



State of Vermont

TRAUMATIC BRAIN INJURY PROVIDER / PROCEDURES MANUAL

**Traumatic Brain
Injury Program**

**State of Vermont
Agency of Human Services
Department of Disabilities, Aging & Independent Living
Adult Services Division
280 State Drive, HC2 South
Waterbury, VT 05671-2070**

Table of Contents

Section I:	Purpose, Overview, and Definition
Section II:	Eligibility
Section III:	Application
Section IV:	Agency Standards
Section V:	Service Standards
Section VI:	Forms Submitted to TBI Program
Section VII:	Forms Kept on File
Section VIII:	Training, Outline, & Job Descriptions
Section IX:	Billing Information
Section X:	Appendices

**State of Vermont
Adult Services Division
TBI Program**

Section I: DEFINITION

Traumatic Brain Injury:

"Brain Injury is an insult to the brain, not of degenerative or congenital nature, the result of either an external physical force or internal cause, which produces an altered mental status, which results in an impairment of behavioral, cognitive, emotional, and/or physical functioning." **(Vermont Adult Services Division)**

**State of Vermont
Adult Services Division
TBI Program**

PROGRAM BACKGROUND & OVERVIEW

In 1991, the Department of Disabilities, Aging, and Independent Living and the Department for Children and Families began the operation of a three-year pilot project offering community-based rehabilitative services. The goal of this program was to divert from placement and/or return Vermonters with a moderate to severe traumatic brain injury from out-of-state facilities. Prior to the development of this service, individuals were placed in expensive out of state facilities, often there for years, with little hope of returning to their home communities. The project demonstrated that individuals with a moderate to severe traumatic brain injury participating in the pilot were appropriately served in community placements.

Effective October 1, 1994, this community based program, serving individuals 16 years of age and older, was approved and financed as a Medicaid Program [TBI Program] under the administration of the Division of Vocational Rehabilitation, and renewed in October 1997 and October 2002. Through collaboration with the Division of Mental Health, a long-term option for individuals requiring ongoing intensive one-to-one support was also added. In 2005, the program was shifted from the Division of Vocational Rehabilitation to the Division of Disability and Aging Services.

The major goal of this short-term program is to assist individuals obtain their optimal level of functioning and to successfully resume living and working in their own home community among family, friends and neighbors. **Therefore, short term in nature, over time the level of services and supports necessary will decrease culminating with graduation.**

Since implementation of the TBI Program statistics indicate:

- Out of State placements dropped from a high of **20** to an average of **3** per year.
- TBI Program serves approximately 100 consumers per year.
- Many individuals on the TBI Program graduate and become competitively employed
- AH individuals improved their quality of life and level of functioning.
- Statewide recognition of disabilities associated with TBI and development of appropriate accommodations has occurred.
- The average financial plan of care per person is approximately \$5,500 per month versus a projected out-of-state cost of \$17,500 per month saving Vermont approximately \$9,000,000 per year.

Revision Date 12-19-25

For assistance contact:

Heather Blair
Brain Injury Program Manager
802-798-9267
Heather.Blair@vermont.gov

Colleen Bedard
Administrative Services
Coordinator 802-241-0294
Colleen.Bedard@vermont.gov

Angela McMann
Adult Services Division Director
802-241-0292
Angela.McMann@vermont.gov

Adult Services Division
280 State Drive HC-2 South
Waterbury, Vt. 05671-2070
Fax: 802-241-0385

**State of Vermont
Adult Services Division
TBI Program**

ELIGIBILITY REQUIREMENTS

This program is limited to the following target group of recipients.

1. Recipients of Traditional and/or Long Term Vermont Medicaid.
2. Vermont residents 16 years of age or older.
3. Diagnosed with a documented [e.g.; CAT Scan] recent moderate to severe, traumatically acquired non-degenerative, structural brain injury resulting in residual deficits and disability. To qualify for rehabilitation program services injury must be within the last five years. See definition.
4. Requires 1:1 instruction focusing on independent living skills. Individuals will require intensive, extended rehabilitation services and ongoing independent living and pre-vocational / employment supports in the community and would meet the criteria to be sent to out-of-state rehabilitation facilities for up to one year if no services were available in-state.
5. Individuals must agree to participate in a substance abuse treatment program if a documented history of such abuse exists.
6. The individual's potential to benefit from rehabilitation services must be evident and will be a determining factor in deciding program eligibility. In order to determine the need for rehabilitation services from the Rehabilitation Program, the recipient must require rehabilitation in four or more specified areas see [TBI ILA]] and have already demonstrated a response to their current program. The individual must demonstrate a potential for independent living and possibility of returning to some vocational activity in the future.

For students, this program is designed to supplement, not replace the educational services that a student is entitled to under all Federal and State Laws and Regulations.

7. This program is short term in nature. Continued eligibility is determined by the individual's progress, in one or more identified areas, and is measured at the end of a six -month period, utilizing the TBI ILA Assessment tool and the TBI Evaluation tool.
8. Once an individual receiving services through the TBI Rehabilitation Program has reached the three year maximum, and continues to require ongoing intensity of supports, and it has been determined no other appropriate Medicaid waivers,

services, or funding are available, this individual will be referred to the TBI Long-term Program for ongoing supports.

9. *Rehabilitation Program Priority order:*

- 1. Individuals currently residing in a hospital or a hospital-based rehabilitation center.**
- 2. Individuals currently residing in an out-of-state facility.**
- 3. Individuals with recent injuries living in the community.**

10. *Long-term Program Priority Order:*

- 1. Individuals currently served on the TBI Program requiring intensive supports as defined in # 8**
- 2. Graduates of the TBI Program requiring intensive supports as defined below.**
- 3. If funds are available, consideration will be given to individuals who are:**
 - Recipients of Traditional and/or Long Term Vermont Medicaid
 - Vermont residents 18 years of age or older
 - Diagnosed with a documented moderate to severe non-degenerative brain injury [see definition].
 - Require a minimum of 6 to 8 hours per day of one on one support as a result of functional issues.
 - Demonstrate a current history of risk of danger to others, or to themselves.
 - Behave in such a manner as to indicate an inability, without supervision and assistance of others, to satisfy a need of nourishment, personal or medical care, shelter, self-protection, and safety.
 - Demonstrate that without adequate services, there is a potential for substantial bodily injury, serious physical, cognitive, and mental deterioration.
 - Documentation of recent intensive inpatient supports, or intensive outpatient services, or at risk of institutionalization.
 - Documentation that alternative funding sources and programs have been fully explored and these services are unable to appropriately meet the individuals needs in the community because of the nature and high degree of supports required.

11. *Long-term continued eligibility is reviewed annually and is based on:*

- The individual continuing to meet the eligibility criteria as defined.
- A revised plan of care that reflects the required need of intensity.

*** An exception may be made to the Priority Order when an individual is at imminent risk of homelessness, health or safety risk, or for other reasons deemed necessary at the discretion of the DAIL Commissioner.**

TBI Waitlist

If TBI program funding is not available, individuals found clinically eligible for TBI services will be placed on a waitlist. The TBI program manager or designee will contact individual's as funding becomes available to begin the process for TBI services. The waitlist will be managed by the TBI program manager using the following criteria.

