

A 3 Week Geriatric Education Program for 4th Year Medical Students at Dalhousie University

Laurie Mallery, M.D., FRCPC, Janet Gordon, M.D., FRCPC, Susan Freter, M.D., FRCPC

Dalhousie University,
Department of Medicine
Division of Geriatric Medicine
Halifax, Nova Scotia, Canada

Abstract: Purpose -Population demographics are shifting towards an increased average age. Yet, many medical schools still do not have mandatory comprehensive education in Geriatric Medicine. In 2001, the Division of Geriatric Medicine at Dalhousie University developed a required three-week geriatric course for fourth year medical students. This paper describes the details of the curriculum so that it can be reproduced in other settings.

Results - The curriculum was successfully implemented. An examination, held at the end of each 3-week rotation, documented extensive learning of important concepts in Geriatric Medicine. The students gave positive feedback about the benefits of this training program.

Conclusion -A well developed formal education program teaches students specific skills in Geriatric Medicine, which may improve the care of the growing elderly population.

Key words: geriatric, geriatrics, elderly, curriculum, medical school education

Caring for elderly patients is a common experience for most physicians. Although seniors represented only 12% of the Canadian population in 1997/1998, they accounted for 35% of all hospital discharges in Canada and for 52% of patient days in the hospital.¹ Similarly, the 1997 National Hospital Ambulatory Medical Care Survey in the United States^{2,3} documents that persons over age 75 had the highest rate of emergency department and ambulatory care visits.

Despite frequent interactions with elderly patients, it is not uncommon for physicians to become frustrated when caring for frail elderly adults and for the true medical needs of this group to remain unrecognized.⁴ For example, a prospective study of 297 patients, aged 70 years or older,⁵ showed that cognitive impairment was common among older adults presenting to the emergency department, occurring in 26% of all older adults. However, only 30% of the patients with mental status impairment had documentation of mental status evaluation while in the emergency department. In addition, of the patients who met the criteria for delirium, 37% were discharged home. Likewise, acute confusional states are frequently missed amongst elderly orthopedic inpatients⁶ and medical patients.^{7,8}

Older patients frequently have multiple interacting diseases, in addition to cognitive and functional disabilities. Atypical disease presentation can cause

misdiagnosis, and inappropriate prescribing is common.⁹ Cognitive impairment amongst elderly inpatients is associated with greater cost and longer length of stay.¹⁰ Effective treatment of this age group, therefore, depends on understanding complex medical illnesses and how they affect cognition and function. Indeed, evidence shows that tailoring treatment plans to the needs of the frail elderly significantly improves outcome.^{11,12,13,14,15}

To enable physicians to provide appropriate care to older adults, specific training in Geriatric Medicine is needed. Unfortunately, many medical schools offer little education in Geriatric Medicine.^{16,17} Until 2001, the Dalhousie Medical School in Halifax, Nova Scotia had only 15 hours of Geriatric Medicine teaching in the entire 4-year curriculum. In September 2001, the Dalhousie Medical School introduced a mandatory 3-week rotation in Care of the Elderly for 4th year medical students. The curriculum for this rotation was developed by the Division of Geriatric Medicine. This paper reviews the principles and format of this program so that it can be reproduced at other medical centers.

Structure

The course entitled "Care of the Elderly" runs over 12 weeks (i.e. 4 three week blocks), during which time the entire 4th year medical school class, comprising approximately 90 students, completes the

rotation. Every three weeks 22-23 students present to the Division of Geriatric Medicine for learning. The course focuses on both didactic teaching and clinical experience. Our main objective is to comprehensively teach the following topics:

1. Cognitive assessment
2. Comprehensive geriatric assessment, including functional assessment
3. Evaluation and treatment of common geriatric problems, such falls and problems of mobility.

Teaching

1. A syllabus (Appendix 2) of objectives, essential reading material, and guidelines for clinical experience covers key geriatric topics, such as comprehensive geriatric assessment, atypical disease presentation, polypharmacy, incontinence, mobility, falls, deconditioning, exercise, delirium, depression and dementia.
2. "Understanding Dementia: A Primer of Diagnosis and Management"¹⁸ by Drs. Ken Rockwood and Chris MacKnight is recommended reading because it presents an understandable and practical way to assess, diagnose and treat problems of cognition.
3. To highlight core principles, case studies with detailed answers were written and distributed.
4. The course begins with 2½ days of didactic teaching by geriatricians (12½ hours), a physical therapist (45 minutes), and an audiologist (1 hour) (Table 1). In subsequent years, teaching sessions were condensed to 2 days.

