

**Manual M-9, Strategic Planning**

**(Veterans Health Administration)**

**Chapter 9, Criteria and Standards and Program Planning Factors**

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Department of  
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# Strategic Planning

July 26, 1991

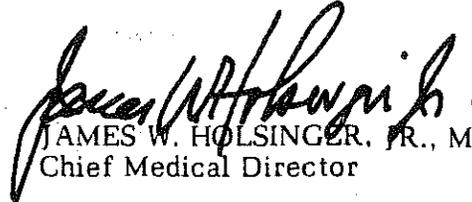
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CONTENTS

CHAPTERS

1. STRATEGIC PLANNING
2. STRATEGIC PLANNING CONSTITUENCY AWARENESS
3. STRATEGIC PLANNING CONFIDENTIALITY POLICY
4. OFF-CYCLE SUBMISSIONS
5. STRATEGIC PLANNING MODELS
6. MISSION REVIEW
7. STRATEGIC PLANNING DATA TABLE INSTRUCTIONS
8. ACTION DETAIL SHEET INSTRUCTIONS
9. CRITERIA AND STANDARDS AND PROGRAM PLANNING FACTORS
10. NURSING HOME NEEDS ASSESSMENT
11. STRATEGIC PLANNING, CONSTRUCTION, AND FDP (FACILITY DEVELOPMENT PLANS)
12. NATIONAL HEALTH CARE PLAN

## RESCISSIONS

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10-88-150

10-89-31

10-89-132

10-90-124

CONTENTS

CHAPTER 9. CRITERIA AND STANDARDS AND PROGRAM PLANNING FACTORS

PARAGRAPH	PAGE
9.01 Purpose .....	9-1
9.02 Overview .....	9-1
9.03 Content of Criteria and Standards .....	9-1
9.04 Definitions of Criteria and Standards .....	9-2
9.05 Contents of Program Planning Factors .....	9-2
 APPENDIXES	
9A Criteria and Standards for VA Domiciliary Program .....	9A-1
9B Criteria and Standards for the Spinal Cord Injury Program .....	9B-1
9C Program Guidelines for Hospital-based Ambulatory Care Programs .....	9C-1
9D Criteria and Standards for VA Oncology Programs .....	9D-1
9E Criteria and Standards for Cardiac Surgery (Open Heart) .....	9E-1
9F Criteria and Standards for GRECCs .....	9F-1
9G Criteria and Standards for New Outpatient Services Remote from VA Medical Centers .....	9G-1
9H Planning Guidelines and Criteria and Standards for VA Intermediate Care Programs .....	9H-1
9I Criteria and Standards for Traumatic Brain Injury Rehabilitation Program .....	9I-1
9J Program Procedures for HBHC (Hospital Based Home Care) .....	9J-1
9K Program Planning Factors for Blind Rehabilitation Service .....	9K-1
9L Program Planning Factors for Spinal Cord Injury Program .....	9L-1
9M Program Planning Factors for Domiciliary-Based Homeless Program ....	9M-1
9N Program Planning Factors for PTSD (Post-Traumatic Stress Disorder) Program .....	9N-1
9O Criteria and Standards for Cardiology Continuum of Care .....	9O-1
9P Mental Health Criteria and Standards .....	9P-1
9Q Criteria and Standards for GEM (Geriatric Evaluation and Management) Program .....	9Q-1

## CRITERIA AND STANDARDS FOR VA TRAUMATIC BRAIN INJURY REHABILITATION PROGRAM

### 1. BACKGROUND

a. The National Head Injury Foundation indicates that the yearly incidence of moderate to severe TBI (Traumatic Brain Injury) within the U.S. (United States) is conservatively estimated at over 140,000. Of this number, 70,000 to 90,000 of those who survive a serious head injury are left with intellectual impairment to such a degree that it precludes a return to their previous lifestyles. The estimated prevalence of TBI in the U.S. is between 1,000,000 to 18,000,000 and these patients require approximately 700,000 hospitalizations a year. According to the Surgeon General's report, trauma is the leading cause of death in the U.S. for persons under the age of 34. Recently the National Safety Council indicated that TBI has become the fourth leading cause of death in the U.S. for individuals up to 45 years of age.

b. More persons are surviving traumatic brain damage due to:

- (1) The development of advanced life support capability at the scene of the accident,
- (2) The highly competent medical/surgical teams at trauma centers, and
- (3) Advances in acute care medicine.

c. As the number of fatalities from TBI has decreased, the number of survivors with severe damage has increased. Thus, the number of persons potentially incapable of returning to normal or near normal life is rising as the number of persons requiring rehabilitation increases proportionally.

### 2. INTRODUCTION

a. Criteria and standards for the TBI Program have been developed to meet the program planning needs of VA (Department of Veterans Affairs) facilities, and regions. VA Central Office will use the criteria and standards in the uniform development and review of VA TBI Program initiatives.

b. A criterion is defined as "a measurable characteristic of a health service."

c. A standard is defined as "a quantitative and/or qualitative value or level of achievement with respect to a specific criterion which represents acceptable performance."

d. The criteria and standards for VA TBI Programs will be reviewed by VA Central Office and revised as necessary based upon further analysis and experience.

**NOTE:** *The terms "must" and "will" are used throughout this appendix to indicate what is mandatory. The terms "should" and "may" are used to reflect preferred practice, yet allow effective alternatives to be used. Staffing guidelines are intended to represent the best current judgment of health care professionals regarding safe and clinically effective levels; they are not mandatory.*

### 3. POLICY

a. Each region must ensure that its patients have access to a TBI continuum of care through inter-regional and/or intra-regional planning.

b. Because DOD (Department of Defense) does not have dedicated TBI beds and the unacceptable cost of private sector care, veterans and active duty military personnel who sustain TBI are often referred to VA facilities for rehabilitation, especially if the degree of injury is severe. These referrals must be taken into consideration for planning purposes.

c. There should be documented evidence that the availability, cost, and medical appropriateness of TBI care in the private sector has been explored before a VA TBI unit is established.