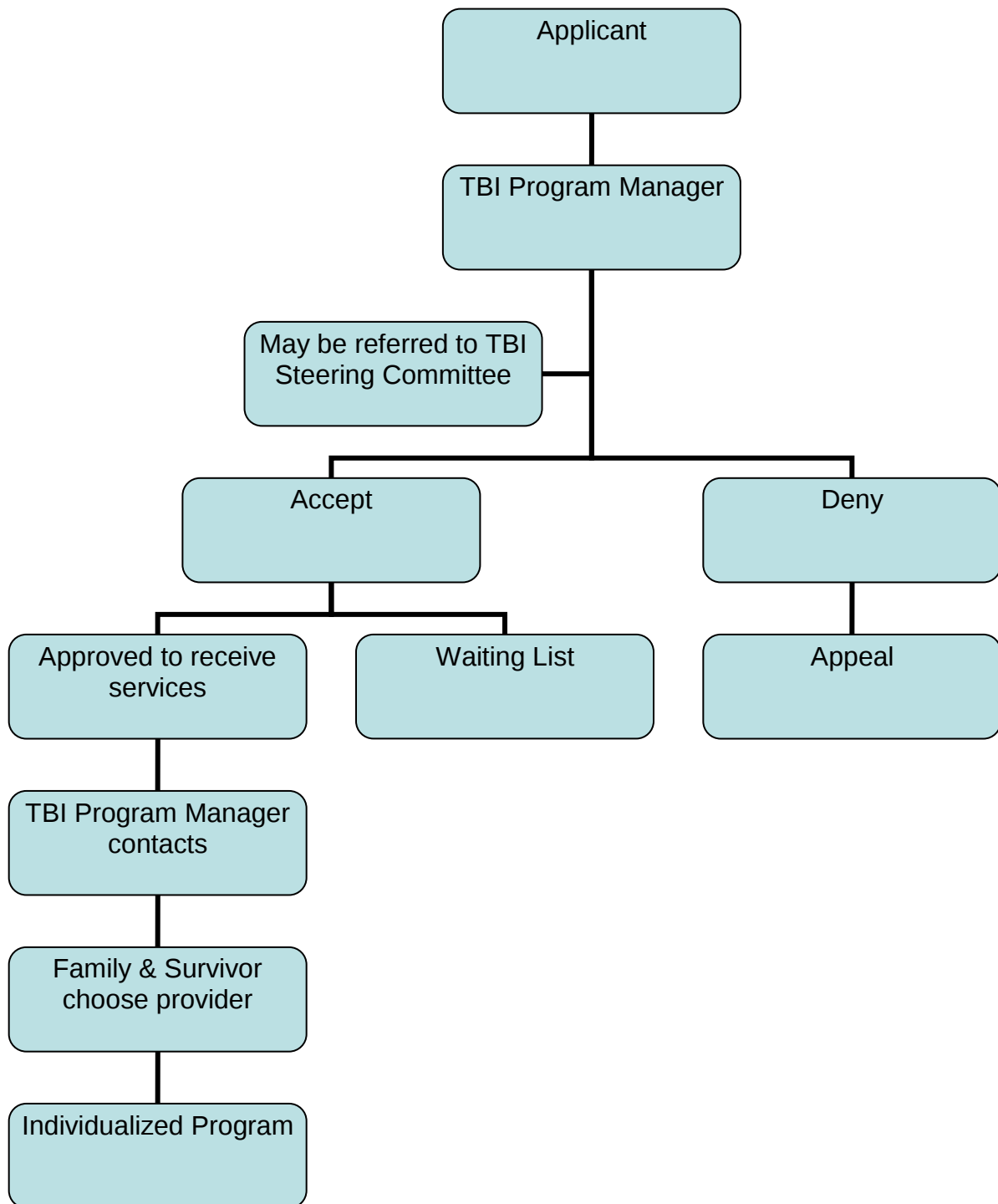
- **Individual's in hospitals or rehab facilities in or out of state**
- **Individual's living in the community on a first come first served basis**
- **Individual's at imminent risk of homelessness, health or safety risk, or for other reasons deemed necessary at the discretion of the DAIL Commissioner.**

Exception

Dependent family member of an active duty service member will maintain his or her position on the waitlist regardless of the member's absence from the state due to the service member's out-of-state military assignment. Upon the eligible dependent family member's return to the State at the conclusion of the service member's out-of-state military assignment, the dependent member shall receive services if during his or her absence from the State he or she moved to a position of priority on the waitlist.

**State of Vermont
Adult Services Division TBI Program**

Section III: TBI PROGRAM PROCESS



**State of Vermont
Adult Services Division
TBI Program**

APPLICATION / REFERRAL / PROVIDER SELECTION PROCESS

1. A completed, signed application is sent to the TBI Program Manager Adult Services Division, 280 State Drive HC-2 South, Waterbury, VT 05671-2070 by an acute rehabilitation facility, a hospital, a long-term care rehabilitation facility, an individual with a TBI, or others on behalf of the individual.
2. Upon receipt of the completed application, the TBI Program Manager or designee will schedule a meeting with the applicant and other relevant individuals to conduct a further assessment of eligibility for the TBI Program.
3. The applicant is then either denied or accepted to services. If the assessment is unclear, the TBI Program Manager, or designee, will contact the TBI Steering Committee with a recommendation for acceptance or denial. The Steering Committee will then approve or deny the applicant for services.
4. If applicant is denied services, they will be notified in writing of the decision along with instruction for the consumer's right to appeal.
5. When an individual is accepted, the TBI Program Manager or designee will recommend a minimum of three (3) Department of Disabilities, Aging, and Independent Living (DAIL) approved TBI Provider Agency (ies) along with the name of a contact person at the Provider Agencies in order for the consumer or guardian to discuss possible services. This recommendation will be based on the needs of the individual. The final selection of the provider agency will rest with the individual and/or their guardian.
6. The TBI Program Manager/ designee will notify the Provider Agency of selection. A Care Plan is developed by the TBI Program Manager/ designee; this and other necessary documentation will be sent to the provider for their review. The Provider Agency will notify the TBI Program Manager / designee of acceptance or denial of the TBI program consumer.
7. Once the Provider Agency accepts the consumer, the pre-admission planning process will begin.
8. If at any point during program services the consumer and/or guardian wishes to consider other Provider Agencies, the TBI Program Manager/designee must be notified.
9. If at any point during program services the Provider Agency is unable to meet the needs of the consumer, the TBI Program Manager / designee and consumer must be notified in writing. The Provider Agency will give a minimum of a 30-day notice and will assist with development and implementation of a transition plan. The State may require an extension of service provision beyond the 30 days to ensure a successful transition.

**State of Vermont
Adult Services Division
TBI Program**

APPLICATION FORM

To:
TBI Program
DAIL - ASD
280 State Drive HC-2 South
Waterbury, VT 05671-2070

Referred by: _____
Agency: _____
Address: _____

Case Manager: _____
Phone Number: _____
Email: _____

Applicant General Information

Name (Please print): _____

Address: _____

Phone (day) : (_____) _____ Phone (eve): (_____) _____

Please consider me for: ☐ TBI Rehabilitation Program * or ☐ TBI Long Term Program

☐ Male or ☐ Female DOB: ____/____/____ SSN: _____

* Injury must have occurred in the last 5 years.

Height: _____ Weight: _____ Dietary habits: _____

Marital Status: _____ Living situation: _____

Children (names and ages): _____

Education: _____

Occupation: _____

Guardian / Payee Information

Guardian Name: _____ Phone: (_____) _____

Address: _____

Revision Date: 06/24/2016

Payee Name: _____ Phone: (____) _____

Address: _____

Insurance & Income Information

I am currently receiving:

☐ Community Medicaid or ☐ Long Term Medicaid or ☐ Other: _____

Medicaid Number: _____

☐ yes or ☐ no Applied for Medicaid If yes, date of application ____/____/____

Income:

SSDI: \$ _____ SSI: \$ _____

Other: \$ _____

☐ yes or ☐ no Applied for SSI/SSDI If yes, date of application ____/____/____

Medical Information

Diagnoses: _____

Cause of Injury: _____ Date of Injury: ____/____/____

Present Location: _____ Phone: (____) _____

Primary Physician: _____ Phone: (____) _____

Address: _____

Past Medical History: _____

TBI Deficits: _____

Recent Hospitalizations/Date: _____

Long-term Rehab Facilities/Date: _____

Prior mental health issues: _____

Please check all services you have received or are currently receiving:

- | | |
|--|---|
| ☐ Developmental Services | ☐ Substance Abuse Services |
| ☐ Mental Health or CRT Services | ☐ Choices for Care Services |
| ☐ Corrections/Probation | ☐ Children's Personal Care Services |
| ☐ Attendant Care Services | ☐ Neuro Resource Facilitation/BIA-VT |
| ☐ Other | |

Required Documentation

Please attach all of the following information to this form.