In this course, we emphasize the importance of developing the necessary skills to evaluate and diagnose problems of cognition, as this subject is often deficient in the medical school curriculum. To accomplish this goal, we spend four hours during the introductory session reviewing basic principles of cognitive assessment. The "Memory Disability Clinic Checklist" (MDCC), a tool developed by the Division of Geriatric Medicine at Dalhousie University, is used to organize and document the history, cognitive evaluation, and physical examination (Table 2).¹

Specific skills the students are expected to learn to assess cognition include:

1. How to use the Brief Cognitive Rating Scale (BCRS)¹⁹ to assess memory and judge the severity of illness. Specifically, employing

axis 2 of this instrument, the student learns how to ask targeted questions to determine whether the patient has memory loss. Targeted questioning means that the physician asks specific questions that have definite answers. For instance, if someone regularly watches the news, he or she should be able to recount details of current events. Other appropriate questions include inquiring about yesterday's evening meal, recent events, and television shows. If the patient cannot recall the names of family members, more severe memory loss exists. In essence, simple questions with specific answers highlight problems of memory more than open-ended questions, and an inability to answer these types of questions demonstrates the extent of memory loss that is present. This technique is emphasized and practised because it teaches students how to identify memory loss during routine questioning, such as during a patient interview.

2. Functional abilities are assessed and staged using the 5th axis of the BCRS, also known as the Functional Assessment Staging Tool (FAST).²⁰ On this scale, if a patient has trouble performing instrumental activities of daily living, such as cooking and shopping, mild impairment is present. In contrast, problems with activities of daily living, such as bathing and dressing, would be compatible with more severe dementia.
3. The students are taught to recognize patterns of dementia. For instance, mild memory and functional impairment in association with hallucinations and delusions would not

Table 1

Didactic Curriculum

Day 1	Introduction to the rotation (1 hr) Comprehensive Geriatric Assessment (CGA) (1½ hr) Frailty and atypical illness presentation (1½ hours) Mobility and falls (2 hours) Meeting with physiotherapist (45 min)
Day 2	Delirium and dementia (4 hours) Hearing (1 hour)
Day 3	Polypharmacy (1½ hours) Exercise (1 hr)

¹ Tables 2 through 5 appear in Appendix 1.

be compatible with Alzheimer's disease. Instead, this combination of symptoms would be indicative of Lewy Body Dementia. Likewise, disturbances of gait, in association with mild memory loss, could be due to normal pressure hydrocephalus, vascular dementia, B₁₂ deficiency, or Parkinson's related illnesses (Table 3).

4. At the end of the evaluation, students must answer "four questions":¹⁸
 - Is there a problem with memory?
 - What type of cognitive problems are there?
 - What type of dementia does the patient have?
 - What is to be done?

To summarize, students are taught to evaluate problems of cognition by:

1. Performing the Folstein MMSE,²¹ to obtain a standardized score.
2. Testing memory using the BCRS.
3. Asking the caregiver about functional disabilities and using this information to stage the severity of illness and develop a differential diagnosis.
4. Documenting history, physical examination, and cognitive testing using the MDCC.

The second focus of the Care of the Elderly Course is to teach medical students how to identify the medical needs of the elderly. To facilitate assessment, students use the Comprehensive Geriatric Assessment (CGA) form (Table 4), designed to collect and record information about common medical, functional, and psychosocial problems of the elderly. The domains of the CGA form include cognition, mood, mobility, balance, bowel and bladder function, functional ability and social situation. Evaluating and describing these areas highlights their important contribution to the health of the individual. Subsequently, problems identified are targeted for treatment.

The third topic we comprehensively teach is the assessment and treatment of mobility problems. Students have a 1½ hour session about falls and fall prevention and an interactive small group session with a physiotherapist to learn basic information concerning how to safely transfer and ambulate patients. Additionally, they learn how to perform gait assessment. This section also reviews the benefits of exercise and the effects of specific exercise protocols, such as the ability of high intensity resistance training to strengthen muscle. Students are taught about the deterioration of function and mobility that commonly

occurs when older adults are hospitalized, emphasizing the importance of observing and describing a hospitalized patient's mobility on a regular basis to detect and treat any change in ambulating ability. Finally, students are taught about common geriatric syndromes, as outlined in the syllabus (appendix 2).