### 4. GOAL

The ultimate goal of TBI treatment is to facilitate re-entry of the patients into the community with the skills to function as independently as possible. To reach this goal TBI patients require intense medical, surgical and rehabilitative treatment.

### 5. SCOPE

The scope of this appendix is limited to rehabilitative requirements of treating TBI patients at various levels of cognitive functioning.

### 6. DEFINITION

a. TBI is an insult to the brain, not of a degenerative nature, caused by an external physical force that may produce a diminished or altered state of consciousness which results in impairment of cognitive abilities or physical functioning. It can also result in the disturbance of behavioral or emotional functioning. These impairments may:

(1) Be either temporary or permanent.

(2) Cause partial or total functional disability or psychosocial maladjustment.

(3) Impact on the ability to live independently or be gainfully employed. (This definition was adopted by the Executive Committee of the Board of Directors of the National Head Injury Foundation.)

b. TBI patients may be found among those classified in the following ICD-9-CM (International Classification of Diseases, 9th Revision, Clinical Modification) Codes: (This list is not all inclusive and is meant to be a general guide for planning purposes. Patient chart review or computer search of ICD-9-CM Codes is recommended for a better count of TBI patients.)

#### Diagnosis

#### ICD-9-CM Codes

(1) Fracture of vault of skull ..... 800

Diagnosis Continued

ICD-9-Codes

(2) Fracture of base of skull .....	801
(3) Other and unqualified skull fractures .....	803
(4) Multiple fractures involving skull or face with other bones ...	804
(5) Concussion .....	850
(6) Cerebral laceration and contusion .....	851
(7) Subarachnoid, subdural, and extradural hemorrhage, following injury .....	852
(8) Other and unspecified intracranial hemorrhage, following injury .....	853
(9) Intracranial injury of other and unspecified nature .....	854
(10) Late effect of fracture of skull and face bones .....	905.0
(11) Late effect of intracranial injury without mention of skull fracture .....	907.0

**NOTE:** *The patients categorized under the following ICD-9 codes may also require primary TBI care:*

(12) Late effect of injury to cranial nerve .....	907.1
(13) Epilepsy .....	345
(14) Specific nonpsychotic mental disorders due to organic brain damage .....	310
(15), Injury to optic nerves and pathways .....	950
(16) Injury to other cranial nerve(s) .....	951
(17) Coma and stupor .....	780.0

c. In order to identify physical impairment and the resultant disability, a specific ICD-9-CM diagnostic code has been targeted for coding TBI cases, Code V15.5, Other Personal History Presenting Hazards to Health (Injury). This code must be used in conjunction with other codes previously listed.

**7. MEASUREMENT TOOLS FOR LEVELS OF COGNITIVE FUNCTIONING**

a. There is a broad range of impairments caused by head injury. Various measurement tools are used to determine the level of cognitive functioning of TBI patients:

(1) The Glasgow Coma Scale measures broad based, general characteristics of consciousness by grading certain responses.

(2) The Rancho Los Amigos Levels of Cognitive Functioning Scale measures behavioral responses by observation:

- (a) Level I, No response.
- (b) Level II, Generalized response.
- (c) Level III, Localized response.
- (d) Level IV, Confused-agitated.
- (e) Level V, Confused- inappropriate.
- (f) Level VI, Confused-appropriate.
- (g) Level VII, Automatic-appropriate.
- (h) Level VIII, Purposeful-appropriate.

(3) The FIM (Functional Independence Measure) is used to measure the functional level of performance.

(4) A copy of these scales may be obtained from RMS (Rehabilitation Medicine Service), VA Central Office, Washington, DC.

b. **Criterion.** The assignment of patients to various phases of TBI care must be based on the level of cognitive and behavioral functioning.

(1) **Standard.** The Rancho Los Amigos Level of Cognitive Functioning Scale and the FIM will be used as a general guideline for assignment of patients to various rehabilitation phases of care as described in paragraph 9.

(2) Determination of the appropriate rehabilitation phase of care and movement of patient from one phase of care to another, including discharge, will be made by an interdisciplinary team.

## 8. INTERDISCIPLINARY TEAM

### a. Definition

(1) An interdisciplinary team is composed of a mixture of professionals from diverse backgrounds. Unlike the multidisciplinary team, the interdisciplinary team members:

- (a) Share common team goals.
- (b) Collaborate and work interdependently in:
  - 1. Planning,
  - 2. Problem solving,
  - 3. Decision making, and

4. Implementing and evaluating team-related tasks.

(c) Share the right and responsibility for assuming leadership roles and functions for team progress.

(2) Because interdisciplinary team members work interdependently to ensure the efficient provision of comprehensive and coordinated quality care, they give great importance to the interactional processes of their team.

**b. Criterion. Availability of a Dedicated Team**

(1) **Standard.** TBI patients should have access to a variety of clinical specialties over an appropriate extended period of time.

(a) A dedicated core team must be available to provide TBI rehabilitation care.

(b) The care giver should participate in the decision-making process involved in the treatment of the TBI patient, especially if it concerns movement of a patient from one phase and/or facility to another.

(2) **Standard.** The family or care giver should be trained in as many aspects of treatment as possible. Extensive education and counseling should be provided.

**NOTE:** *The team composition will be separately specified for each phase of rehabilitation care.*

**8. PHASES OF CARE**

TBI care involves five basic phases of rehabilitation: Acute Medical/Surgical, Acute Rehabilitation, Transitional Rehabilitation, Community Re-entry, and Outpatient Management. *(It is anticipated that acute medical/surgical and acute rehabilitation phases of care will be provided in a medical school affiliated VA medical center which also provides affiliated training for schools of allied health professions.)* Other types of care that are needed by TBI patients are long-term, respite, and neurobehavioral care. *(It is recognized that a limited number of patients would continue to need long-term institutional care.)* The following provides various requirements, such as staff, space, equipment, etc., for major phases of care that could be provided in VA medical facilities:

**a. Acute Medical/Surgical Phase (Phase I).** Patients during this phase of care are medically unstable and require around the clock monitoring. This phase includes treatment in an Intensive Care Unit. The physician in charge must have members of the core treatment team available for care.