- ☐ Notice of Medicaid Eligibility
- ☐ Physician reports and letter of recommendation for community based services
- ☐ Rehabilitation facility admission and discharge summary
- ☐ Hospital admission and discharge summary, which includes documentation of a moderate to severe brain injury (e.g.; CAT Scan)
- ☐ Neuropsychological reports (if one has been done)
- ☐ Completed Independent Living Assessment Form
- ☐ Psychiatric evaluations (if applicable)
- ☐ Specialty reports or evaluations (i.e.; physical therapy, occupational therapy, speech therapy, etc.)
- ☐ Guardianship/payee papers (Required if individual has a legal guardian)

FOR LONG-TERM APPLICANTS ONLY—INCLUDE:

- ☐ Reports to substantiate risk factors, safety issues, and level of daily support.
- ☐ Letter(s) of denial from other applicable home and community based programs.
- ☐ Documentation of history of intensive inpatient (i.e.; other hospital admission and discharge summary), **or**
- ☐ Documentation of intensive outpatient services (i.e.; counseling, psychotherapy reports, etc.), **or**
- ☐ Physician letter to include risk of institutionalization.

***Please note: Inadequate information or delay in providing requested information can result in denial of eligibility. Applications cannot be reviewed until all information is received.**

****Applicant and/or guardian should contact the appropriate State Agencies, Vermont State Police and/or Vermont Crime Information Center to resolve any outstanding legal issues, e.g.; traffic violations, warrants, etc.**

Release of Information

- I agree to participate in the assessment of my eligibility for this program and in developing my plan of care. I understand that if I am found eligible for the TBI Program. I will be given the choice of: (1) participating in the TBI Program; (2) requesting medically necessary institutional services; (3) remaining in the community without TBI Program Services.
- I give permission to the team of persons developing my plan of care to obtain personal, medical, and financial information about me to determine my eligibility for this program. They are to keep this information confidential.

Signature_____ Date_____

Applicant or Legal Representative(s)

Signature_____ Date_____

Legal Representative

**State of Vermont
Adult Services Division
TBI Program**

ELIGIBILITY NOTIFICATION FORM

Date: _____ **Clinical Eligibility Start Date:** _____
Name: _____ **DOB:** _____ **SSN:** _____
Address: _____ **City:** _____ **State:** ____ **Zip:** ____
Telephone: _____
Guardian: _____ **Telephone:** _____
Address: _____ **City:** _____ **State:** ____ **Zip:** ____
Date Application Received: _____ **Date Application Reviewed:** _____

1. ☐ Clinically Eligible for TBI Services: _____ Program
☐ Waiting list - you will be notified when a slot is assigned.
☐ Slot assigned

Following is a list of provider agencies qualified to meet your needs. Please contact the Agency to discuss program services.

- ☐ Choice A: _____
☐ Choice B: _____
☐ Choice C: _____

NOTIFY THE TBI PROGRAM SUPERVISOR OF YOUR DECISION BY: _____

2. ☐ *Not eligible - does not meet the eligibility requirement. SEE ATTACHMENT.
3. ☐ *Not eligible - due to inadequate information.

TBI Program Manager
Adult Services Division
280 State Drive HC-2 South
Waterbury, VT 05671-2070
Telephone: (802) 241-0294

Date: _____

**State of Vermont
Adult Services Division
TBI Program**

YOUR RIGHT TO APPEAL

If your request for services from the Traumatic Brain Injury (TBI) Program is denied or services are terminated, you may proceed as follows:

To ask for more information about this decision, speak or write to the TBI Program Manager at the Adult Services Division 280 State Drive HC-2 South, Waterbury, VT 05671-2070, telephone: 802-798-9267.

You may appeal this action. If you wish to appeal, you must do so within 90 days of the postmark date of this decision. To appeal, write to the Commissioner's Office, 280 State Drive HC-2 South, Waterbury, VT 05671-2020 or call 802-241-2401. You may also call toll-free at 1-800-252-8427 and ask to be transferred to the TBI Program.

You may also request a fair hearing from the Human Services Board by writing the Human Services Board, 14-16 Baldwin Street, 2nd Floor, Montpelier, VT 05633-4302. If you wish to request a fair Hearing, you must write to the Human Services Board within 90 days of the postmark date of the decision or within 30 days of the Commissioner's review.

This information is important. If you do not understand it, take it to your local office for help.

Ces informations sont importantes. Si vous ne les comprenez pas, apportez-les à votre bureau local pour recevoir de l'aide. **French**

Это важная информация. Если она Вам непонятна, возьмите это письмо и обратитесь за помощью в местное отделение. **Russian**

Ovaj dopis je važan. Ukoliko je nerazumljiv za vas onda ga ponesite i obratite se lokalnoj kancelariji za pomoć. **Serbo-Croatian**

Esta información es importante. Si no la entiende, llévela a su oficina local para solicitar ayuda. **Spanish**

Maelezo ya barua hii ni muhimu. Kama huielewi, ichukue, uende nayo katika ofisi yako ya karibu kwa msaada zaidi. **Swahili**

Thông tin này rất quan trọng. Nếu quý vò không hiểu nội dung trong này, hãy đem thư này đến văn phòng tại địa phương của quý vò để được giúp đỡ. **Vietnamese**

**State of Vermont
Adult Services Division
TBI Program**

SUGGESTED SAMPLE QUESTIONS FOR PROVIDER SELECTION

PROVIDER AGENCY _____ PHONE _____

AGENCY REPRESENTATIVE _____ DATE _____

1. Where is your agency located?

2. How long has your agency been in operation?

3. What type of services do you provide?

4. What do you feel are your agency strengths and challenges?

5. What is your agency's philosophy on rehabilitation?

6. How long have you been associated with the TBI Program?

7. Have you served other individuals with TBI?

8. What is your experience and training in working with TBI?

9. What services would be available for the client?
10. How would they get their therapy requirements met?
11. Who would be the Case Manager and other individuals working with the client? Would these people be available to meet with client/guardian?
12. Do the individuals identified to work with the client have experience in working with TBI clients?
13. What if the client and the Case Manager/Life Skills Aides do not get along?
14. What might a daily schedule look like?
15. What if the client wants to return to work?

OTHER QUESTIONS:

**State of Vermont
Adult Services Division TBI Program**

Section IV: TBI PROGRAM PROVIDERS

1. Addison Home Health Care Agency
P.O. Box 754
254 Ethan Allen Highway
Middlebury, VT 05753
Phone: (802) 388-7259
Contact: June Glebus, RN
Email: jglebus@achhh.org
Web: www.achhh.org
2. Bayada Nurses
110 Kimball Avenue, Suite 250
South Burlington, VT 05403
Phone: 1(800) 44 -NURSE or (802) 655-7111
Contact : Tracey Chellis
Email: tchellis@bayada.com
Fax: (802) 861-2921
Web: www.bayada.com
3. Central VT. Home Health and Hospice
600 Granger Road
Barre, VT 05641
Phone: (802) 223-1878
Contacts: Sandi Rousse
Email: srousse@cvhhh.org
Fax: (802) 223-2861
Web: www.cvhhh.org
4. Choice TBI Support Services
23 Jones Brothers Way Barre, VT 05641
Phone: (802) 622-8122
Contact: Linda Ormsbee, Nicole Pierce
Email: lormsbee@comcast.net
5. Community Associates
109 Catamount Park
Middlebury, VT 05753
Phone: (802) 388-4021
Contact: Paula Dougherty
Email: pdougherty@csac-vt.org
Fax: (802) 388-1868
Web: www.csac-vt.org/main.html
6. Eagle Eye Farm, Inc.
PO Box 247
3014 Newark Road
West Burke, VT 05871
Phone: (802) 723-9797
Contacts: Earl Whitmore
Email: ewhitmoreeef@gmail.com
Fax: (802) 723-9797
7. Head Injury / Stroke Independence Project
Lenny Burke's Farm
PO Box 1837-A
Rutland, VT 05701
Phone: (802) 446-2302
Contacts: Kevin Burke
Email: B1840house@aol.com
Fax: (802) 446-3780
8. Health Care & Rehabilitation Services
390 River Street
Springfield, VT 05156
Phone: (802) 886-4500
Contact: Terrisa Clark
Phone: (802) 886-4567 x7208
Email: taclark@hcrs.org
Fax: (802) 257-5769