Clinical Experience

The students work with preceptors throughout Atlantic Canada, including geriatricians and family physicians caring for older adults. While working with these physicians, students meet and assess frail elderly patients. Interview and clinical experiences are structured using the CGA and MDCC forms.

Assignments

During the three-week rotation, the students complete and submit the following to the geriatrician acting as the course preceptor:

1. Comprehensive geriatric assessment and Mini-Mental State Examination (MMSE) forms for 5 patients, along with a brief description of their major medical problems and a treatment plan. In subsequent years, this was decreased to three assessments.
2. Thorough medication review for one person taking multiple medications, with a discussion of undertreatment and polypharmacy.
3. Written assessment of ambulation, transfer and balance for one patient with mobility problems.
4. One cognitive evaluation, including the completion of a clinical interview using the MDCC, Folstein MMSE, Brief Cognitive Rating Scale, and the Clock Drawing Test. The students write answers to the "4 questions".¹⁸
5. Each student researches and gives a 15 minute presentation on a topic in geriatric medicine. Suggested topics are distributed to the students, but they are also able to present an approved topic of their choice.

Evaluation

An evaluation form documents the goals and accomplishments of the student (Table 5), including satisfactory completion of the assignments, oral presentation, written examination, and preceptor assessment.

To date, three medical schools classes have completed the geriatric program. Assessment at the end of the rotations demonstrated that the medical students acquired detailed knowledge of geriatric

medicine. Review of the assignments documented acquisition of specific skills, such as how to complete comprehensive geriatric assessment, assess cognition, and manage common geriatric syndromes. The examination, held at the end of each three-week period, included 10-15 clinically based open-ended questions that covered the subject matter outlined in the syllabus and required detailed knowledge to answer correctly. For example, the students were shown an interview of a patient who had dementia and asked about diagnosis, stage, other expected associated symptoms and treatment options (see appendix 2 for examples of other questions). The answers to these questions clearly demonstrated the comprehensive knowledge the students attained during the 3-week course, as all but one participating student were able to provide detailed answers to most questions about core geriatric topics. Since the course began in 2001, one student has failed this examination.

Prior to participating in the geriatric program, a pre-test evaluation of one group of medical students (n=23) showed they had little knowledge of how to assess cognition or integrate comprehensive geriatric assessment into the medical history and physical examination. After participating in the 3-week geriatric course, this same group provided detailed answers about these topics in a posttest, demonstrating that they achieved an understanding of how to assess dementia and perform CGA.

One hundred percent of the students in all three years completed course evaluations. The majority of participating students rated the course positively. Eighty-three percent of the comments made by the students were positive, and students complimented the lectures, organization of the course and the amount of learning that occurred over three weeks. During each year, several students made superlative comments, such as: "Overall the best learning experience in the past four years" and "this was the best rotation in the clerkship". Seventeen percent of the comments were critical. Of these, 6% of students stated that the oral presentation was unnecessary and 5% of students said there were too many assignments. Other recommendations made by the students included shortening the lecture time (1%), eliminating the examination (1%), putting the course in the third year rather than the fourth year (1%), and providing different reading material about dementia because the recommended text was too expensive (1%). Two percent of students reported an inadequate clinical experience and 1% of students said they were not yet "comfortable assessing patients with dementia". On the basis of this feedback, the number of mandatory assignments was decreased to three

CGA/treatment plans and one assessment of medication use, mobility and cognition. The duration of lectures was changed to 2 days.

Discussion

Other programs for undergraduate geriatric education have been described in the literature. Several are similar to the Dalhousie Curriculum in that they include lectures,²²⁻³⁰ mandatory reading assignments,^{22,24,26,29} clinical experience,²²⁻³⁰ cases^{22,24,26-28} and examinations.^{20,22-27} The Mt. Sinai³² program differs from the others in that it uses standardized patients, actors that pose as patients using a scripted geriatric problem. Many published curriculum document the topics covered in didactic lectures^{22-25,27-29}, however, few articles extensively describe the way in which they teach these topics. Of these, the University of Kansas²⁴ most comprehensively outlines its course. The course syllabus, objectives, seminar topics, cases, and coursework are available on their website³¹.

Our curriculum is unique in that it specifies how didactic subject matter is incorporated into clinical experience. Particularly, the four-hour teaching session on dementia, in addition to reading "Understanding Dementia; A primer of Diagnosis and Management"¹⁶ provide a focused approach for the assessment of cognition. The student then uses these learned skills and the MDCC to assess at least one patient with cognitive problems. Each of these assessments is critiqued by a geriatrician for feedback. Similarly, the CGA form provides a template for the student to assess core geriatric problems, including functional assessment, for patients they evaluate during their clinical time.