**(1) Criterion. Interdisciplinary Team Staff**

**Standard.** The core treatment team must consist of the following:

(a) Physician in charge (may be neurosurgeon or neurologist).

(b) Nurse.

(c) Occupational Therapist.

- (d) Physical Therapist.
- (e) Speech Pathologist.
- (f) Social Worker.

**NOTE:** *A Dietitian with special training in treating TBI patients should be designated for the acute medical/surgical phase of care.*

**(2) Criterion. Services/Facilities Requirements**

**Standard.** The following clinical services should be available at the medical center:

- (a) Audiology and Speech Pathology.
- (b) Dental.
- (c) Dietetics.
- (d) Ear, nose, and throat specialty.
- (e) General Surgery.
- (f) Internal medicine and medical subspecialties.
- (g) Laboratory.
- (h) Neurology.
- (i) Neurosurgery.
- (j) Nursing.
- (k) Ophthalmology.
- (l) Orthopedics.
- (m) Pharmacy.
- (n) Physiatry.
- (o) Plastic Surgery.
- (p) Psychiatry, including Substance Abuse Program.
- (q) Psychology/neuropsychology.
- (r) Radiology.
- (s) RMS.
- (t) Respiratory Therapy.
- (u) Social Work.

(v) Urology.

**(3) Criterion. Equipment Requirements**

(a) **Standard.** Equipment must be adequate for monitoring. In addition to routine ICU (Intensive Care Unit) equipment, the following should also be available at the medical center:

1. Electroencephalograph.
2. Electromyograph.
3. Evoked potential.
4. Imaging Equipment (MRI (Magnetic Resonance Imaging) and/or CAT (Computer Assisted Tomography) Scan).
5. Intracranial pressure monitors.
6. Wanderer Alarm at Neurology and Neurosurgery Units.
7. Special beds/frames/mattresses and equipment as needed.

b. **Acute Rehabilitation Phase (Phase II).** Once patients are medically stable, they will need acute rehabilitation care. Appropriate candidates for the acute rehabilitation care fall in the category of Level IV or sometimes Level III of the Rancho Los Amigos Cognitive Scale. Acute rehabilitation provides a broad interdisciplinary rehabilitation team approach to the many problems head-injured individuals begin to face as soon as they are medically stable.

*NOTE: Acute coma (approximate length of stay 1-3 months) should be treated in the Acute Rehabilitation Unit, unless the patient is demonstrating profound coma with no evidence of improvement. Arranging for the care of chronic coma patients will be the responsibility of each region as a part of the TBI continuum of care. If there are a large number of chronic coma patients, establishing a central Coma Unit should be considered.*

**(1) Criterion. Size of TBI Acute Rehabilitation Unit**

(a) **Standard.** The Acute Rehabilitation Unit will have a minimum of 20 beds. There should be no more than one such unit in each region unless indicated by patient need. Approximately 3 beds should be available for support of acute coma patients with lengths of stay from 1-3 months.

(b) **Rationale.** The American Hospital Association guidelines recommend size of a dedicated TBI unit to be a minimum of 20 beds, with a maximum of 40. A minimum of 20 beds is needed to have full-time staff as a part of an interdisciplinary team and for efficient, cost-effective, and quality care operations.

(c) For every 20 beds there should be a minimum workload of 50 discharges per year with an optimum level of 100 discharges per year.

**(2) Criterion. Length of Stay**

**Standard.** The anticipated length of stay for acute rehabilitation is highly variable.

As long as the patient is making progress the patient should continue to receive rehabilitation services in both inpatient and outpatient settings. (For program planning purposes, the anticipated length of stay is from 1-3 months.)

**(3) Criterion. Interdisciplinary Team Staff**

(a) **Standard.** The dedicated core TBI team should design and implement a total rehabilitation plan.

(b) **Suggested Guidelines.** The following provides various disciplines that should be present as a part of the core team; an ideal (not mandatory) ratio of staff to patients is provided in parentheses:

**Disciplines/Functions**

1. Physician (1 to 10 patients).
2. Neuropsychologist (1 to 10/15 patients).
3. Speech and Language pathologist (1 to 4 or 5 patients).
4. Social worker (1 to 10 patients).
5. Occupational therapist (1 to 3 or 4 patients).
6. Physical therapist (1 to 3 or 4 patients).
7. Rehabilitation nurse (1 to 2 or 3 patients per shift).
8. Clerk.
9. Family/significant other.

(c) A physician should be a member of the core team. This will be a physiatrist if at all possible.

**NOTE:** *A Dietitian with special training in treating TBI patients should be designated for acute rehabilitation phase of care.*

(d) **Standard.** The core team should select a team leader for each patient. The team leader should remain in that role until the patient is transferred elsewhere.

(e) **Standard.** The team leader should coordinate the clinical care activities for the patient. Since each team may vary, depending upon the plan and level of care required by the patient, the team leader role should be rotated among staff directly involved in the clinical care of that patient. Thus, an individual may serve as a team leader for patient X, but would be a team member for patient Y and Z.

**(4) Criterion. Availability of Services**

**Standard.** Patients must have access to appropriate/needed services. The following services must be available to the medical center:

- (a) Audiology and Speech Pathology.
- (b) Dentistry including oral and maxillofacial surgery.
- (c) Dermatology.
- (d) Dietetics.
- (e) Ear, nose, throat specialty.
- (f) General surgery.
- (g) Gynecology.
- (h) Internal medicine including respiratory therapy.
- (i) Laboratory.
- (j) Neurology.
- (k) Neurosurgery.
- (l) Nursing.
- (m) Ophthalmology.
- (n) Orthopedics.
- (o) Orthotics/prosthetics.
- (p) Pharmacy.
- (q) Plastic Surgery.
- (r) Psychiatry, including Substance Abuse Program.
- (s) Psychology, including Vocational Counseling.
- (t) Radiology.
- (u) Recreation Therapy Service.
- (v) Rehabilitation engineering (as needed).
- (w) RMS.
- (x) Social Work.
- (y) Urology.
- (z) Vocational Counseling (for both cognitive as well as physical skills).
- (5) Criterion. Equipment Requirements

(a) **Standard.** In addition to standard rehabilitation equipment, the following equipment must be available to accommodate the physical and cognitive disability of the patients:

1. Orthotics.
2. Splinting.
3. Wheelchair modifications.
4. Special beds and lifts.
5. Communication devices including computers for care and data collection.
6. Cognitive retraining equipment including microcomputers and software.
7. VHS/TV monitors.
9. Ambulatory monitoring equipment including wanderer alarm.
10. Individualized patient treatment.