9. Lamoille Home Health & Hospice
54 Farr Avenue
Morrisville, VT 05661
Phone: (802) 888-4651
Contacts: Kathy Demars, RN
Beverly Lemieux
Email: kdemars@lhha.org
blemieux@lhha.org
Fax: (802) 888-7822
10. Manchester Health Services, Inc.
PO Box 1224
Manchester Center, VT 05255
Phone: (802) 362-2126
Contact: Mildred C. Dunn, MS, RN
Email: milliedunrn@yahoo.com
Fax: (802) 362-4884
Web: www.manchesterhealthservices.com
11. Northern Counties Health Care
Caledonia Home Health Care & Hospice
161 Sherman Drive
St. Johnsbury, VT 05819
Phone: (802) 748-8116
Contact: Pat MacNichols RN
Email: patriciam@nchcvt.org
Fax: (802) 748-4628
12. Northwest Counseling & Support Services
107 Fisher Pond Rd.
Saint Albans, VT. 05478
Phone: (802) 524-6555 X 6489 or (802) 393-6489
Contact: Kathleen Brown
Email: Kathleen.brown@ncssinc.org
Fax: (802) 524-3894 or (802) 527-8161
Web: www.ncssinc.org
13. Orleans – Essex VNA & Hospice
46 Lakemont Road
Newport, VT 05855
Phone: (802) 334-5213
Contact: Tony Tribul
Email: ttribul@oevna.org
Fax: (802) 334-8822
Web: www.vna-vermont.org
14. PRIDE Supports and Services, Inc.
PO Box 969
Barre, VT. 05641-0969
Phone: (802) 479-5801
Contact: Michele Corrow, Kim Daniels
Email: mmv1266@aol.com or kdaniels@TDS.net
Lmartin@pridetbi.com
Fax: (802) 479-9648
15. Riverview Life Skills Center
197 Highlander Drive
Jeffersonville, VT 05464
Phone: (802) 644-8708
Contacts: Chuck Erickson, Carl Erickson
Email: rlsci@yahoo.com
Fax: (802) 644-6697
Web: www.riverviewlifeskillscenter.com
16. Rutland Area Visiting Nurses Association
7 Albert Cree Drive
Rutland, VT 05701
Phone: (802) 775-0568
Contact: Bea Wells, MSW, LICSW
Email: bwells@ravnah.org
Fax: (802) 770-1545
Web: www.ravnah.org
17. Rutland Mental Health Services, Inc.
78 South Main Street / PO Box 222
Rutland, VT 05701
Phone: (802) 775-0828
Contact: Gerald Bernard, Director
Email: jbernard@rmhscn.org
Fax: (802) 747-7692 or 773-3705
Web: www.rmhscn.org
18. Geen Mountain Support Services
109 Professional Drive
Morrisville, VT 05661
Phone: (802) 888-7602
Contact: Sonja Crowe
Email: sonjac@GMSSI.com
Fax: (802) 888-1182
Web: www.sterlingarea.org

19. United Counseling Services P.O. Box 588100 Ledge Hill Drive Bennington, VT 05201 Phone: (802) 442-5491 Contact: Kathy Hamilton Email: khamilton@ucsvt.org Fax: (802) 442-1701

20. Upper Valley Services Inc. P.O. Box 317 Bradford, VT 05033 Phone: (802) 222-9235 Contact: Bill Ashe Email: bashe@uvs-vt.org

21. VNA and Hospice of Southwestern Vermont

Healthcare Services
160 Benmont Ave. Suite 17
Bennington, VT 05201
Phone: (802) 442-5502
Contact: Sharon Moore, RN
Email: moosh@phin.org
Fax: (802) 442-4919

22. Washington County Mental Health Services

50 Granview Drive
Barre, VT 05641
Phone: (802) 479-2502
Contact: Margaret Bardossi, Dev. Svc. Asst. Prog.
Email: megb@wcmhs.org
Fax: (802) 479-4056
Web: www.wcmhs.org

**State of Vermont
Division of Disability and Aging Services
TBI Program**

PROVIDER AGENCY

Description:

Provider Agencies are home health agencies, community mental health centers licensed under state statutes, and other independent service providers who are approved by the State of Vermont, Department of Disabilities, Aging, and Independent Living and who meet the standards as indicated.

Each Provider Agency will develop and submit a written plan outlining their TBI program for review and approval. The document will include the scope of services required by the State TBI Program service definitions (i.e., case management services, rehabilitation services, community support, assistive technology services, crisis support, respite services, and psychology & counseling supports), and will assure compliance with the standards established under each service.

Standards:

1. The Commissioner of the Department of Disabilities, Aging and Independent Living will approve Provider Agencies based on the recommendation of a review committee. This committee may consist of the TBI Program Supervisor, a physician skilled in TBI, a psychologist, a consumer, consultants skilled in TBI, and other professionals as needed. The committee will formulate its recommendation based on the written plan submitted by the agency and on-site visits as needed.
2. The Provider Agency will adhere to the background check policy. Verification of such checks shall be maintained in files at the Provider Agency and be available on request.
3. Provider Agencies will employ, train and supervise case managers. See Case Management job description for requirements.
4. Provider Agencies will employ, train and supervise life skills aides (LSA). See LSA job description for requirements.
5. Provider Agencies will assure provision of community support in home and/or community settings. Residences will be licensed by the appropriate State agency when required.
6. The Provider Agency must complete the Housing Standards forms as required by the DDAS policy. It is recommended that providers adhere to the DDAS Housing Standards Policy, even those not receiving community support funding. This is required for all homes receiving community

funding.

7. Provider Agencies will develop contracts with service providers as appropriate. This contract must reflect the appropriate standards of the services to be performed, the duration of contract, and signatures of both parties. The contract must include and adhere to the DAIL background check policy. Verification of such must be maintained in files at the Provider Agency and be available on request.
8. The Provider Agency must submit an initial TBI Service Plan via specified TBI database within 30 days of admission to the program and it must be updated or revised a minimum of every six months for consumers on the Rehabilitation Program and annually for consumers on the Long Term Program. The Agency must use the required TBI Service Plan assessment and submit via the TBI database.

For Students, this program is designed to supplement, not replace, the educational services that a student is entitled to under Federal and State Laws and Regulations.

9. Provider Agencies must provide pre-service training and at least 3 on-going relevant training opportunities per year to maintain competencies. Trainings may include, but are not limited to: self study (reading TBI related books, journals, periodicals, and videos), attending Case Management or Life Skills Aide meetings offered by the TBI Program, or TBI conferences. Training records and reports must be maintained at the Provider Agency and available upon request by the State.
10. Provider Agencies are responsible for development, coordination and provision of all services identified in TBI Service Plan and the TBI Care Plan and will utilize appropriate consultants as necessary. Consultants may include, but are not limited to physicians, psychologists, physical therapists, occupational therapists and speech therapists. Consultants shall have a state license and have 1-2 years of experience working with survivors of traumatic brain injury.
11. The Provider Agency must provide or arrange transportation that meets the individual's needs and allows them access to community activities. If the Agency provides transportation, it must meet the State's minimum insurance requirements. Current driving license and insurance is required and must be available upon request.
12. The following supporting documents are required and must be submitted to the TBI Program Supervisor in a timely manner:

INDIVIDUALS WITH REHABILITATION SERVICES:

- TBI Independent Living Assessment will be submitted 30 days after admission and every six months thereafter.
- TBI Evaluation will be due three months after admission and every three months thereafter.
- TBI Care Plan – while there is no action required on this form any errors or concerns must be reported to the TBI Program Supervisor immediately.
- TBI Service Plan - written by the Provider Agency with team input within 30 days of admission to the program and every six months thereafter. Required signatures must be kept on file at the Provider Agency.

INDIVIDUALS WITH LONG TERM SERVICES:

- TBI Independent Living Assessment will be submitted 30 days after admission and every twelve months thereafter.
- TBI Evaluation - this report will be due six months after admission and every six months thereafter.
- TBI Care Plan - while there is no action required on this form any errors or concerns must be reported to the TBI Program Supervisor immediately.
- TBI Service Plan written by the Provider Agency with team input, within 30 days of admission and every twelve months thereafter. Required signatures must be kept on file at the provider agency.

All documents may be updated and submitted to the TBI Program more frequently as needed.

Failure to submit documents in a timely manner will result in a delay in claims processing. Electronic submission of documentation via TBI database is required.