As with our course, most,^{22-24,26-30} but not all programs²⁵ were highly rated.

Conclusion

By instructing students to attend to common medical, functional and cognitive problems of the older adult, this educational program appears to meet the goal of teaching students how to assess and care for geriatric patients. In light of the increasing need to care for this population, we believe that these important skills should be taught to all medical students in a comprehensive and meaningful way so that the needs of this patient group can be properly identified and treated.

References

1. www.cihi.ca
2. Nourjah P. National Hospital Ambulatory Medical Care Survey: 1997 emergency department survey. *Adv Data* 1999 May 6;(304):1-24.
3. Schappert SM. Ambulatory care visits to physician offices, hospital outpatient departments, and emergency departments: United States, 1997. *Vital Health Stat* 13 1999 Nov;(143):i-iv, 1-39.
4. Rockwood K. Medical management of frailty: confessions of a gnostic. *Can Med Assoc J* 1997 Oct 15;157(8):1081-4.
5. Hustey FM, Meldon SW. The prevalence and documentation of impaired mental status in elderly emergency department patients. *Ann Emerg Med.* 2002;39:248-53.
6. Gustafson Y, Brannstrom B, Norberg A, Bucht G, Winblad B. Underdiagnosis and poor documentation of acute confusional states in elderly hip fracture patients. *J Am Geriatr Soc* 1991;39(8):760-5.
7. Rockwood K, Cosway S, Stolee P, Kydd D, Carver D. Increasing the recognition of delirium in elderly patients. *J Am Geriatr Soc* 1994;42:252-6.
8. Inouye SK, Foreman MD, Mion LC, Katz KH, Cooney LM. Nurses' recognition of delirium and its symptoms. *Arch Intern Med* 2001;161:2467-73.
9. Liu GG, Christensen DB. The continuing challenge of inappropriate prescribing in the elderly: an update of the evidence. *J Am Pharm Assoc (Wash)* 2002 Nov-Dec(6):847-57.
10. Lyketsos CG, Sheppard JM, Rabins PV. Dementia in elderly persons in a general hospital. *Am J Psychiatry* 2000 May;157(5):704-7.
11. Gustafson Y, Brannstrom B, Berggren D, Ragnarsson JI, Sigaard J, Bucht G, et al. A geriatric-anesthesiologic program to reduce acute confusional states in elderly patients treated for femoral neck fractures. *J Am Geriatr Soc* 1997;39(7):655-62.
12. Inouye SK, Bogardus ST Jr, Baker DI, Leo-Summers L, Cooney LM Jr. The Hospital Elder Life Program: a mode of care to prevent cognitive and functional decline in older hospitalized patients. *Hospital Elder Life Program. J Am Geriatr Soc* 2000 Dec;48(12):1697-706.
13. Inouye SK. Prevention of delirium in hospitalized older patients: risk factors and targeted intervention strategies. *Ann Med* 2000 May;32(4):257-63.
14. Reuben DB. Making hospitals better places for sick older persons. *J Am Geriatr Soc* 2000 Dec;48(2):1728-9.
15. Marcantonio ER. Restricted activity: key indicator of decline or "just having a bad day"? *Ann Intern Med* 2001;135(5):374-6.
16. Trends in geriatric teaching, contemporary issues in medical education. *AAMC*, July 1998;1(8).
17. Barry PP. Geriatric clinical training in medical school. *Am J Med* 1994;97(4 suppl):85-95.
18. Rockwood K, MacKnight C. *Understanding Dementia; A Primer of Diagnosis and Management.* Halifax: Pottersfield Press, 2001 ISBN:1-895900-38-8.
19. Reisberg B, Ferris SH. Brief Cognitive Rating Scale (BCRS). *Psychopharmacology Bulletin* 1988;24(4):629-36.
20. Reisberg B. Functional Assessment Staging (FAST). *Psychopharmacology Bulletin* 1988;24(4):653-9.
21. Folstein MF, Folstein SE, McHugh PR. "Mini-mental state". A practical method for grading the cognitive state of patients for the clinician. *J Psychiatry Res* 1975 Nov;12(3):189-98.
22. Fields Suzanne, Jutagir Rajendra, et al. Geriatric Education Part I: Efficacy of a Mandatory Clinical Rotation for Fourth Year Medical Students. *JAGS* 1992;40:964-969.
23. Wener Stephen, Foley Conn, et al. Three Years of Required Geriatrics Module for Third-year Medical Students. *Acad Med* 1991 May;66(5):292-294.