(b) **Standard.** In addition, the medical center should have access to the following:

1. Computerized Tomography.
2. Electroencephalograph with video monitor.
3. Electrophysiological Equipment.
4. Electromyograph.
5. Evoked Potential/Brain mapping equipment.
6. MRI and/or CT Scan.
7. Specialized wheel chair for evaluation.
8. Sensory Feedback Equipment
9. Vocational Testing/Training Equipment

(6) **Criterion. Space Guidelines**

(a) **Guidelines.** The TBI patients should have access to private, semi-private or 4-bed rooms depending upon the cognitive level of the TBI patient.

1. Adequate distraction-free space for team treatment as well as individual treatment should be available to treat TBI patients.
2. All areas must be obstacle free and wheelchair accessible.
3. These patients will also need:

- a. A congregate dining room,
- b. Special treatment rooms which are padded,
- c. Isolation rooms, and
- d. A quiet room.

(b) Every effort should be made to have adequate space available for conference rooms. Core staff members' offices should be in close proximity to each other to facilitate an integrated team approach with team planning and discussions as a routine part of the day's activities.

c. **Transitional Rehabilitation Phase (Phase III).** Transitional Rehabilitation Phase precedes Community Re-entry Phase. Appropriate candidates for the Transitional Phase fall in the category of Level V and VI of Rancho Los Amigos Cognitive Scale. The Transitional Rehabilitation Phase addresses all barriers to a return to the community with the goal of preparing the patients for the community re-entry phase of care.

**(1) Criterion. Size of the Unit**

**Standard.** Size of the unit should be at least 20 beds to support an influx of patients from acute phases of care. For every 20 beds there should be a minimum workload of 30 discharges per year with an optimum level of 60 discharges per year. *It is appropriate to have some Early Transitional Rehabilitation Phase patients in a combined unit with Acute Rehabilitation Phase patients. Likewise, it would be appropriate to have some Late Transitional Rehabilitation Phase patients in a combined unit with Community Re-entry Phase patients. Adequate "quiet rooms" should be available to transitional rehabilitation patients*

**(2) Criterion. Length of Stay**

**Standard.** The anticipated length of stay for a TBI patient requiring a managed milieu in Transitional Rehabilitation Phase would be from 3 to 6 months. Discharge planning should be undertaken early in the course of care. The family should be involved in planning for the long-term care needs of the patient.

**(3) Criterion. Staffing Guidelines**

(a) Important staffing for this level of rehabilitation would be recreation therapy and kinesiotherapy; occupational and physical therapy may be provided by therapy assistants.

(b) **Recommended Guidelines.** Adequate staffing should be available to the patient in the transitional rehabilitation care setting. The following provides ideal (not mandatory) staff-to-patient ratios:

1. Physician (1 to 30 patients).
2. Occupational Therapy (1 to 12 patients).
3. Recreation Therapy (1 to 15 patients).
4. Physical Therapy (1 to 15 patients).

5. Kinesiotherapy (1 to 15 patients).
6. Neuropsychology or Psychology (1 to 20 patients).
7. Social Work (1 to 20 patients).
8. Rehabilitation Nursing (1 to 5 patients per shift).
9. Speech and Language Pathology (1 to 12 patients).
10. Vocational Rehabilitation/Educational Therapy (1 to 15 patients).
11. Clerk.

**(4) Criterion. Equipment Requirements**

**(a) Standard.** The following equipment should be available for the transitional rehabilitation care needs of the patients:

1. Standard rehabilitation and activities equipment.
2. Wanderer-alert equipment.
3. Special beds.
4. Handicapped accessible transportation.
5. Vocational testing and training equipment.
6. Van equipped for handicapped drivers.
7. Video taping equipment.
8. Cognitive retraining equipment (including microcomputers).

**(b) Standard.** Driver training resources should be available for patients depending upon their physical and cognitive capabilities.

**d. Community Re-entry (Phase IV)**

**(1)** The Community Re-entry Program will accept patients at Cognitive Levels VII and VIII. The emphasis at the Community Re-entry level should be on either or both of the following:

- (a)** Vocational retraining and placement and/or
- (b)** Independent living.

**(c)** The patients in the Community Re-entry phase should have access to a Substance Abuse program.

(2) Patients selected for inclusion in the program require continued treatment in a supervised environment.

(a) Potential candidates for this program are those patients who continue to experience deficits that substantially interfere with their ability to adapt successfully or to live semi-independently within their family and community support systems. These deficits include:

1. Cognitive.
2. Communicative.
3. Emotional.
4. Social.
5. Behavioral.

(b) Locations considered appropriate for this phase of care are:

1. Domiciliary.
2. Residential Care Home.
3. Private home.

(3) The ultimate goal is to place the patient into a residential setting with the skills to function as independently as possible. This may include but is not limited to;

- (a) Employment.
- (b) Independence in activities of daily living.
- (c) Participation in community affairs.