13. The following additional documents are required and must be available on request from the TBI Program Supervisor or others as appropriate. **(Failure to do so will result in delay in claims processing).**

- Life Skills Aides Report (weekly or daily report)
- Case Management Log
- Caregiver's log
- Care Conference Minutes - this record shall include the consumer's signature, which may result in changes in the TBI Service Plan
- A weekly activities schedule that reflects a record of the individual's rehabilitation activities

14. Room and board is a separate item and not part of community supports. It is not included though the TBI Program; it is paid to the Provider Agency by the consumer from SSI / SSDI income. If the consumer is on SSI or SSDI, he or she must be allowed to keep the Personal Allowance as deemed appropriate by the Social Security Administration. Room and board shall not exceed SSI income, minus \$89/month. Documentation of room and board charges, payment, and allowance must be available upon request.
15. Provider will maintain liability insurance as required by the State. Proof of insurance must be available upon request.
16. Providers will comply with the annual DDAS Provider Agreement.
17. Providers will develop their own processes and policies to address consumer complaints.
18. All TBI Providers are mandated to maintain current licenses for TBI databases. Required documentation must be submitted via the Social Access Management System (SAMS). See appendix for SAMS details.

***** If at any point during program services the Provider Agency is unable to meet the needs of the consumer, the TBI Program Supervisor / designee and consumer must be notified in writing. The Provider Agency will give a minimum of a 30-day notice and will assist with development and implementation of a transition plan. The State may require an extension of service provision beyond the 30 days to ensure a successful transition.**

******Failure to comply with these standards will result in loss of approval from the Department of Disabilities, Aging, and Independent Living.**

**State of Vermont
Division of Disability and Aging Services
TBI Program**

DOCUMENTATION REQUIREMENTS

TO BE KEPT ON FILE WITH PROVIDER AGENCY:

1. Life Skills Aide Report
 - Tracks activities and progress
 - Providers may choose to use either the LSA Daily Report or the LSA Weekly Report
2. Case Management Reporting Log
 - Substantiates hours billed
 - Serves as record of activities
3. Care Conference Minutes with appropriate signatures
 - Documents results of monthly team meetings
4. A weekly activities schedule
 - Promotes independence
 - Provides consistency and structure
5. Admission / Transfer / Discharge Checklist
 - Required to be completed when transitioning a consumer to another program.
6. ORIGINALS of all documents

DOCUMENTS SUBMITTED TO WATERBURY:

1. TBI Independent Living Assessment
 - Initial – due within 30 days of admission to program
 - Revisions – every 6 months for Rehabilitation consumers; Annually for Long term consumers (or more frequently as needed)
 - *Signatures not required for submission to TBI Program. Please keep signatures on file at Provider Agency.*
2. Home Evaluation in accordance with DDAS Procedure
 - Required for unlicensed placements
 - Required when individuals receive community funding
3. TBI Service Plan
 - Initial – due within 30 days of admission to program

- Revisions – every 6 months from Start Date for Rehabilitation consumers; Annually for Long term consumers (or more frequently as needed)
- *Signatures not required for submission to TBI Program. Please keep signatures on file at Provider Agency.*

4. TBI Evaluation

- Required every 3 months from start date for Rehabilitation consumers and every 6 months for Long term consumers
- *Signatures not required for submission to TBI Program. Please keep signatures on file at Provider Agency.*

**State of Vermont Adult Services
Division TBI Program**

Section V: SERVICE DEFINITIONS

[All services are provided through State of Vermont approved provider agencies]

Case Management:

Service coordination is the primary function of case management and will include securing, developing, implementing, coordinating and monitoring of a comprehensive therapeutic program provided to the individual and as identified in the TBI Service Plan and the Care Plan.

Case Management required training and experience: A Bachelor of Arts or Science in a relevant discipline, or licensing as a Registered Nurse; a minimum of two years experience working in a relevant community service setting; and demonstrable experience, knowledge and skills specific to working with individuals with traumatic brain injury, and completed the required TBI pre-service training.

On a case-by-case basis, the Department of Disabilities, Aging, and Independent Living / Division of Disability and Aging Services may approve staff to provide services when they have an equivalent combination of education, experience, and skill specific to working with individuals with TBI. The approved TBI Provider Agency shall maintain documentation of the State's approval of such a variance.

Rehabilitation Services:

Rehabilitation services for consumers will promote independent living and re-integration into the community, and will include daily training and support. The Life Skills Aides (LSA) trained to implement TBI Service Plans will work with the consumer on a one-to-one basis, providing training in specific activities of daily living in all necessary settings. LSAs, through the supervision of the case manager, will carry out the specific therapeutic program that will be designed in consultation (when appropriate) with licensed speech, physical and occupational therapists, physicians, psychologist, vocational counselors, educators, family members, and others experienced in serving individuals with a traumatic brain injury.

Community Support:

Community Support is designed to promote and foster independence by assisting the consumer to achieve his/her optimal level of physical, cognitive, and behavioral functions within the context of the consumer, family, school and community. This service may be provided in a family setting, group home, supervised apartment, or in the consumer's own apartment. Some consumers are unable to return to the home or family setting where they lived before their injury. Under such circumstances, the Provider Agency will assist the individual in selecting an appropriate residential setting. The caregiver, responsible for 24-hour care and supervision, will receive training

specific to the needs of the consumer. Respite will be provided to the caregiver based on need, as identified in the Individual Service Plan.

Environmental and Assistive Technology Services:

Environmental and Assistive Technology Services improve the functional independence of consumers. These supports which are determined to be necessary may include home modifications, services/supports, equipment and/or devices. These purchases maybe one time in nature or made available on a per month rental basis.

Home modification will be in accordance with state and local building codes. All accessibility renovations will meet the requirements of the Federal and Vermont Fair Housing Act Guidelines and the Americans with Disabilities Accessibility Guidelines.

Crisis Support:

Crisis Support is an array of services and supports short-term in nature that assist a consumer to resolve a behavioral or emotional crisis safely in their community. This system includes professional one-on-one support and 24-hour staffing and case management services.

Respite Services:

Contracted Community Support Providers that provide 24-hour care and supervision to a consumer are eligible to receive respite services to maximize the effectiveness of the residential placement.

Payment will not be made for services furnished by the consumer's parent, step-parent or adoptive parent; by the consumer's spouse, domestic partner or legal guardian; or by siblings under the age of eighteen (18).

Psychology & Counseling Supports:

This support provides intensive one-on-one counseling, evaluation, monitoring, support, and medication review and instruction. This service is provided by a psychiatrist, psychologist, and/or individuals with Masters Degree in psychotherapy or counseling. All service providers must be licensed and have experience and an expertise in traumatic brain injury.

Employment Supports:

Employment Support consists of services that assist a consumer to obtain and maintain individual employment in regular work settings. Employment Support includes activities needed to access employment including assessment, job development, supervision and training. Employment Support also includes activities to sustain paid work by the consumer, including job coaching, off-site support and consultation with employers. However, work services will not pay for normal supervisory activities expected of all employers as part of a business setting.

Documentation will be maintained in the file of each individual receiving work supports identifying that the service is not otherwise available under a program funded under the Rehabilitation Act of 1973 or P.L. 94-142 (IDEA)

Claims will not be approved for incentive payments, subsidies, or unrelated vocational training expenses such as the following:

- Incentive payments made to an employer to encourage or subsidize employer's participation in a supported employment program.
- Payments that are passed through to individuals receiving work supports.
- Payments for vocational training that are not directly related to a consumer's work supports.
- Payments for supports provided in sheltered work environments (those group environments requiring a sheltered workshop and/or work activity certificate).
- Payments for supports provided in segregated work crews designed specifically for people with disabilities, even if these crews operate in the community.

All Inclusive Daily Rate

The TBI Daily Rate is an all inclusive rate that combines all of the standard TBI services.

Services include:

- Case Management
- Rehabilitation
- Community Support
- Respite
- Environmental & Assistive Technology
- Psychology Supports
- Employment Supports

The daily rate does NOT include crisis supports.

This does NOT affect Room & Board, personal allowances or additional transportation expenses.

**State of Vermont
Adult Services Division
TBI Program**

CASE MANAGEMENT

Description:

Case managers are responsible for securing and coordinating appropriate services for consumers. Service coordination is the primary function of case management.