Mallery L, Gordon J, Freter S. A 3 week geriatric education program for 4th Year Medical Students at Dalhousie University

Med Educ Online [serial online] 2003;8:11. Available from <http://www.med-ed-online.org>

24. Sullivan Gail. A Case-Oriented Web-Based Curriculum in Geriatrics for Third-Year Medical Students. *JAGS* 2000;48:1507-1512.
25. Powers Cathey Savidge Mildred, et al. Implementing a Mandatory Geriatrics Clerkship. *JAGS* 2002;50:369-373.
26. Duque Gustavo, Gold Susan, et al. Early Clinical Exposure to Geriatric Medicine in Second-Year Medical School Students – The McGill Experience. *JAGS* 2003;51:544-548.
27. Fleetwood-Walker Patricia, Mayer PP, et al. A New Approach to Course Development in Geriatric Medicine. *Med Educ* 1983;17:95-99.
28. Stout R.W. Teaching Geriatric Medicine at the Queen's University of Belfast. *Age & Ageing* 1983;12:S7-13.
29. Caird F.I. Undergraduate Teaching in Geriatric Medicine in Glasgow. *Age & Ageing* 1983;12:S24-25.
30. Stiles Nancy and Haist Steven. A Four-year Longitudinal Gerontology Curriculum for Medical Students. *Acad Med* 1999;74(5):584-585.
31. [Http://classes.kumc.edu/som/amed900/](http://classes.kumc.edu/som/amed900/)
32. Gold Gabriel, Hadda Ceri, et al. A Standardized Patient Program in a Mandatory Geriatrics Clerkship for Medical Students. *The Gerontologist* 1995;35(1):61-66.

Correspondence

Laurie Mallery, M.D., FRCPC
Division of Geriatric Medicine
QEII Health Sciences Centre
5955 Veterans' Memorial Lane, Ste. 2654
Halifax, NS Canada B3H 2E1
Phone: 902-473-6261
Fax: 902-473-4867
Email: laurie.mallery@cdha.nshealth.ca

APPENDIX 1 Table 2

MEMORY DISABILITY CLINIC CHECKLIST
Division of Geriatric Medicine, Dalhousie University

Date: _____

Education: _____ Occupation: _____

Marital Status: _____ Carer: _____

Description of Problem: _____

Sudden onset _____
 Rapid progression _____
 Hallucinations/Delusions _____
 Anxiety _____
 Depression _____
 Gait Impairment _____
 Incontinence _____
 ETOH _____
 Recent head injury _____
 Pronounced personality change _____
 Focal neurological symptoms _____
 Previous stroke _____
 Hearing/vision/speech _____
 Family Hx _____
Vascular RFs:
 HTN _____ DM _____
 IHD _____ Smoking _____
 Other _____

MMSE	SCORE	_____
1. year	11. ball	21. tree
2. season	12. flag	22. pencil
3. month	13. tree	23. watch
4. date	14. d	24. ifs
5. day	15. l	25. take
6. country	16. r	26. fold
7. province	17. o	27. place
8. city/town	18. w	28. close
9. place	19. ball	29. sentence
10. floor	20. flag	30. diagram

Folstein et al J Psychiatry Res 1975;12:189

PMHx: _____

Medications: _____

Clock

Pentagons

BCRS I__ II__ III__ IV__

Verbal fluency Letter _____ Category _____

Physical Exam _____

Labs _____

CT _____

Problem Areas:

Are there behavioural disturbances? _____

Is nutrition adequate? _____

Are there sleep problems? _____

Is the patient driving? _____

Are there concerns about driving? _____

Is the patient safe at home? _____

Are medications used correctly? _____

Is more support needed? _____

Is OT or Social Work referral needed? _____

Is there caregiver stress? _____

Referral to Alzheimer Society? _____

Is an advance directive in place? _____

Is the patient able to give advance directive? _____

Should medication be started? _____

Recommendations:

Signature: _____

Functional Assessment Staging Tool (FAST)

Reisberg et al Psychopharmacol Bull 1988;24:662

1. No impairment.
2. Subjective complaint, no impairment.
3. Decreased organization capacity.
4. Problems with complex tasks, finances, shopping, medications, or housework.
5. Needs prompting to change clothes.
6.
 - a. Problems in dressing.
 - b. Problems in bathing.
 - c. Cannot handle mechanics of toileting.
 - d. Urinary incontinence.
 - e. Fecal incontinence.
7. Cannot walk, limited or no speech.

