INFORMATION EXTRACTED FROM CDMP HANDBOOK ON DEMENTIA – CHRONIC DISEASE MANAGEMENT PROGRAMME FOR DEMENTIA

INTRODUCTION

The following pages are selected from the Handbook for Healthcare Professionals Edition 2011 on Chronic Disease Management of Dementia and Bipolar Disorder.

INCLUSION OF DEMENTIA AND BIPOLAR DISORDER INTO THE CDMP

1.1 From 1 Nov 2011, Dementia and Bipolar Disorder will be included into the CDMP. This is expected to bring about better health outcomes for patients who will have better control of their conditions with close supervision from their doctors.

1.2 It is recognised that the treatment of chronic diseases is costly when administered collectively over a long period. However, this Programme will help reduce out-of-pocket payments and also reduce the barriers for patients to seek medical treatment.

1.3 With the implementation of the CDMP, GPs will be able to take on a greater role in the management of chronic diseases of their patients.

1.4 With effect from 1 Nov 2011, the use of Medisave for CDMP will apply to the ten conditions listed below:

a) Diabetes Mellitus (DM)
b) Hypertension (HPT)
c) Lipid Disorders
d) Stroke
e) Asthma
f) COPD
g) Schizophrenia
h) Major Depression
i) Dementia
j) Bipolar Disorder

DISEASE MANAGEMENT PROGRAMMES (DMPS)

1.1 The care components in each DMP are recommended by the Clinical Advisory Committee appointed by MOH. These care components are recommended based on current available medical evidence.

1.2 Some clinics have found it administratively easier to package their services for their patients. Packages should contain the care components detailed in the DMPs. Additional components, if any, can only be offered as add-ons.

1.3 Figure 1.1 shows the treatment algorithm for dementia and bipolar disorder respectively. Details regarding each of the essential care components can also be found in the MOH Clinical Practice Guidelines, available at http:// www.moh.gov.sg/mohcorp/publications.aspx?id=16266.