1. Case management services will include the following:
 - A. Development, implementation, coordination and monitoring of comprehensive services provided to the individual as identified by the TBI Service Plan and the Care Plan.
 - B. Coordination of comprehensive services prior to a consumer's discharge from a facility or admission to the program. This will include a review of medical documentation, individual assessments, and attendance to care conferences. Proposed living arrangements and staffing patterns must also be evaluated.
 - C. Secure necessary services which could allow the individual to remain in his/her own home.
 - D. Monitor the quality of care provided. Individualized program outcomes shall be evaluated quarterly utilizing the progress scale to complete the Rehabilitation Quarterly or Long Term Semi-Annual Evaluation.
 - E. Modify services in the TBI Service Plan as necessary. Maximize the use of natural and generic community and school resources to meet the consumer's needs.
 - F. Supervise Life Skills Aides (LSAs) and the schedule of daily rehabilitation activities.
 - G. Provide supports to the consumer, his/her family, the caregivers, and other agency staff providing services.
 - H. Collaborate with schools to coordinate a comprehensive program and provide the schools with the consultation required to deliver appropriate services when applicable.
 - I. Monitor level of all services provided and billed by the agency to ensure optimal use of approved level of services. If level of services provided is significantly less than the amount approved by the TBI Program Manager,

the Program Manager should be contacted for discussion and/or revision of the Care Plan.

- J. Develop a Care Conference Team. The team will be comprised of the consumer, guardian, case manager, appropriate consultants, and caregivers. This may also include LSAs, educational personnel, TBI Program Supervisor, a Vocational Rehabilitation Counselor, primary care physician, physiatrist, therapist, and other professionals with expertise in traumatic brain injury. This team shall meet once a month or more often if deemed necessary.

Standards:

1. Case Management.

- A. Required training and experience: A Bachelor of Arts or Science in a relevant discipline, or licensing as a Registered Nurse; a minimum of two years experience working in a relevant community service setting; and demonstrable experience, knowledge and skills specific to working with individuals with traumatic brain injury, and completed the required TBI pre-service training.

On a case-by-case basis, the Department of Disabilities, Aging and Independent Living / Adult Services Division may approve staff to provide services when they have an equivalent combination of education, experience, and skill specific to working with individuals with TBI. The approved TBI Provider Agency shall maintain documentation of the State's approval of such a variance.

- B. Case managers will be employed, trained, and supervised by the TBI Program approved Provider Agency. The agency is responsible for assuring the availability of case managers to effectively manage the TBI Service Plan (See Case Manager Job Description for details).
- C. Case managers will complete and/or monitor the following documentation:
 - (1) TBI Independent Living Assessment (ILA)
 - (2) Home Evaluation in accordance with DDAS Housing Standards
 - (3) TBI Evaluation
 - (4) Care Plan
 - (5) TBI Individual Service Plan (ISP)
 - (6) Life Skills Aide Report (daily or weekly)
 - (7) Case Management Log
 - (8) Caregiver Log
 - (9) Care Conference Minutes
 - (10) A weekly activities schedule

**State of Vermont
Adult Services Division
TBI Program**

REHABILITATION SERVICES

Description:

Rehabilitation services for consumers will promote independent living and re-integration into the community, and will include daily training and support. The Life Skills Aides (LSA) trained to implement TBI Individual Service Plans will work with the consumer on a one-to-one basis, providing training in specific activities of daily living in all necessary settings. LSAs, through the supervision of the case manager, will carry out the specific therapeutic programs that will be designed in consultation (when appropriate) with licensed speech, physical and occupational therapists, physicians, psychologist, vocational counselors, educators, family members, and others experienced in serving individuals with a traumatic brain injury.

The work of the LSA will be a unique component to the program as it emphasizes continuous integration of daily skills and routines within the consumer's residential and community setting. LSAs will focus on the comprehensive physical, emotional, cognitive and social needs of the consumer through a holistic approach.

Standards:

1. LSAs shall be 18 years or older; with a minimum of a high school diploma or GED and, have completed mandatory training in traumatic brain injury. (See LSA Job Description)
2. LSAs will receive training specific to the consumer's needs from the provider agency.
3. LSAs will be hired, trained, supervised, and paid by the Provider Agency.

**State of Vermont
Adult Services Division
TBI Program**

COMMUNITY SUPPORT

Program Description:

Community Support is designed to promote and foster independence by assisting the consumer to achieve his/her optimal level of physical, cognitive, and behavioral functions within the context of the consumer, family, school and community. This service may be provided in a family setting, group home, supervised apartment, or in the consumer's own apartment. Some consumers are unable to return to the home or family setting where they lived before their injury. Under such circumstances, the Provider Agency will assist the individual in selecting an appropriate residential setting. The caregiver, responsible for 24-hour care and supervision, will receive training specific to the needs of the consumer. Respite will be provided to the caregiver based on need, as identified in the TBI Service Plan.

Standards:

1. The caregiver will own their home; or, will have the approval of the landlord if the living space is leased or rented.
 - A. A home serving three or more individuals with traumatic brain injury will require licensing by the state of Vermont as a community care home.
 - B. If a home is not licensed and Community Support is to be provided, it is required that the provider agency will be in compliance with the DDAS Housing Standards procedure.
2. A private room, which is accessible to meet the needs of the consumer, should be available unless the consumer agrees otherwise.
3. The caregiver must complete the TBI pre-service training.
4. The caregiver will provide 24-hour care and supervision including active participation in the consumer's daily rehabilitation program. The caregiver will assure that a phone is available, all necessary appointments are kept; and, will be available to attend and participate in monthly care conferences
(See Community Support Functions and Standards in Section VIII for additional requirements)
5. The caregiver must have the capacity to transport individuals to appointments and community settings as indicated by the TBI Service Plan.

**State of Vermont
Adult Services Division
TBI Program**

ENVIRONMENTAL AND ASSISTIVE TECHNOLOGY SERVICES

Description:

Environmental and Assistive Technology Services can improve the functional independence of consumers. These supports which are determined to be necessary may include home modifications, services/supports, equipment and/or devices. These purchases maybe one time in nature or made available on a per month rental basis.

Reimbursement for this service will be made only for modification and equipment, which are not currently available under the Vermont State Medicaid Plan. Eligible items may include, but are not limited to, the following:

- Durable Medical Equipment (e.g., Touch Talkers, shower commode chairs)
- Safety devices (e.g., grab bars, intercom systems, motion detectors)
- Physical endurance equipment as prescribed by physician under supervision of an appropriate therapeutic discipline (e.g., weights, stair-stepper, small exercise equipment), tape recorder and tape, alarm clock.
- Accessibility and memory devices and equipment (e.g., ramps, grab bars, tape recorders, alarm clocks, other home modifications)

Standards:

1. Home modification will be in accordance with state and local building codes. All accessibility renovations will meet the requirements of the Federal and Vermont Fair Housing Act Guidelines and the Americans with Disabilities Accessibility Guidelines.
2. Prior authorization is required from the TBI Program Supervisor or their designee.
3. A prior authorization request must originate from the TBI Provider Agency, and should include but not limited to:
 - Consumer name
 - Description of modification / equipment / service requested, e.g.; brochure
 - Purpose
 - Cost
 - Length of service/support

**State of Vermont
Adult Services Division
TBI Program**

CRISIS SUPPORT

Program Description:

Crisis Support is an array of services and supports short-term in nature that assist a consumer to resolve a severe behavioral or emotional crisis safely in their community. This system includes 24-hour professional one-on-one support staffing and case management services.

Standards:

1. Professional one-on-one-support and 24-hour staffing and case management services is provided by trained Life Skills Aides and Case Managers (see TBI Program Job Descriptions), or other professionals trained in TBI, and behavioral management issues. Crisis Support is developed and managed by case managers and oversight and consultation by a physician or a psychiatrist.
2. Provider Agencies may contract with other appropriate agencies to provide Crisis Support such as mental health providers.
3. Crisis Support is not provided in hospital or institutional settings such as skilled nursing facilities.
4. Prior authorization is required for utilization of this service. If the TBI Program Manager or their designee is unavailable, up to 2 days of support will be approved if ordered by a physician. All preceding days will require authorization from the TBI Program Manager or their designee. The TBI Program Manager or their designee must be notified as soon as possible of the use of this service.
5. Prior authorization request must originate from the TBI Provider Agency and should include but is not limited to:
 - Provider of Crisis Support
 - Consumer
 - General description of the crisis
 - Management plan
 - Place of support
 - Number of days requested

**State of Vermont
Division of Disability and Aging Services
TBI Program**

RESPIRE

Description:

Contracted Community Support Providers that provide 24-hour care and supervision to a consumer are eligible to receive respite services to maximize the effectiveness of the residential placement.