TABLE 3
COMMON DEMENTIAS AND ASSOCIATED SYMPTOMS

Mild Cognitive Impairment plus:

Gait abnormality	Vascular dementia Lewy Body Dementia Parkinson's related dementia B ₁₂ deficiency Alcohol related dementia Normal pressure hydrocephalus
Hallucinations	Lewy Body Dementia
Incontinence	Normal pressure hydrocephalus Vascular Dementia
Language Disturbance	Primary Progressive Aphasia
Frontal symptoms	Frontal lobe dementia

Rapid decline	Delirium Tumor Vasculitis Creutzfeldt-Jakob Disease Vascular dementia
---------------	---

Mallery L, Gordon J, Freter S. A 3 week geriatric education program for 4th Year Medical Students at Dalhousie University

Med Educ Online [serial online] 2003;8:11. Available from <http://www.med-ed-online.org>



Queen Elizabeth II Health Sciences Centre

TABLE 4

Comprehensive Geriatric Assessment

Name: _____
 Unit #: _____
 DOB (YYYY/MM/DD): _____
 Family Physician: _____

- Inpatient Clinic GDH NH Other
 Outreach Home LTC ER

A. Mental Status	<input type="checkbox"/> WNL <input type="checkbox"/> CIND <input type="checkbox"/> Dementia <input type="checkbox"/> Delirium	MMSE: _____	Education: _____
B. Emotional	<input type="checkbox"/> WNL <input type="checkbox"/> ↓ Mood	<input type="checkbox"/> Depression	<input type="checkbox"/> Anxiety <input type="checkbox"/> Other
C. Communication	Speech: <input type="checkbox"/> WNL <input type="checkbox"/> Other	Hearing: <input type="checkbox"/> WNL <input type="checkbox"/> Other	Vision: <input type="checkbox"/> WNL <input type="checkbox"/> Other
D. Mobility	Transfers: I A D	Walking: I A D	Aids: _____
E. Balance	<input type="checkbox"/> WNL	<input type="checkbox"/> Impaired	<input type="checkbox"/> Fall(s)
F. Bowel	<input type="checkbox"/> Constipation	<input type="checkbox"/> Continent	<input type="checkbox"/> Incontinent
G. Bladder	<input type="checkbox"/> Catheter	<input type="checkbox"/> Continent	<input type="checkbox"/> Incontinent
H. Nutrition	Weight: <input type="checkbox"/> Stable <input type="checkbox"/> Loss <input type="checkbox"/> Gain	Appetite: <input type="checkbox"/> WNL <input type="checkbox"/> Fair <input type="checkbox"/> Poor	
I. ADL	Bathing I A D Cooking I A D Dressing I A D Cleaning I A D	Medications I A D Driving I A D Shopping I A D Banking I A D	
J. Social	M W D S Lives: <input type="checkbox"/> Alone <input type="checkbox"/> Spouse <input type="checkbox"/> Other Supports: _____	Home: ___ Level House <input type="checkbox"/> Apt <input type="checkbox"/> Other Steps: _____	

Problems:	Associated Medications & Doses:
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

Assessor/Physician: _____ Date (YYYY/MM/DD): _____

TABLE 5

FINAL ROTATION EVALUATION FORM

GOAL	HOW TO ACHIEVE THE GOALS	EVALUATION	FAILS TO MEET	MEETS
1. To be able to complete a comprehensive geriatric assessment	1. Complete a comprehensive geriatric assessment on 5 frail elderly patients using the CGA form.	1. The completed 5 CGA forms, accompanied by MMSE and other standardized assessments, will be submitted for evaluation.		
2. To be able to manage a patient with multiple interacting medical, social, and functional problems	2. Develop a treatment plan for the above 5 patients using a problem-oriented approach.	2. Management plans will be reviewed with the preceptor and a written outline of the treatment plan will be submitted.		
3. To be able to prescribe appropriate medications.	3. Choose a patient taking multiple medications. Perform a medication review by listing all medical problems and each associated medication. Discuss whether the medications prescribed are appropriate and if there is undertreatment or polypharmacy.	3. Medication assessment will be submitted.		
4. To be able to evaluate mobility and risk for falling	4. Observe one patient walk. Describe their mobility and risk of falling. Develop a plan.	4. Mobility/Fall risk assessment will be submitted.		
5. To be able to complete a cognitive assessment and determine whether dementia is present	5. Assess one patient with cognitive difficulties. Complete the Memory Disability Clinic Checklist, BCRS ¹ and answer the "four questions".	5. The cognitive assessment will be submitted.		
6. To be able to independently research a specific geriatric problem and present findings	6. Students will select a project from a list of proposed topics or develop their own research topic.	6. Oral presentation will be evaluated.		
		7. Written Examination		
		8. Preceptor Evaluation		

¹ BCRS = Brief Cognitive Rating Scale (Axis 2)

Were the objectives of the rotation successfully completed?

