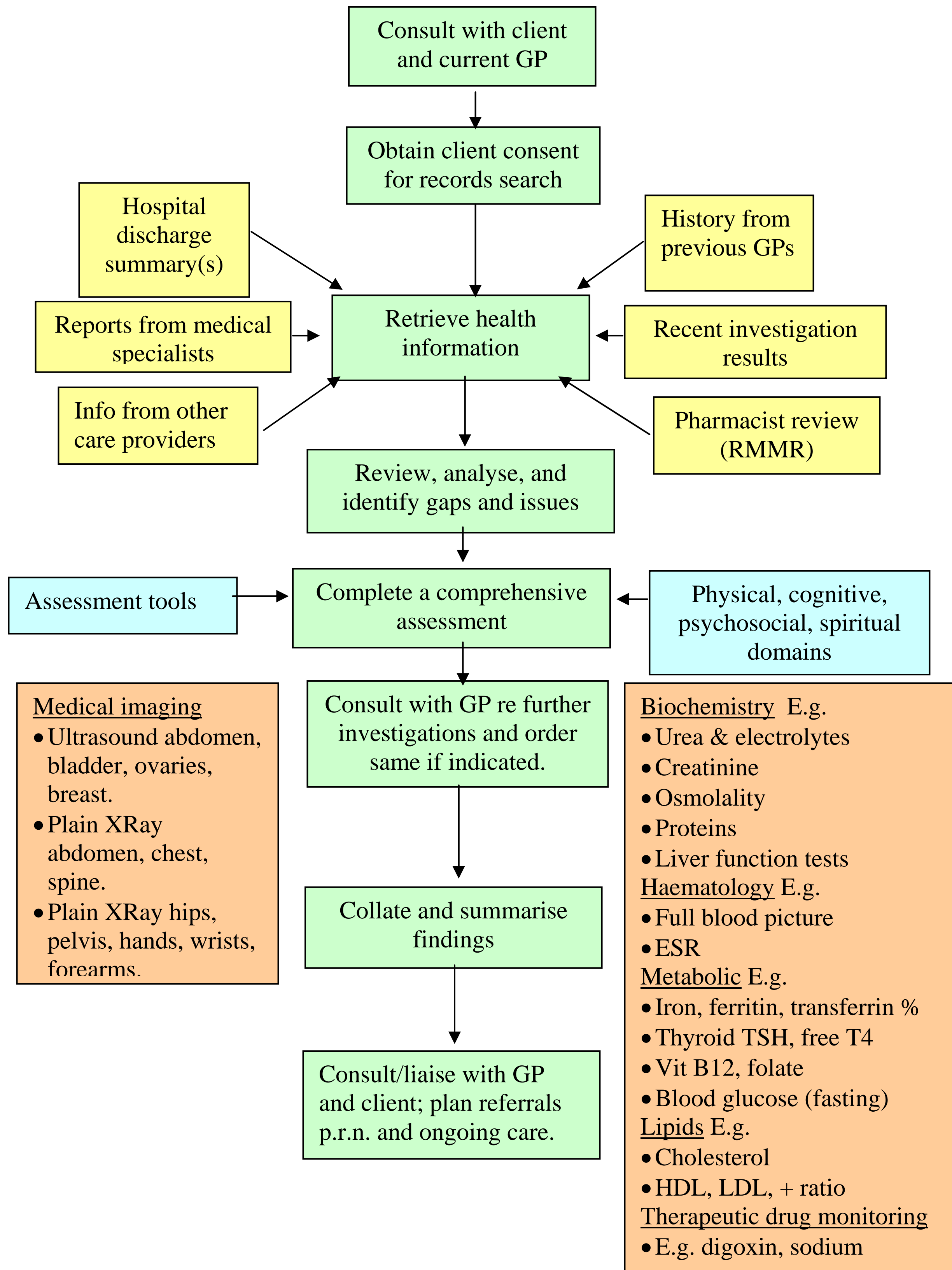
Table 1: Assessment phases with rationales