(4) A VA Domiciliary should be utilized for patients staying at VA for the TBI care at this level. A VA domiciliary is not suitable for TBI patients unless the following requirements are met:

(a) **Criterion. Size of the Unit**

**Standard.** Size of the unit (approximately 20 ADC (average daily census)) should be such that it can support a dedicated team. The domiciliary may accommodate an additional 10 visits (anticipated average visits per patient is two times per week) for patients who reside elsewhere but need to return for continuing care during the day. *The minimum workload for TBI unit would be 12 discharges per year, with an optimum of 24 discharges per year.*

(b) **Criterion. Length of Stay**

**Standard.** The average anticipated length of stay in the domiciliary TBI unit is approximately 6 months. Actual length of stay per patient may vary from 3 months to 18 months.

(c) Criterion. Space Guidelines

**Standard.** Handicap accessible space with conference rooms, treatment rooms and offices should be in near proximity to the unit. Refer to H-08-9, Chapter 312 for Domiciliary Space Guidelines.

(d) Criterion. Staffing Guidelines

1. The following guidelines provide the type of staff that should be dedicated to a domiciliary-based TBI Community Re-entry Program; an ideal (not mandatory) ratio of staff to patients is provided in parentheses:

- a. Physician (1 to 60 patients).
- b. Psychologist (1 to 60 patients).
- c. Neuropsychologist (1 to 30 patients).
- d. Speech and language pathologist (1 to 15 patients).
- e. Social Worker (1 to 15 patients).
- f. Occupational therapist (1 to 15 patients).
- g. Rehabilitation nurse (1 to 20 patients).
- h. Recreation therapist (1 to 30 patients).
- i. Kinesiotherapist (1 to 30 patients).
- j. Vocational rehabilitation counselor (1 to 15 patients).
- k. Clerk.

2. Dental and Dietetic counseling services should be available to the TBI program.

a. Specialists such as Physical Therapists and Psychiatry should also be available on an as-needed basis.

b. Additionally, health Technicians, rehabilitation technicians (domiciliary assistants) or nursing staff and nursing assistants should be available in adequate numbers to provide 24 hour coverage in the domiciliary TBI program.

**NOTE:** *Staff requirements will vary depending on whether community resources are available to provide follow-up services to veterans being outplaced by the Community Re-entry Program.*

(e) Criterion. Support Services Requirement

**Standard.** The following services must be available at or near the TBI program:

- 1. Community colleges and/or vocational technical training,

2. Chemical dependency counseling,
3. VAVS (Veterans Affairs Voluntary Service) program, and
4. Drivers training.

**(f) Criterion. Equipment Requirements**

1. **Standard.** In addition to the standard domiciliary equipment, the domiciliary patients should have access to the specialized equipment at VA medical centers or private sector facilities.

2. **Standard.** Adequate kitchen and laundry equipment should be available for learning independent living skills, video taping equipment for learning social skills and computers with terminals for vocational skills.

3. **Standard.** A nurse call system should be available in the TBI patient area if not available throughout the domiciliary.

**e. Outpatient Treatment (Phase V).** Patients may be considered for outpatient follow-up at different levels of care depending on the patient's support system, progress, prognosis, etc. These patients continue to require intervention services but can be maintained in their own environment (i.e., private home, group home, nursing home).

**(1) Criterion. Outpatient Program Requirement**

**Standard.** Each level of inpatient care, i.e., Acute Rehabilitation, Transitional Rehabilitation, and Community Re-entry Phase should have its own outpatient program.

**(2) Criterion. Staffing**

**Guidelines:** For continuity of care, the same core team at each level of care could treat the patients on both inpatient and outpatient basis. Staffing requirements would depend upon the cognitive as well as physical needs of the patient.

**f. Long-term Care**

**(1)** Patients whose cognitive levels remain between IV and VI would most likely require long-term institutional care. Properly supervised and staffed group living might also be appropriate for Levels V, VI, and VII. Institutional care would also be dependent upon the level of physical disability (e.g., quadriplegia). Institutional care may be appropriate at other levels where patients have not achieved success in either acute or community re-entry programs or attempts at community living have failed.

**(a)** A long-term care program would be required for those patients who, in their current status, cannot return to their homes or communities, or whose families can no longer care for them.

**(b)** Long-term care would be needed for patients who are not able to re-enter society. Long-term care programs are designed more specifically for head injured patients who otherwise would be placed in a nursing home with a geriatric population.

(c) Care of chronic coma TBI patients should be provided in:

1. Existing ventilator dependent units.
2. Specialized intermediate medicine.
3. Skilled nursing home beds with supplemental staffing.

(d) Care of chronic neurobehavioral TBI patients should also be provided in specialized intermediate medicine or skilled nursing home beds, one unit per Region, with supplemental staffing.

**(2) Criterion. Location of Care**

**Standard.** Patients being treated in a managed milieu may be placed in a nursing home (VA or community-based), depending upon their medical condition.

**(3) Criterion. Staffing Guidelines**

**Guidelines:** The staffing at this level is needed to provide a maintenance rehabilitation program. Staffing required would be primarily:

- (a) Recreational therapy.
- (b) Kinesiotherapy.
- (c) Occupational therapy.
- (d) Physical therapy.

**g. Respite Care**

(1) Respite care should be available primarily at VA facilities that have a TBI Acute/Transitional Rehabilitation or Community Re-entry Program. In addition to providing rest to the caregiver, there should be focus on:

- (a) A day care program primarily staffed by recreation therapists and trained volunteers who would assist in providing relief for families/care givers,
- (b) Review of the patient/caregiver's care routine,
- (c) Priorities in care, and
- (d) The modification of care through teaching, priority adjustment.

**(2) Criterion. Respite Care Program Requirement**

**Standard.** Respite care may be provided to eligible veterans for up to 30 days in a calendar year. The frequency will not exceed once a quarter. The duration of any respite care admission will not exceed 14 days.

**h. Neurobehavioral Unit**

- (1) The neurobehavioral unit is designed to handle patients whose aggressive behavior

continues to present a major problem in the management of their care. These patients require intense supervision.

(a) The core team should include:

1. Psychology.
2. Neuropsychology.
3. Neurology.
4. Psychiatry.
5. Occupational therapy.
6. Nursing.

(b) Available on a consultation basis:

1. Speech pathology.
2. Physical therapy.
3. Physiatry.
4. Pharmacy.
5. Kinesiotherapy.
6. Recreational therapy.
7. Social work.