FIGURE 1.1: TREATMENT ALGORITHM FOR DEMENTIA

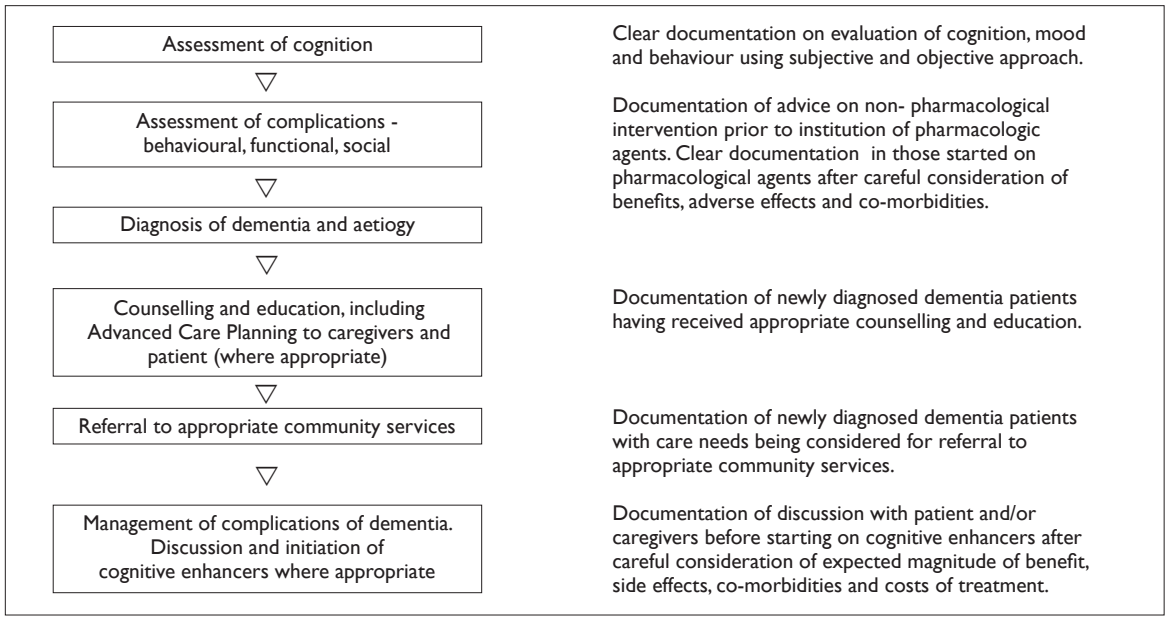

TABLE 1.1. ESSENTIAL CARE COMPONENTS FOR DEMENTIA FOLLOW-UP MANAGEMENT IN DEMENTIA DISEASE MANAGEMENT PROGRAMME

Essential Component*		Minimum Recommended Frequency (per year)	Remarks
A1	Assessment of memory (if on cognitive enhancers to document MMSE/CMMSE scores)	At least once yearly or as clinically indicated	Enquiring about memory and/or performing cognitive screening test
A2	Assessment of mood and behaviour	At least once yearly or as clinically indicated	Enquiring about mood and behaviour and initiating appropriate non-pharmacological and/or pharmacological treatment where appropriate
A3	Assessment of social difficulties and caregiver stress	At least once yearly or as clinically indicated	Assessment and referral to care coordinator or medical social worker or appropriate community services
A4	Functional needs assessment	As indicated	To initiate if there are concerns with regards home safety, driving safety, reports of recurrent falls, functional decline, swallowing difficulties

*** The diagnosis of dementia needs to be already established**

In addition, components A5 to A9 are recommended for patients who are on particular drugs due to higher risk of adverse drug effects in these frail elderly patients.

Essential Component		Minimum Recommended Frequency (per year)	Remarks
A5	Clinical parameters (HR/BP)	At least once yearly or as clinically indicated	Especially patients on cholinesterase inhibitors and antidepressants or antipsychotics which might affect cardiac rhythm
A6	Blood test for sodium and liver function tests	At least once yearly or as clinically indicated	Only for patients on SSRIs
A7	Full Blood count	At least once yearly or as clinically indicated	For patients on mood stabilisers or antiplatelet
A8	Physical examination for extra-pyramidal side-effects	At least once yearly or as clinically indicated	Only for patients on antipsychotics
A9	Electrocardiogram	As indicated	Especially patients who are being considered for cholinesterase inhibitor and/ or on cholinesterase inhibitor but concerns regarding heart rhythm and patients on antipsychotics

TABLE 2.2: ADDITIONAL CARE COMPONENTS FOR PATIENT WITH DEMENTIA AND STROKE

Essential Component		Minimum Recommended Frequency (per year)	Remarks
S1	Thomboembolism Risk Assessment	Annually	Clinical evaluation including atrial Fibrillation, cardiac Mumurs and need for anti-thombotic therapy
S2	Rehabilitation need assessment	As clinically indicated	

TABLE 2.3. ESSENTIAL CARE COMPONENTS FOR BIPOLAR DISORDER FOLLOW-UP MANAGEMENT IN BIPOLAR DISORDER DISEASE MANAGEMENT PROGRAMME

Essential Component		Minimum Recommended Frequency (per year)	Remarks
A1	Clinical Global Impression (CGI) a. Severity b. Improvement	At least once yearly or as clinically indicated	Provider-administered
A2	Patient attendance	At least twice a year or as clinically indicated	Provider-administered
A3	Blood test for fasting glucose and lipids (only for patients on atypical antipsychotics)	At least once yearly	Provider-administered

Notes: Medisave can also be used for doctor follow-up, nurse follow-up evaluation, physiotherapy, occupational therapy, speech therapy, home visit evaluation as clinically indicated and ordered by the attending doctor but not for home meal delivery, transport or other non-medical aspects of care.

GUIDELINES FOR CONTINUING CARE

1.1 To facilitate integration of care across the various levels so that patients are able to continue and receive the appropriate management of their conditions, MOH has developed the following guidelines:

a) Referral from Specialist to Primary Care

i. Suitable patients must be assessed by specialist to be stable and suitable for community follow-up.
ii. They should have a clear diagnosis of dementia or bipolar disorder.
iii. For dementia, their caregivers should have been counselled on their condition, natural history and progression of illness. For bipolar disorder, their caregivers should have been counselled on their condition and the need for continual treatment.
iv. For dementia, they should not have significant behavioural issues or significant caregiver stress. If they have behavioural issues, these should be stable before transfer to their primary care physician. For bipolar disorder, their last mood episode should have been more than three months ago.
v. For dementia, if prescribed antidepressant and/or antipsychotic agents, they should be on stable doses of these medications for at least 3 months. Similarly, for bipolar disorder, they should be on stable doses of medications.

b) Referral from Primary Care to Specialist

i. GPs should refer for specialist's review, patients in whom diagnosis of dementia is uncertain. GPs should also refer for specialist's review, complicated cases of bipolar disorder such as co-morbidities, pregnancy, patients 18 years or younger or other complications which in the family physician's opinion would require specialist opinion.
ii. Patients who, under special circumstances, require specialist opinion for medication titration for their condition (i.e. side effects or complications from conventional medication).
iii. For bipolar disorder, patients who are relapsing.