Fails to Meet _____ Meets _____

Appendix 2

Syllabus (Updated 2002)

PRINCIPLES OF GERIATRIC MEDICINE AND COMPREHENSIVE GERIATRIC ASSESSMENT

Objectives

To familiarize students with the basic principles of geriatric medicine, including how to incorporate function into a medical evaluation.

The student will know how to conduct comprehensive geriatric assessment and be able to appropriately complete the comprehensive geriatric assessment form.

The student will demonstrate knowledge of the following subjects:

- Frailty
- Comprehensive geriatric assessment
- Atypical illness presentation
- Polypharmacy and undertreatment
- Functional assessment instruments
- Urinary incontinence

Reading

CGA and Frailty

Rockwood K. Medical management of frailty: confessions of a gnostic. *Can Med Assoc J* 1997 Oct 15;157(8):1081-4

Rockwood K, Silviu JL, Fox RA. Comprehensive geriatric assessment – helping your elderly patients maintain functional well-being. *Postgraduate Medicine* 1998;103:247-64

Atypical Illness

Jarrett PG, Rockwood K, Carver D, Stolee P, Cosway S. Illness presentation in elderly patients. *Arch Intern Med* 1995 May 22;155:1060-4

Polypharmacy

Gordon J. Rational approach to prescribing for seniors. *Drugs & Therapeutics* 2000 Jan-Feb;23(1):1-6

Functional Assessment Instruments

Barthel Index form

Lawton Brody form

Urinary Incontinence

Resnick MN. Urinary incontinence. *The Lancet* 1995;346:94-9

Clinical Experience

Complete CGA forms and MMSE evaluation for 5 patients under the student's care.

Develop a management and treatment plan for the above five patients, including attention to social situation, function and cognition.

Review the medications of one patient to determine if there is undertreatment or inappropriate treatment.

MOBILITY

Objectives

The student will learn how to assess ambulation, transfer, and balance.

The student will be familiar with the principle that changes in mobility or falling may be a sign of illness, and conversely, improved mobility may be indicative of recovery.

Reading

Evaluation of balance, transfer, ambulation (HABAM)

MacKnight C, Rockwood K: Mobility and balance in the elderly. *Postgraduate Medicine* 1996 Mar;99(3):269-76

Balance and gait scales

Summary of:

- Functional reach
- Timed Get Up and Go
- Berg Balance Scale

Clinical Experience

The student will assess the gait of patients under their care.

The student will work with a physical therapist to learn gait assessment, transfer technique and selection of appropriate aids and footwear.

FALLS

Objectives

The student should demonstrate knowledge of:

- Prevalence of falls in the elderly population
- Causes of falls
- Consequences of falling
- Prevention and management of falls
- Basic principles of home safety
- Principles and treatment of osteoporosis

Reading

Falls

Tinetti ME. Preventing Falls in Elderly Persons. *N Engl J Med* 2003 Jan 2;348(1):42-9.

Osteoporosis

NIH Consensus Development Panel. Osteoporosis Prevention, Diagnosis, and Therapy. *JAMA* 2001 Feb;285(6):785-95.

Clinical Experience

Accompany OT/PT on a home visit for evaluation of home safety.

Find one patient on assigned service with falls, or who is at risk for falling, and evaluate mobility and falling risk. Design a treatment plan.

DECONDITIONING

Objectives

To know the definition of deconditioning.

To be able to recognize deconditioning in hospitalized patients.

To know how deconditioning during hospitalization affects mobility and outcome.

To be familiar with the studies that address hospital outcomes in the elderly and know what percentage of elderly persons develop new functional limitations during hospitalization.

Reading

Sager MA, Rudberg MA. Prevalence and Incidence of Functional Decline. *Clinics in Geriatric Medicine* 1998;14(4):669-79.

Clinical Experience

If your clinical rotation has a hospital-based component, please do the following:

- Follow one patient and describe their mobility during hospitalization.
- Learn how to use the HABAM to document your observations.
- Determine if your observations of mobility status coincide with those of other health care workers?
- If mobility is impaired, determine if there is documentation of this problem in the chart?