ACTION	RATIONALE
Retrieve health information ▪ GP health summary (+ previous GP(s) if necessary) ▪ Hospital records and Investigation results ▪ Other health care providers ▪ Pharmacist reviews	▪ If older people move between health care services and geographical locations their health histories become dispersed. ▪ Hospital admissions may involve transfers to other hospitals for sub-acute care, rehabilitation, or transition care. ▪ Acute hospital discharge summaries vary in quality, and specialist reports may not get to the person's usual GP. ▪ Community service care records also vary in quality

	and relevance. ▪ Older people may receive care services from a number of care providers, and each will hold their own records and information. ▪ Older people may purchase prescribed and "over-the counter" medication from more than one pharmacy.
2. Review data and gap analysis	▪ Identification of incorrect and out-of-date information will enable development of a current health profile ▪ Identifying gaps assists with prioritising further assessment and care planning.
3. Comprehensive assessment (Skilled assessment + standardised assessment tools, including those listed in National Framework (2005)	▪ Some older people miss or avoid opportunities for a comprehensive health check or for reassessment. ▪ A NP may be perceived as more accessible and less "busy" than the client's usual GP.
4. Order relevant diagnostic investigations*, in consultation with GP ▪ Biochemistry ▪ Haematology ▪ Microbiology ▪ Radiology	▪ Routine investigations may focus on known health conditions: wider screening is warranted from time to time. ▪ Reviewing data acquired from different assessment modalities within the same time period is more informative. ▪ Allow for therapeutic monitoring recommended in pharmacists' reviews to occur in a timely manner. ▪ Radiographic investigations may be indicated to rule out fractures following falls.

* Relevant investigations will consist of routine (common) tests and other more focused tests depending on the individual client's health profile. Non-routine or less commonly performed tests will be identified in consultation with the GP and Pathology Service Provider.

Health Assessment Algorithm for Older Adults



PHARMACOTHERAPY FOR OLDER ADULTS WITH CHRONIC HEALTH CONDITIONS

It is intended that the following discussion about Quality Use of Medicines for older adults will establish the framework within which the NP will make decisions about pharmacotherapy for residents and clients of Southern Cross Care WA

Quality Use of Medicines (QUM)

Concerns about medicinal drug use in Australia led the then Commonwealth Department of Health, Housing, and Community Services (CDHHCS) to initiate a working party to develop a policy on QUM. The Pharmaceutical Health and the Rational use of Medicines (PHARM) working party produced the policy in 1992.
The policy goal was "to optimise medicinal drug use (both prescription and OTC) to improve health outcomes for all Australians" and the objectives were to achieve

- Judicious selection of management options.
- Appropriate choice of medicine and dosage regimens.
- Safe use (minimising misuse, over-use, under-use, solve medication-related problems etc) (CDHHCS, 1992, p.15).

The outcome of PHARM Working Party was a National Medicines Policy (Commonwealth Department of Health and Aged Care, 1999), and a National Strategy for QUM was subsequently published in 2002 (Department of Health and Ageing (DHA)).
A series of guidelines were developed and published by APAC, addressing:

- Medication management in residential aged care (APAC 2002);
- Discontinuity in medication management "that occurs when consumers move between different health settings and health care providers" (APAC 2005, p.4); and,
- Medication management for consumers living in the community (APAC, 2006).

The National Strategy for QUM was taken up by other organizations, including the National North West Melbourne Division of General Practice (NWMDGP, 2004) and Royal Australian College of General Practitioners (RACGP, 2006).

- NWMDGP offered 10 principles for GPs to use when prescribing medications for older people; and,
- The RACGP "Silver Book" provides best practice recommendations for managing clinical conditions in RACF, with one section addressing medication management.