CLINICAL INDICATORS FOR DEMENTIA

1.1 Participating medical institutions must monitor the quality of care that patients receive. The following are for management of dementia patients after establishing diagnosis:

a) Documentation in follow-up of dementia patients
   - Documentation of assessment of memory
   - Documentation of assessment of mood and behaviour
   - Documentation of assessment of functional and social difficulties (if any)
   - Documentation of assessment of rehabilitation needs
b) Consultation for CDMP Dementia
c) For patients on cognitive enhancers, objective documentation of memory assessment must be performed, by way of a bedside cognitive screening instrument (such as the Mini-Mental State Examination (MMSE) or Chinese Mini Mental State Examination (CMMSE).
d) Blood test for sodium and liver function tests (only for patients on SSRIs or mood stabilisers)
e) Full blood count (for patients on mood stabilisers or considered anti-platelet therapy)
f) Clinical parameters (HR/BP) (especially for patients on cholinesterase inhibitors and antidepressants or antipsychotic medication)
g) Physical examination of extrapyramidal side effects (for patients on antipsychotics)
h) Electrocardiogram (especially for patients being considered for or on cholinesterase inhibitor. Also for patients on antipsychotics)

For those patients with stroke and dementia:

a) Documentation of thromboembolism risk assessment
   - Clinical evaluation including atrial fibrillation, cardiac mumurs and need for anti-thrombotic therapy
b) Documentation of rehabilitation need assessment

1.2 The Clinical Practice Guidelines details the good clinical practices required in dementia evaluation and management. The documentation of the important care component process in dementia evaluation and dementia management is captured in the first two clinical parameters to indicate good clinical dementia care.

1.3 As following up patients to detect complications early and prevent the morbidity and mortality associated with complications is an important aspect of care for dementia patients, the Consultation for CDMP Dementia (at least twice per year) is a key care compliance indicator for the Programme.

1.4 For dementia patients who are prescribed antidepressants or antipsychotic medications, biochemical tests should be performed at least once yearly.

1.5 For dementia patients who are prescribed cholinesterase inhibitors and antipsychotic agents, they should have clinical parameters taken during consultation visits and if there are concerns, electrocardiogram should be done. Recent evidence has shown association of cardiac rhythm abnormalities with cholinesterase inhibitor use.

Note: Indicators 1.1(c) to 1.1(h) are applicable only if patients are on these drugs

TABLE 2.4 SUMMARISES THE CLINICAL INDICATORS FOR PATIENTS WITH DEMENTIA REQUIRED FOR SUBMISSION VIA ELECTRONIC CHANNELS TO MOH

Clinical Indicator	Frequency
Documentation of: i. assessment of memory ii. assessment of mood and behaviour iii. assessment of functional and social difficulties (if any) iv. assessment of rehabilitation needs	At least once yearly or as clinically indicated
Consultation for CDMP Dementia	Twice yearly
For patients on cognitive enhancers, documentation of objective assessment of memory (MMSE or CMMSE testing or other validated instruments)	At least once yearly or as clinically indicated