EXERCISE

Objectives

To learn about the benefits of exercising, the risks of not exercising, and the methods and strategies for exercising the elderly population.

The student should demonstrate knowledge of the following topics:

- Aerobic exercise, benefits and recommendations for older adults.
- High intensity resistance training.

Reading

Christmas C, Andersen RA. Exercise and Older Patients: Guidelines for the Clinician. JAGS 2000;48: 318-24.

Fiatarone MA, O'Neill EF, Doyle Ryan N et al: Exercise Training and Nutritional Supplementation for Physical Frailty in Very Elderly People. The New England Journal of Medicine 1994 Jun 23;330(25): 1769-75

Leveille SG, LaCroix AZ. Exercise Training for Very Elderly People (Correspondence). The New England Journal of Medicine 1994 Nov 3;331(18):1237-38

Clinical Experience

Spend time with a physical therapist to experience how exercise is conducted.

DELIRIUM

Objectives

The student will demonstrate knowledge of the following topics:

- Diagnosis of delirium
- How to differentiate dementia from delirium
- Common causes of delirium
- Principles of treating delirium

Reading

Inouye SK. Delirium in Hospitalized Older Patients. Clinics in Geriatric Medicine 1998 Nov;14(4): 745-65

Clinical Experience

Evaluate a patient with delirium or one who is recovering from delirium.

DEMENTIA

Objectives

To be able to assess cognition, determine if there is dementia, establish etiology, and develop an appropriate treatment plan.

To be familiar with assessment tools used for evaluating dementia, such as the Folstein MMSE, the Brief Cognitive Rating Scale (BCRS), and the Clock Drawing Test.

To be able to describe the functional changes that occur in dementia and how deterioration in function relates to staging.

To understand the common behavioural problems that occur in dementia and be familiar with the non-pharmacological and pharmacological treatment options for treating this condition.

To be knowledgeable about community resources that are available to support caregivers.

Reading

Rockwood, K; MacKnight, C: Understanding Dementia: A Primer of Diagnosis and Management. Pottersfield Press. Halifax, Nova Scotia, 2001

Brief Cognitive Rating Scale (BCRS)

Reisberg B. Psychopharmacology Bulletin 1988;24(4):629-36.

Functional Assessment Staging (FAST)

Reisberg B. *Psychopharmacology Bulletin* 1988;24(4):653-659.

Memory Disability Clinic Checklist

Clinical Experience

A full cognitive assessment will be completed for one patient, including: MMSE, answers to the “four questions”, and completion of the Memory Disability Clinic Checklist.

DEPRESSION

Objectives

To be able to differentiate depression from dementia.

To know how the disease of depression differs in older versus younger patients.

To know how to treat depression.

Reading

Stable JA, Dunn LB, Zisook S. Late-life depression: How to identify its symptoms and provide effective treatment. *Geriatrics* 2002 Feb;57(2):18-35.

APPENDIX 3. SAMPLE EXAMINATION QUESTIONS

1. A 72-year old woman was admitted to the hospital for treatment of urinary sepsis. What can be done, beyond “traditional” medical treatment of the infection, to improve this patient’s chances of leaving the hospital without a decline in function?
2. Mr. Jones is a 78-year old man with advanced Alzheimer’s disease who recently moved from Newfoundland to live with his daughter. On your home visit, she reports that she may no longer be able to care for her father at home because of his urinary incontinence. His medical history is positive for CHF, hypertension and hiatal hernia. His medications include furosemide 40 mg od, Nitropatch 0.4 mg, diphenhydramine (Benadryl) qhs prn, and ranitidine 150 mg qhs.
 - a) What are the four major categories of urinary incontinence?
 - b) What is contributing to Mr. Jones’ incontinence? Be specific.
 - c) What would your suggestions be for treatment? Be specific.
3. Mr. Holland is a 75-year-old man who is brought to the Emergency Room by the police, when they found him confused and wandering in his apartment building. On examination, it is difficult to gain his attention to answer questions. His speech is rambling and disorganized and he is unable to describe where he is or where he lives. He is at times agitated and at other times quiet, withdrawn and drowsy. You contact Mr. Holland’s daughter who states that her father was previously fully functional and living independently. In fact, she had had a normal conversation with him only one week ago.
 - a) What is your diagnosis? What are the 3 pieces of information from the history that support this diagnosis?
 - b) What investigations would you order?