(2) TBI patients' neurobehavioral problems are seen at every level of care. When patients remain at Levels IV and V for extended periods of time, the neurobehavioral unit may be appropriate. These programs help people to regain control over their behaviors.

(3) VA has been contracting out for neurobehavioral care of the patients. It is suggested at this time to continue to do so until the patients' needs and costs of this program are better known.

### (3) Criterion. Program Requirement

**Standard.** To qualify to contract as a Neurobehavioral Program, the program must exhibit the following qualities:

- (a) A committed bed space which is not intermingled with other psychiatric cases.
- (b) Knowledgeable, trained interdisciplinary staff in TBI.
- (c) An established program with defined management techniques in the treatment of TBI neurobehavioral problems.

**(4) Criterion. Length of stay**

**Standard.** The anticipated length of stay in Neurobehavioral Units is from 1 to 12 months.

**9. EDUCATION AND TRAINING**

**Criterion. Education and Training requirements of TBI staff and patients**

a. **Standard.** Education and training for both the TBI staff, patients, and patients' family or caregiver must constitute an important aspect of the TBI Program.

b. It is important to engage the interest of an affiliated academic institution in the treatment of TBI patients.

c. VA medical centers providing care at the Acute Medical/Surgical and Acute Rehabilitation level of care must be affiliated with a medical school as well as with a school of allied health.

d. Interest in TBI care will include clinical rotations for trainees in all disciplines of TBI programs.

e. Educational activities are intimately linked to research and should result in a new generation of physicians, psychologists, nurses, therapists, etc., who are aware of, and are interested in, treating TBI patients.

**10. RESEARCH**

a. Research in TBI can result in improved care and cost reduction for VA.

**Standard.** VA TBI medical research/evaluation is an integral part of the research program where new diagnostic and treatment procedures are designed and tested. In evaluating the relative effectiveness of alternative treatments, data must be pooled from a large number of patients. Such studies can be performed efficiently in the VA medical care system, utilizing VA research designs and statistical methodologies.

b. TBI unit must have and maintain an active patient database with complete demographics as well as documentation of the cause of the TBI and the level of behavioral, emotional and functional impairment at the time of admission to the unit. This includes the Glasgow Coma Scale, the Rancho Los Amigos Levels of Cognitive functioning and the functional independent measures.

c. These functional measurements should be updated in the database upon transfer of the patient to each subsequent phase of rehabilitation. Such a database would serve not only quality management issues, but also form the bases for research on TBI.

**11. QUALITY MANAGEMENT MECHANISMS**

a. **Standard.** Quality assurance activities should be the responsibility of existing quality management programs with regular feedback to the TBI treatment team. The results of medical staff monitoring should be an integral part of this program. This should include:

- (a) Medical records review.
- (b) Drug usage review.
- (c) Pharmacy and therapeutic agents review.
- (d) Infection control.
- (d) Tissue and surgical case review.
- (e) Critical care review.
- (f) Blood usage review.

b. The result of Occurrence Screening should also be considered as well as Risk Management/Patient Incident Review issues.

c. Stronger quality assurance programs have a consumer satisfaction component. Since TBI patients may not be able to assess their care, the family or care giver is a good source for determining the appropriateness/satisfaction of care.

## 12. PROGRAM PLANNING FACTORS

a. **Goal.** The goal of the planning protocol for the TBI Program is to achieve comprehensive integration of strategic and operational planning (including construction), budgeting and operational management of the VA health care system consistent with the VA National Health Care Plan.

(1) There are five basic phases of TBI care:

- (a) Acute Medical/Surgical Phase.
- (b) Acute Rehabilitation Phase.
- (c) Transitional Rehabilitation.
- (d) Community Re-entry.
- (e) Outpatient Management.

(2) Other types of care that may be required by TBI patients include chronic coma and neurobehavioral care.

(3) The planning factors for the TBI Program primarily address Phase II through Phase V TBI requirements, including chronic care.

### b. Referral patterns of patients and geographic area served

(1) Because they are often medically unstable, TBI patients requiring the Acute Medical/Surgical Phase of care (Phase I) should be treated at appropriate tertiary level facilities near the site of injury.

(2) Other phases of care should be provided in TBI units/programs closer to the patient's home and/or family.

(3) Treatment of TBI patients requiring Acute and Transitional Rehabilitation Phases of care (II & III) should be provided in one combined unit at a tertiary level facility.

(4) Based on FY (Fiscal Year) 1990, TBI workload levels, it is estimated that each Region would have one to three TBI units providing both Phases II & III at each facility.

(a) The geographic distribution of these units should optimize access for patients and family.

(b) In determining unit location, both the relative demand for TBI care in an area and the distance to be travelled should be considered.

(5) When the patient's needs become primarily behavioral rather than medical, some Transitional Rehabilitation and Community Re-entry Phases of care (III and IV) can be provided at a neighboring secondary level facility or at a facility nearer the patient's home.

(6) It is estimated that each Region would have two to five programs providing Phases III and IV, in view of current TBI workload. These programs should be strategically located to maximize access (i.e., consideration of demand and distance).

(7) Outpatient Management (Phase V) will be provided at all VA medical centers with TBI programs.

(8) Care of chronic coma TBI patients should be provided in existing ventilator dependent units or specialized intermediate medicine or skilled nursing home beds, with supplemental staffing.

(9) Care of chronic neurobehavioral TBI patients should also be provided in specialized intermediate medicine or skilled nursing home beds, one unit per Region, with supplemental staffing.

**c. Present and projected need**

(1) VA medical centers selected as TBI treatment facilities must have demonstrated such capability and already be providing some level of care. For example, a September 1990, RMS survey indicated that, over an 18-month period, 17 VA medical centers treated 10 or more Phase II and III TBI patients; 7 VA medical centers treated 10 or more Phase IV patients.

(2) In FY 1990, the VA provided hospital care to 5,712 patients with TBI-related diagnoses, with a total of 6,586 discharges.