Internationally, the National Guidelines Clearinghouse (2005) considered an evidence-based guideline developed in USA: "Improving medication management for older adult clients" (Bergman-Evans, Adams & Titler, 2004, 2006). The guideline was developed by the Gerontological Nursing Interventions Research Centre at the University of Iowa School of Nursing and focuses on clinical aspects of medication management. The risks and recommendations described in APAC and other Australian reports were replicated in that guideline, with the addition of the fourth expected outcome:

- Reduce inappropriate prescribing;
- Decrease polypharmacy;
- Avoid adverse events; and,
- Maintain functional status (Bergman-Evans, 2006, p.6).

Finally, literature related to potentially inappropriate medication use includes the Beers Criteria (Fick, Cooper, Wade, Waller, Maclean, & Beers, 2003). The criteria identified medications or classes of medications that should be avoided in older adults, especially if the person has

specific diseases or conditions. The combination of guidelines and specific tools such as the Medication Management Outcomes Monitor (Bergman-Evans, 2006) and the Beers Criteria (Fick, et al., 2003) are useful auditing tools.

Medication management
As stated above, this clinical protocol assumes that medication regimes for particular residents already exist, and that maintenance of the medication regime will be managed jointly by the NP and GP. Models of collaboration between the NP and GPs or other medical practitioners will be individually negotiated. The NP will also collaborate in completion of medicare rebatable Medication Management Reviews.

Therefore the following formulary indicates potential drugs that may be prescribed by the NP in consultation with the resident's GP. The AMH Drug Choice Companion: Aged Care (2006), and AMH (2007) provide the details about the listed drugs, e.g. actions, contraindications, and side effects. The drugs are listed here under the conditions for which they are most frequently prescribed.

FORMULARY OF DRUGS

Hypertension (AMH Companion, p.88-91)

Therapeutic class	Drug name	Dosage range	Route	Frequency
Thiazide diuretic	Hydrochlorothiazide Indapamide	12.5 – 25mg 1.25 – 2.5mg	O O	Once daily (D) D
Beta blocker	Atenolol	25 – 50mg	O	D
	Metoprolol	50 – 100mg	O	D or BD
ACE inhibitor	Ramipril Perindipril	2.5 – 5mg 2.5 – 5mg	O O	D D
LA Ca channel blocker	Amlodipine Diltiazem (CR)	2.5 – 5mg 180-360mg	O	D D
Angiotensin II antagonist	Candesartan	4 – 16mg	O	D
Combination therapies Irbesartan 150mg + hydrochlorothiazide12.5mg orally D				

Heart disease, incl. angina and heart failure (AMH Comp. p.80-85)
Selected drugs above (beta blockers, ACE inhibitors, ARB etc), plus:

Therapeutic class	Drug name	Dosage range	Route	Frequency
Antiplatelet	Asprin	75 – 150mg	O	D
	Clopidogrel	75mg	O	D
Lipid modifiers	Simvastatin Atorvastatin	10mg 10mg	O O	D D
Nitrates	Glyceryl trinitrate	300-600mcg 400mcg 5 – 15mg	Sub-lingual SL spray Patch	prn prn < 14hr/day
LA nitrate	Isosorbide mononitrate CR	30 mg	O	D

Heart failure (AMH Comp p.74-79)
Selected drugs above (beta blockers, ACE inhibitors, etc), plus:

Therapeutic class	Drug name	Dosage range	Route	Frequency
Loop diuretic	Frusemide	20-80mg	O	D or BD
Beta blockers	Carvedilol Metoprolol CR Bisoprolol	12.5-25mg Maint. 190mg Maint 10mg	O O O	D or BD D D
	Carvedilol	Maint. 190mg Maint. 10mg	O O	D D
Aldosterone ant.	Spironalactone	25mg	O	D
Cardiac glycoside	Digoxin	62.5-125mcg	O	D
Nitrate	Isosorbide dinitrate	10-20mg	O	TDS or QID