Standards:

1. Payment will not be made for services furnished by the consumer's parent, step-parent or adoptive parent; by the consumer's spouse, domestic partner or legal guardian; or by siblings under the age of eighteen (18).
2. Respite is provided through the Provider Agency. Individuals providing respite services must complete the TBI pre-service training, have prior experience working with individuals with traumatic brain injury, or experience working with individuals with other cognitive, physical and behavioral difficulties.
3. Primary caregivers are expected to utilize two days of respite per month.
4. Respite maybe provided in the individual's home or place of residence, private home of a respite caregiver, a foster home, or other non-institutional location. Provider agency should ensure the safety and accessibility of the respite home.
5. All respite workers must go through the appropriate background checks. See Section X Appendix – Background Check Policy.

**State of Vermont
Adult Services Division
TBI Program**

PSYCHOLOGY & COUNSELING SUPPORTS

Program Description:

This support specifically provides intensive one-on-one counseling, evaluation, monitoring, support, and medication review and instruction. This service is provided by individuals licensed as a psychiatrist, psychologist, and/or with a Masters degree in psychotherapy or counseling. All service providers must have experience and an expertise in traumatic brain injury.

Standard:

1. This service is provided by individuals licensed in Vermont as a psychiatrist, psychologist, and/or with a masters in psychotherapy or counseling.
2. All providers of Psychology & Counseling Supports must have documented experience and expertise in traumatic brain injury.
3. Prior authorization by the TBI Program Manager or their designee is required for utilization of this service.
4. Prior authorization request must originate from the TBI Provider Agency and should include but is not limited to:
 - Consumers name,
 - Purpose of support,
 - Frequency,
 - Documentation that other funding sources are unavailable,
 - Primary physician recommendation,
 - Qualifications of therapist to include:
 - Therapist name
 - Vermont license number/certification documentation
 - A summary of TBI experience & expertise

**State of Vermont
Adult Services Division
TBI Program**

EMPLOYMENT SUPPORT

Description:

Employment Support will assist the consumer to obtain and maintain employer paid competitive employment* in integrated work settings in his/her own community. Employment supports will be provided primarily by Life Skills Aides (LSAs) who have received Supported Employment training. Employment activities will include job coaching, on- and off-site support, and consultation with employers.

Standards:

1. In order to receive payment for Employment Support, the Provider Agency must receive prior approval from the TBI Program Manager or their designee.

The request will include:

- Consumer name
- Vocational Rehabilitation (VR) Counselor's contact information
- A written vocational plan or Vocational Rehabilitation Individualized Plan for Employment (IPE) developed in conjunction with rehabilitation team members, the consumer, his/her family, and a VR Counselor.

The plan will include:

- ◆ Job preferences
- ◆ Job site / situational assessments
- ◆ Medically related documentation / evaluations e.g.; neuropsychological, seating, mobility, augmentative communication, etc.
- ◆ Strategies for job development
- ◆ On- and off-site counseling and support needs
- ◆ Training needs (plans for incorporating natural supports and or long-term supports)
- ◆ Plans for fading paid support
- ◆ Long-term support plan (if applicable)

****Note**** Social Security consultation and training must be provided to the consumer and his/her family, as appropriate, during the development of the plan.

2. Persons who provide employment support must meet the LSA criteria and receive Supported Employment training. Additionally, agencies will ensure staff providing employment support will receive appropriate vocational and supported employment training.

3. The LSA will be hired, trained, supervised, and paid by the Provider Agency.
4. The Provider Agency must provide or coordinate transportation to all necessary appointments and employment activities as identified in the vocational plan.
5. Employment Support funds will not be approved for incentive payments, subsidies or unrelated vocational training expenses such as:
 - Incentive payments made to an employer to encourage or subsidize employer's participation in a supported employment program.
 - Payments that are passed through to individuals receiving work supports.
 - Payments for vocational training that are not directly related to an individual's work supports.
 - Payments for supports provided in sheltered workshop work environments (those group activities requiring a sheltered workshop and/or work activity certificate).
 - Payments for supports provided in segregated work crews designed specifically for people with disabilities, even if these crews operate in the community.

Key Definitions in the amended Federal Regulations:

***Competitive Employment:** Employment must provide full-time or part-time work. Hourly goals for weekly employment are determined on an individual basis. The person with a disability in supported employment must be paid wages on a basis consistent with wages paid to non-disabled workers with similar job functions and must be made in accordance with the Fair Labor Standards Act.

Individualized goals for hours of weekly employment must be established and gradually increased as a component of the Individualized Plan for Employment (IPE).

**State of Vermont
Adult Services Division
TBI Program**

ALL INCLUSIVE DAILY RATE

Description:

The TBI daily rate is an all inclusive rate that combines all of the standard TBI services. Services include:

- Case Management
- Rehabilitation
- Community Support
- Respite
- Environmental & Assistive Technology
- Psychology Supports
- Employment Supports

The daily rate does NOT include crisis supports.

This does NOT affect Room & Board, person spending allowances or additional transportation expenses.

Standards:

The Daily Rate is an all inclusive daily rate that combines all the standard TBI services and allows the provider more flexibility. The TBI Program Manager has the authority to determine which program (daily rate or standard services) is most appropriate, given individual medical or behavioral challenges.

Providers must continue to maintain all required documentation for services that are being provided.

The all inclusive daily rate is determined on an individual basis as described below. The chosen Provider Agency will develop an individualized budget utilizing the TBI All Inclusive Daily Rate Request Form located in Section IV.

The individualized budget will address the consumer's needs and strengths identified through the needs assessments and the clinical assessments, and will reflect supports and services provided by unpaid, natural supports and other providers, and will take into account any existing contract for care.

The care plan should reflect *all* services, but ASD will pay only for those which are not otherwise paid for.

ASD may grant, reduce, change or decline to fund a daily rate plan / proposal, or send it back for further consideration.

**State of Vermont
Adult Services Division
TBI Program**

Section VI: DOCUMENTATION TO BE SUBMITTED TO TBI PROGRAM

1. TBI Independent Living Assessment
 - Initial – due within 30 days of admission to program
 - Revisions – every 6 months for Rehabilitation consumers; Annually for Long term consumers (or more frequently as needed)
 - *Signatures not required for submission to TBI Program. Please keep signatures on file at Provider Agency.*
2. Home Evaluation in accordance with ASD Procedure
 - Required for unlicensed placements
 - Required when individuals receive community funding
3. TBI Service Plan
 - Initial – due within 30 days of admission to program
 - Revisions – every 6 months from Start Date for Rehabilitation consumers; Annually for Long term consumers (or more frequently as needed)
 - *Signatures not required for submission to TBI Program. Please keep signatures on file at Provider Agency.*
4. Care Plan
 - While there is no action required on this form any errors or concerns must be reported to the TBI Program Manager immediately
 -
5. TBI Evaluation
 - Required every 3 months from start date for Rehabilitation consumers and every 6 months for Long term consumers
 - *Signatures not required for submission to TBI Program. Please keep signatures on file at Provider Agency.*
6. Continued Eligibility Review
 - Required every 6 months for Rehabilitation consumers and once a year for Long term consumers
 - Assessments required 1.) TBI Independent Living Assessment; 2.) TBI Service Plan; 3.) TBI Evaluation
 - Continued Eligibility Review (CER) Assessments are due on the 1st of the month. Plans of Care expire at the end of the prior month and cannot be renewed until CER Assessments are submitted for review
 - *Signatures not required for submission to TBI Program. Please keep signatures on file at Provider Agency.*

**State of Vermont
Adult Services Division
TBI Program**

TBI EVALUATION

Purpose:

To evaluate the consumer's progress from the day of admission in all areas of the rehabilitation program. For rehabilitation consumers, the evaluation is completed every three months; for long-term consumers, the evaluation is completed semi-annually. The evaluation must be completed by the case manager assigned to the recipient and will be utilized by the Admission/Discharge Committee in determining eligibility for continuation in the program. The evaluation is also utilized for ongoing program development.