(a) In FY 1990, the following TBI discharges were reported: Region 1 -- 1,427; Region 2 -- 1,710; Region 3 -- 2,367; Region 4 -- 1,082.

(b) The FY 1990 workload represented a 18.5 percent increase in the number of TBI patients treated over FY 1989 levels.

(3) A new ICD-9 code for all TBI diagnoses (V15) was established by VA Central Office in 1990.

(a) Previous ICD-9 codes for TBI diagnoses included 800, 801, 803, 804, 850, through 854, 905.0, 907.0 and 907.1.

(b) Projections of current TBI workload levels for specific facilities should be determined by assessing such codes in the PTF (Patient Treatment File).

(4) National TBI discharge rates (discharges/1,000 veterans), by age group, for FY 1990 were the following:

<25	25-34	35-44	45-54	55-64	65-74	75-84	85+
0.6762	0.3529	0.3259	0.1763	0.1877	0.2074	0.2337	0.5632

(5) Current TBI discharge rates by age group, applied to future veteran population by age group, can be used to project future TBI workload.

(6) The Armed Services Medical Regulating Office reports that 126 active duty TBI patients were transferred to 10 VA medical centers for rehabilitation therapy in FY 1990, which represents about 2 percent of the TBI workload in the VA.

(7) Increased VA/DOD sharing and joint ventures in the future will result in more potential TBI workload from the military, including the possibility of CHAMPUS (Civilian Health and Medical Program for Uniformed Services) referrals. Therefore, current and potential DOD and CHAMPUS workload at a VA facility should be a consideration in developing TBI programs.

(8) Over 92 percent of TBI patients treated in the VA are Category A veterans. Care should be provided in accordance with VA priorities. However, equal consideration should be given to active duty military personnel requiring TBI treatment. (The cost of such care is reimbursed.)

**d. Appropriate Size of Program**

(1) Combined TBI units treating Phase II and Phase III patients would each have 20 beds, approximately 3 of which would be available for the support of acute coma patients. Lengths of stay for Phase II patients will range from 1 to 3 months; lengths of stay for Phase III patients will range from 3 to 6 months. The overall average within each facility would generally range from 2 to 6 months.

(2) The minimum workload for TBI units treating Phase II and Phase III patients would be 30 discharges per year; an optimum level would be 60 discharges per year.

(3) Units with fewer than 30 discharges per year and/or occupancy rates of 60 percent or less should be evaluated for possible closure.

(4) Community Re-entry (Phase IV) programs would have an ADC of 20 in a hospital, domiciliary or residential care setting. The length of stay in a domiciliary TBI unit will average 6 months.

(5) The minimum workload for TBI units treating Phase IV patients would be 12 discharges per year; an optimum level would be 24 discharges per year.

(6) Treatment of chronic coma and chronic neurobehavioral patients should each be provided in 20-bed specialized intermediate medicine or skilled nursing home units, for a national total of 80 beds each.

**e. Opportunities for Consolidation, Sharing or Contracting of Programs**

(1) DOD does not have dedicated TBI beds and use of private sector care is generally not an acceptable alternative source for TBI treatment because of the high cost. Recent VA Central Office data shows the cost of TBI care in the private sector is averaging 83 percent higher than similar care provided by the VA.

(2) There is no effective manner in which TBI care provided by contracted sources can be monitored on a regular basis.

(3) There should be documented evidence that the availability, cost, and medical appropriateness of TBI care in the private sector has been explored before a VA TBI unit is established.

**f. Available Resources**

(1) The availability of significant existing resources related to the care of TBI patients should be a major consideration in the selection of appropriate facilities for TBI units.

(2) VA medical centers currently providing strong leadership in the treatment of TBI patients on a regional basis are preferred.

(3) For Phase I treatment, tertiary level VA medical centers with specific subspecialties (e.g., neurology, neurosurgery) are appropriate.

(4) For Phase II and Phase III TBI treatment, tertiary level VA medical centers with RMS bed services with a full complement of allied health specialties and neuropsychology are most appropriate.

(5) For Phase I, Phase II, and Phase III, TBI treatment, affiliated VA medical centers are desirable for reasons such as enhanced recruitment of clinicians, and other scarce medical resources.

(6) Equipment and space requirements for all phases of treatment are also identified in the patient care criteria and standards. Facilities already having these resources should be given preference.

(7) VA medical centers selected to receive funding for TBI programs will be given supplemental staffing and equipment only. For example, staffing of combined Phases II and III units will be supplemental to the medical model; staffing of Phases III and IV units will be supplemental to the intermediate care model.

(8) The relative number of military referrals for TBI rehabilitation currently received by VA medical centers should be a consideration in selecting appropriate sites.

(9) VA medical centers designated as primary receiving facilities for military

casualties under the VA/DOD Contingency Hospital System should be given priority when selecting appropriate sites for Phase II and Phase III TBI treatment.

**g. Other Considerations**

(1) Equal access to TBI programs should be given to eligible patients from all VA medical centers. Uniform, objective admission criteria should be established, as well as transfer and discharge criteria, consistent with JCAHO (Joint Commission on Accreditation of Healthcare Organizations) requirements for quality care.

(2) Tertiary level VA medical centers treating acute and transitional rehabilitation TBI patients and secondary level VA medical centers treating transitional and community re-entry patients should work cooperatively to ensure appropriate care is provided at each phase.

(3) One VA medical center in each region will have responsibility for providing TBI-related education and research region-wide.

(4) Resource planning methodology funding formulas should address special costs of care unique to this population.

(5) One individual (a case manager) should be designated to serve as a national VA coordinator to expedite TBI referrals from the military.

(a) Appropriate response times for acceptance of TBI referrals from the military should be established.

(b) Other functions of program development, design, oversight, evaluation and education will require a nationally designated TBI specialist.

(6) One individual (a case manager) should be designated at each medical center and/or region based on organizational need.

(7) A national TBI registry will be established to collect such data as, but is not limited to:

(a) Patient demographics.

(b) Quality measures for each phase of treatment.