TABLE 2.6 DOSING INFORMATION FOR DEMENTIA PATIENTS*

DRUG CLASS	DRUG NAME	EXAMPLES OF BRAND NAMES	USUAL ADULT STARTING DOSE	USUAL ADULT DOSE RANGE (PER DAY)	MAX. ADULT RECOMM. DOSE (PER DAY)
SSRI	Escitalopram	Lexapro®	5 – 10 mg/day	10 – 20 mg	20 mg
	Fluoxetine	Prozac®	10 – 20 mg OM	20 – 60 mg	80 mg
	Fluvoxamine	Faverin®	25 – 50 mg/day	50 – 300 mg	300 mg
	Paroxetine	Seroxat CR®	10 – 12.5 mg/day	12.5 – 50 mg	75 mg
	Sertraline	Zoloft®	25 – 50 mg/day	25 – 200 mg	200 mg
SNRI	Duloxetine	Cymbalta®	30 – 60 mg/day	30 – 60 mg	120 mg
	Venlafaxine	Efexor XR®	75 mg/day	75 – 225 mg	225 mg
NASSA	Mirtazapine	Remeron Soltab®	15 – 30 mg/day	15 – 45 mg	45 mg
RIMA	Moclobemide	Aurorix®	150 mg/day	150 – 600 mg	600 mg
Cholinesterase Inhibitors	Donepezil	Aricept®	2.5 – 5 mg once daily {Tablet (5 mg, 10 mg)}	5 – 10 mg	10 mg
	Rivastigmine	Exelon®	1.5 mg bd after meals {Capsule (1.5mg, 3mg, 4.5mg, 6 mg) Transdermal patch (4.6mg/24 hours, 9.5mg/24 hour)}	6 – 12 mg 4.6 mg – 9.5 mg (Transdermal patch)	12 mg
	Galantamine	Reminyl®	8 mg once daily after meals {PR Capsule (8mg, 16 mg and 24 mg)[2] Solution (4mg/ml; 100 ml bottle)[3]}	16 – 24 mg	24 mg
NMDA Antagonists	Memantine	Ebixa®	5 mg once daily {Tablet: 10 mg, Solution: 10 mg/g oral drops (10 drops = 5 mg)}	20 mg/day (CCT4>60) 10 mg/day (CCT 40-60)	20 mg
Others	Bupropion	Wellbutrin SR®	150 mg OM, increase to 150 mg BD on day 4 if well tolerated	150 – 300 mg	300 mg
	Tianeptine	Stablon®	25 – 50 mg/day in 2 – 4 divided doses	25 – 37.5 mg	50 mg
	Trazodone	Trittico®	25 – 150 mg/day in divided doses	50 – 300 mg	600 mg

* NB: - Dosing information for bipolar disorder is similar to schizophrenia and major depression.
2 PR: prolonged release once-a-day formulation. The immediate-release formulation has been phased out.
3 Solution can be mixed with non-alcoholic beverage, but must be consumed immediately.
4 Creatinine clearance

Abbreviations

- SSRI: Selective Serotonin Reuptake Inhibitor
- SNRI: Serotonin and Noradrenaline Reuptake Inhibitor
- NASSA: Noradrenaline and Specific Serotonin Antidepressant
- RIMA: Reversible Inhibitor of Monoamine Oxidase

Important Notes:

- For details, please consult the manufacturers most current product literature or other standard references.
- Lowest effective doses should be used. Elderly patients should be carefully initiated at lower doses of a suitable antidepressant. Individualized dosing for any antidepressant should be based on an in-depth evaluation of the individual patient's therapy requirement with considerations to issues such as contraindications, warnings, precautions, adverse reactions and interactions with other drugs.
- There are many adverse drug interactions with antidepressant drug use, please refer to drug literature for details. Some examples of potential clinically significant interactions with general medicines when initiating/increasing an antidepressant dose can be:
  - Triptans (e.g. Sumatriptan), St. John's Wort: Risks of serotonin syndrome with SSRIs and related antidepressants.
  - Insulins, oral hypoglycaemic agents: Risks of hypoglycaemia with some antidepressants (e.g. Fluoxetine)
  - Theophylline, Clozapine: Risks of toxicity with Fluvoxamine
  - Digoxin: Risks of toxicity with Fluoxetine
  - Anticonvulsants: Levels affected by many antidepressants. Seizure threshold reduced by TCAs, bupropion.
  - Warfarin: Risks of bleeding with many antidepressants (e.g. Fluvoxamine)
- Precautions when switching antidepressants: Other antidepressants should not be started until at least 2 weeks after Moclobemide has been stopped. Moclobemide should not be started until at least 1 week after a TCA or SSRI or related antidepressant has been stopped (2 weeks in the case of Sertraline, and at least 5 weeks in the case of Fluoxetine). Combinations of SSRIs and related antidepressants may cause serotonin syndrome, hypotension and drowsiness.