Chronic Airways Limitation (AMH Comp. 97-106)

Therapeutic class	Drug name	Dosage range	Route	Frequency
SA B2 agonists	Salbutamol Terbutaline	100–200mcg 250-500mcg	Inh Inh	prn prn
Anticholinergics	Ipratropium Tiotropium	40-80mcg 18mcg	Inh Inh	Prn D
Corticosteroids	Prednisolone	30 – 50mg	O	D for no longer than 14 days
Inhaled CS	Fluticasone Budesonide	Up to 500mcg 100-400mcg	Inh Inh	BD BD
LA B2 agonists	Salmeterol Eformoterol	25-50mcg 6-24mcg	Inh Inh	BD BD
Combination Rx LABA & ICS	Eformoterol & Budesonide	6/100mcg or 6/200mcg	Inh	BD
Combination Rx LABA & ICS	Salmeterol & Fluticasone	25/50-250mcg 50/100-500mcg	Inh	BD
Antibiotics	Amoxycillin Doxycycline	500mg 100mg	O O	TDSx7 days 1xd x 7days

Diabetes, Types 2 (AMH Comp. p. 150-153)

Therapeutic class	Drug name	Dosage range	Route	Frequency
Biguanide	Metformin	500-850mg	O	D to TDS
Sulfonylurea	Gliclazide MR	30-120mg	O	D
insulins	Insulin	Variable	O	BD to QID

Hypothyroidism (AMH Comp. p. 148-149)

Therapeutic class	Drug name	Dosage range	Route	Frequency
Hormone	Thyroxine	50-100mcg	O	D

Anxiety, Depression, Insomnia (AMH Comp. p. 13-23)

Therapeutic class	Drug name	Dosage range	Route	Frequency
SSRI	Citalopram Sertraline	20-40mg 50mg	O O	D D
SNRI	Venlafaxine	37.5-150mg	O	D
NaSSA	Mirtazapine	15-30mg	O	D
Insomnia	Temazepam	10mg	O	D

GI disorders (GORD, PUD) (AMH Comp. p. 126-130)

Therapeutic class	Drug name	Dosage range	Route	Frequency
Proton pump inhibitor.	Omeprazole Lansoprazole (Zoton) (granules)	20mg or/then 10-20mg 30mg	O O	D x 4 weeks D D

Nausea and vomiting (AMH Comp. p. 131-132)

Therapeutic class	Drug name	Dosage range	Route	Frequency
Dopamine antag.	Metoclopramide	5-10mg	IM	8 hrly prn
CNS anti-emetic	Domperidone	10mg	O	3–4 x daily prn

Pain management (AMH Comp. p. 42-44, 198-205)

Analgesic	Paracetamol Paracetamol CR	500mg-1gm 665-1330 mg	O O	4-6 hrly (max 8 tabs/day) 6-8 hrly (max. 6 tabs/day)
Analgesic	Paracetamol with codeine	500mg + 8mg 1 – 2 tablets	O	Up to QID (as above)
Analgesic	Paracetamol with codeine	500mg + 30mg 1 – 2 tablets	O	Up to QID (as above)
NSAID	Diclofenac	25-50mg	O	BD/TDS prn

Other regularly used medicines may be added to this formulary over time. In those instances, the medications to be added will be submitted to the Director General for Health for approval.

IMPLEMENTATION OF THE CLINICAL PROTOCOL

- The clinical protocol will be disseminated to pharmacy and pathology service providers and GPs providing medical care for Southern Cross care WA residents and clients.
- The NP will negotiate with GPs to implement the clinical protocol with their patients.
- The NP will monitor diagnostic tests and medicines prescribed and apply for approval of further items/medicines as required.

EVALUATION AND REVISION

An evaluation plan will be prepared and the clinical protocol will be reviewed according to that plan once it has been in operation for 12 months. Evaluation activities will begin once the NP has a Medicare Provider Number and PBS authorisation.

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