(c) Discharge destinations.

January 28, 1993

1. Transmitted is a change to Department of Veterans Affairs, Veterans Health Administration Manual M-9, "Strategic Planning," Chapter 9, "Criteria and Standards and Program Planning Factors."
2. Principal change is to add Appendix 9P, "Mental Health Criteria and Standards."
3. **Filing Instructions**

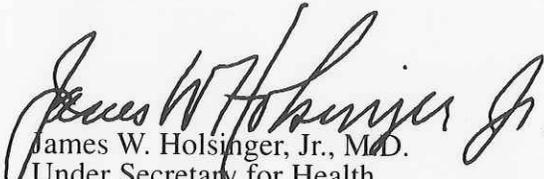
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9-i ✓

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9P-1 through 9P-26 ✓

4. **RECISSIONS:** None.

  
James W. Holsinger, Jr., M.D.  
Under Secretary for Health

Distribution: **RPC 1318**  
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Printing Date: 2/93

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May 28, 1992

1. Transmitted is a change to Department of Veterans Affairs, Veterans Health Administration Manual M-9, "Strategic Planning," Chapter 9, "Criteria and Standards and Program Planning Factors."

2. Principal change is to add Appendix 9I, "Criteria and Standards for Traumatic Brain Injury Rehabilitation Program."

3. Filing Instructions

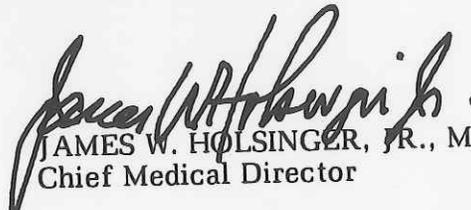
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4. RESCISSION: Circular 10-90-012, TBI (Traumatic Brain Injury).

  
JAMES W. HOLSINGER, JR., M.D.  
Chief Medical Director

Distribution: RPC: 1318  
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Printing Date: 6/92

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July 26, 1991

1. Transmitted is a change to Department of Veterans Affairs, Veterans Health Administration Manual M-9, "MEDIPP," which is changed to M-9, "Strategic Planning."

2. Principal reason for this manual change is to delete the term "MEDIPP":

a. In chapters 1 through 11, delete the term "MEDIPP" and replace it with "Strategic Planning."

b. Changes to all M-9 chapters are in process to update to current procedures.

3. Filing Instructions:

Remove pages

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Cover page through iv

Cover page through iv

  
JAMES W. HOLSINGER, JR., M.D.  
Chief Medical Director

Distribution: RPC: 1318  
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October 2, 1989

1. Transmitted is a new Veterans Health Services and Research Administration Manual M-9, "MEDIPP," chapter 1 through chapter 11. Changes will be made to incorporate the recent reorganization in the near future.

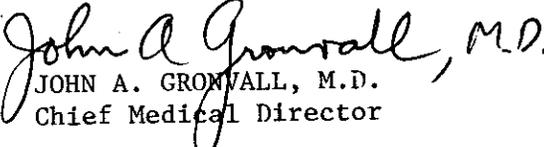
2. Principal reason for this manual is to provide a description of and issue guidance concerning VHS&RA planning process.

3. Filing Instructions:

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1-1 through 11-3

4. RESCISSIONS: Circular 10-87-113, dated October 10, 1987 and Supplement No. 1 dated April 4, 1988; Circular 10-87-147, dated December 30, 1987; Circular 10-88-3, dated January 13, 1988; Circular 10-88-150, dated December 9, 1988; and Circular 10-89-31, dated March 23, 1989.

  
JOHN A. GRONVALL, M.D.  
Chief Medical Director

Distribution: RPC: 1318 is assigned  
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Printing Date: 10/89



Veterans Administration

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REMARKS

SUBJ: Departmental Manual M-9

1. In DM&S Supplement MP-1, Part II, Changes 35 dated November 13, 1984, the title of M-9 is "Medical District Initiated Program Planning."

2. This is to request that the title of this manual be changed to:

*"Planning and Evaluation and Systems Development"*

We expect to be submitting a number of items to be included in this manual during the coming year.

3. Thank you for your assistance.

Approved  Disapproved

*John W. Ditzler*  
JOHN W. DITZLER, M.D.  
Chief Medical Director

*2-3-86*  
Date

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MARJORIE R. QUANDT

ACMD for Planning Coordination (17A)

Regulations and Publications  
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**Veterans  
Administration**

# Memorandum

APR 03 1984

From: Director, Program Analysis and  
Development (10C2B)

To: Chief Medical Director (10)  
Publications Control Officer (101B2)

Subj: Establishment of M9-MEDIPP

1. Request permission to establish a new manual (M9-MEDIPP) to formalize MEDIPP (Medical District Initiated Program Planning) as a permanent DM&S Policy.
2. MEDIPP has in its two year cycle become an effective mechanism for DM&S planning purposes. MEDIPP has become the management tool providing comprehensive information directly from the medical districts. This allows prudent decision making in order to meet the health care veterans needs of the 1990's and beyond.
3. The '84 MEDIPP Planning Guidance has been reviewed and concurred in by appropriate program offices, therefore, in order to expedite the process, I would recommend that Volume I: Medipp Purpose, Structure, and Process and Volume II: Plan Development, of the '84 MEDIPP Planning Guidance be accepted as the M9-MEDIPP Manual without further circulation. (Appropriate formatting would be instituted.) I anticipate no changes to these two volumes in the near future.

Volume III: Needs Assessment Methodology and Volume IV: MEDIPP Reference Documents will by necessity be revised annually and will therefore have to be issued annually as a CMD Circular.

4. It is timely that M9-MEDIPP be developed in order to firmly establish its important place in DM&S as a consistent, and permanent policy.

*Murray G. Mitts M.D.*  
MURRAY G. MITTS, M.D.

*Donald L. Custis*  
DONALD L. CUSTIS, M.D.  
Chief Medical Director (10)

Approve   
~~Disapprove~~

*4/17/84*  
Date