References:

British National Formulary Vol. 57 (Mar 2009) & Geriatric Dosage Handbook (11th Ed) MICROMEDEX (DRUGDEX) Healthcare Series Vol. 140 (2009)
American Hospital Formulary System (2009 Edition) Manufacturers' Product Information

TABLE 3.1: RECOMMENDED INVESTIGATIONS FOR PATIENTS RECEIVING SELECTED PHARMACOTHERAPY

S/N	Investigation	Indication
BIPOLAR DISORDER		
1	Full Blood Count	Patients on most mood stabilisers at baseline and yearly for carbamazepine
2	Renal Panel (U/E/Cr)	Patients on all antidepressants, carbamazepine and lithium
3	Liver Function Test	Patients on antidepressants, atypical antipsychotics, mood stabilisers
4	Thyroid function (TFTs)	Patients on lithium
5	Fasting lipids and glucose	Patients on atypical antipsychotics and those at risk of metabolic syndrome.
6	Serum levels	Patients on Lithium, Carbamazepine and Sodium Valproate
DEMENTIA		
1	Full Blood Count	Patients on mood stabilisers. Patients for consideration or on antiplatelet agent
2	Renal Panel (U/E/Cr)	Patients on antidepressants or mood stabilisers
3	Liver Function Test	Patients on antidepressants, atypical antipsychotics, mood stabilisers
4	Electrocardiogram	Patients for consideration or on cholinesterase inhibitors and antipsychotics (both typical and atypical) and in whom there is concern with regards to cardiac rhythm abnormalities

TABLE 3.2: LIST OF MEDISAVE CLAIMABLE DRUGS FOR TREATMENT OF PSYCHIATRIC CONDITIONS

This list includes any new medications (excluding benzodiazepines) approved by the Health Sciences Authority (HSA) for the treatment of psychiatric conditions which are included in the CDMP programme.

S/N	Drug	S/N	Drug
1	Amisulpride	24	Lithium*
2	Amitriptyline	25	Maprotiline
3	Aripiprazole	26	Memantine#
4	Benzhexol	27	Mirtazepine
5	Benztropine	28	Moclobemide
6	Bupropion	29	Nortriptyline
7	Carbamazepine*	30	Olanzepine
8	Chlorpromazine	31	Paliperidone
9	Clomipramine	32	Paroxetine
10	Clozapine	33	Perphenazine
11	Donepezil#	34	Quetiapine
12	Dothiepin	35	Risperidone
13	Doxepin	36	Rivastigmine#
14	Duloxetine	37	Sertraline
15	Escitalopram	38	Sodium Valproate*
16	Fluoxetine	39	Sulpiride
17	Flupenthixol	40	Tianeptine
18	Fluphenazine	41	Trazodone
19	Fluvoxamine	42	Trifluoperazine
20	Galantamine#	43	Trimipramine
21	Haloperidol	44	Venlafaxine
22	Imipramine	45	Ziprasidone
23	Lamotrigine	46	Zuclopenthixol

* Mood stabilizers
# Drugs which are specific for the treatment of dementia

TABLE 3.3: LIST OF ALLOWABLE THERAPIES FOR TREATMENT OF PSYCHIATRIC CONDITIONS

1. Psychological therapy in specific cases
2. Electro-convulsive therapy (ECT)
3. Occupational Therapy
4. Physiotherapy
5. Speech therapy

COMMENCEMENT OF CLINICAL DATA COLLECTION

1.1 For patients who have been enrolled in the Dementia or Bipolar Disorder Chronic Disease Management Programme (CDMP), data collection will commence at the patient's first visit to the doctor for the chronic condition.

1.2 The clinical data fields required for Dementia is shown below :

Dementia

DATA TO BE ENTERED ONCE ONLY (EXCLUDING UPDATES)		
NRIC/FIN:		
DOB (DD/MM/YYYY):		
Gender: Male ( ), Female ( )		
DATA TO BE ENTERED AT LEAST ONCE YEARLY		**DATA TO BE ENTERED ONCE EVERY 6 MTHS**
Documentation of: i. assessment of memory ii. assessment of mood and behaviour iii. assessment of functional and social difficulties (if any) iv. assessment of rehabilitation needs	Yes (if assessment done) OR No (if assessment not done)	Consultation for CDMP Dementia
For patients on cognitive enhancers, documentation of objective assessment of memory (MMSE or CMMSE testing or other validated instruments)	As above	

Clinical Global Impression (CGI) Scale

Considering your total clinical experience with this particular population, how would you rate this patient's mental condition at this time?

1) Severity of Illness

1 = Normal (not at all mentally ill)
2 = Borderline mentally ill)
3 = Mildly mentally ill
4 = Moderately mentally ill
5 = Markedly mentally ill
6 = Severely mentally ill
7 = Extremely mentally ill

2) Global Improvement

0 = Not assessed
1 = Very much improved
2 = Much improved
3 = Minimally improved
4 = No change
5 = Minimally worse
6 = Much worse
7 = Very much worse