Headings:

Recipient data

Case Manager:

The staff person responsible for consumer's program. If there is a case manager change, you must explain the reason why and how familiar you are with the consumer and their program. In order to have consistent evaluations, it is important for the same person to complete each of the evaluations.

Present address:

Where the recipient is residing while in the program. This may not be where he/she used to live or where they intend to live in the future.

Evaluation process:

All areas for evaluation are the same as identified on the Life Skills Aides Reports and TBI Independent Living Assessment (ILA).

In order to complete this process, a review of the Life Skills Aides Reports for the previous quarter and the previous TBI ILA is necessary. If the previous TBI ILA was completed by the discharging facility, use this ILA.

Areas to be evaluated:

There are three sections to each element.

Section A: Status upon admission: (Identify the client's status in this area and related problems he/she may have as a result of the TBI *To be completed for initial evaluation and then to remain without changes for all future evaluations.*)

Section B: Current Program: (Identify the specific activities/goals in the recipients' plan, the intensity of the activity, and by whom – with or without support or 1:1 activity with cuing.)

Section C: Future Program: (This section briefly describes the anticipated changes and future program goals when current goals listed in Section B are met.)

The scale relates to the measurement tool for progress scale, which includes cognitive functioning from 1 through 8. Usually areas 3 and 4 are where the recipient is cognitively, meaning how able they are in responding to verbal or written cues and retaining some of the instructions, depending on short-term memory loss. Refer to the attached measurement tool for progress scale. This progress scale is explained in Section VI, "Progress Scale", of the Provider Manual.

In some areas you may see little or no progress. The scale may show movement from 4 to 5 or no movement at all. In some cases, a loss of progress may occur. In each area, circle the number the client received on the previous evaluation, with an arrow directing to the newly circled number for current report period.

As conditions improve, services in some areas may no longer be necessary or a recipient may have reached a plateau where progress is no longer possible. Once a recipient reaches 7 –8 on the measurement tool for progress, it is an indication that the recipient most likely does not need services in this area anymore.

Please follow the above process for each area of evaluation in the TBI Evaluation. There is a scale to report the status as of the previous evaluation another scale to report the status as of the current evaluation.

Submission:

It is required that you electronically submit these assessments. The assessment format is available in the TBI SAMS database. You must submit these assessments via the TBI database. These assessments must be submitted by the 1st of the month following the period for which they are reporting.

****Failure to adhere to these procedures will result in delay of reimbursement for services provided.**

See Appendix for a sample SAMS TBI Evaluation.

**State of Vermont
Division of Disability and Aging Services
TBI Program**

PROGRESS SCALE

Individuals with a brain injury go through several stages of recovery. However, each person is unique and will go through the stages at different rates. Some individuals may skip or repeat stages, or remain in one level.

The following progress scale is to be utilized when completing the TBI Evaluation on each consumer. Each individual area should be evaluated using this measurement tool remembering that all areas will not fall within the same measurement or may only show minimal progress while other areas will identify significant progress.

This measurement tool will be utilized for admission into the program and determining ongoing eligibility.

Level 1: No response

Recipient appears to be in a deep sleep and is completely unresponsive to any stimulation presented such as pain, touch, sound or sight. Client does not communicate. Totally dependent in all care including nutrition. Bed or chair confined. Recipients in this level would not be able to benefit from rehabilitation services due to lack of all cognitive function.

Characteristics

- No response.
- No memory.
- No communication.
- No generalized response to any social behavior.
- No generalized response to self-care.

Level 2: Generalized Response

Recipient reacts inconsistently and non-purposefully to stimuli in a non-specific manner. Responses have no purpose. Usually only responds to deep pain or intense stimuli. Response may be physiological changes, random vocalization, crying, or large body movements. Totally dependent in all care including nutrition. Bed or chair confined. Recipients at this level may be demonstrating some changes, but cognitive function is still so severely impaired that intensive rehabilitation services would not be successful or beneficial.

Characteristics

- Inconsistently responds to noxious stimuli with random vowel sounds or crying.
- Memory – none.

- Communication – none.
- No generalized response to any social behavior.
- No generalized response to self-care.

Level 3: Localized Response

Responds to physical discomfort and pulls on tubes, may take small amounts orally. May recognize family or friends. Usually non-ambulatory. Dependent in all activities of daily living.

Recipient reacts specifically but inconsistently to stimuli. Responses are directly related to the type of stimulus presented, as in turning head toward a sound or focusing on an object presented. The recipient may withdraw an extremity and/or vocalize when presented with a painful stimulus. Simple commands may be followed in an inconsistent, delayed manner, such as closing the eyes, squeezing something or extending an extremity. Once external stimuli are removed, he/she may lie quietly. A vague awareness of self and body may be shown by responding to discomfort—pulling at naso-gastric tube or catheter or resisting restraints. A bias toward responding to some persons (especially family, friends) but not to others may be present.

Characteristics

- Responds to social stimuli, e.g., turns towards noises, makes eye contact.
- Occasionally responds with bias to familiar person or objects.
- Inconsistently follows simple commands, e.g., close your eyes, squeeze my hand.
- Spontaneous automatic verbal and gestured responses, e.g., waves hello/goodbye, reaches for food.
- Single word expression (yes/no).
- Responds to social stimuli and communicates within functional limitations, e.g., eye contact, turns toward voice, vocalizes at person.
- Occasionally eats finger foods.

Level 4: Confused-Agitated

May complete single step tasks, but inconsistently. Misnames objects, but may identify shapes and letters. May walk aimlessly. Recipient is in a heightened state of activity with severely decreased ability to process information. Behavior is frequently bizarre and non-purposeful relative to his immediate environment. Crying out or screaming out of proportion to stimuli even after removal is not uncommon, as is aggressive behavior, attempts to remove restraints or tubes or to crawl out of bed in a purposeful manner. Recipient does not, however, discriminate among persons or objects and is unable to cooperate directly with treatment efforts. Verbalization is frequently incoherent and/or inappropriate to the environment. Confabulation may be present, and he/she may be euphoric or hostile. Recipient lacks short-term recall and may be reacting to past events. Recipient is unable to perform self-care (feeding, dressing) without maximum assistance or cuing. If not disabled physically, he/she may perform motor activities such as sitting, reaching, and ambulating, but as part of this agitated state and not as a purposeful act or

on request.

Characteristics

- Inconsistently completes single step task with cuing.
- Oriented to person.
- Usually responds with bias to familiar person or object, recognizes shapes and letters.
- Inaccurately sequences two-step commands (e.g. touch the cup and pick up the pencil).
- Speech is inappropriate and unintelligible.
- Misnames objects or activities.
- Usually aggressive and resistant behavior, e.g. screaming, hitting, crying, withdrawing.
- Inconsistent compliance with activities, better with familiar people.
- Eats finger foods, occasionally uses fork or spoon, drinks with a straw.
- Usually initiates upper body dressing and bathing (sponge), needs assistance to complete.

Level 5: Confused, Inappropriate, Non-Agitated

Recipient appears alert and is able to respond to simple commands fairly consistently. With increased complexity of commands or lack of any external structure, responses are non-purposeful, random, or at best, fragmented toward any desired goal. Agitated behavior, a result of external stimuli, is usually out of proportion to the stimulus. Recipient shows gross attention to the environment, but is easily distracted and lacks ability to focus attention to a specific task without frequent redirection back to it. With structure, he/she may be able to converse on a social-automatic level for short periods of time. Verbalization is often inappropriate; confabulation may be triggered by present events. Memory is severely impaired, with confusion of past and present in reaction to ongoing activity. Recipient lacks initiation of functional tasks and often shows inappropriate use of objects without external direction. Recipient may be able to perform previously learned tasks when structured, but is unable to learn new information. Individual responds best to self, body, conform and often, family members. Self-care activities can usually be performed with assistance, and feeding can often be accomplished with maximum supervision. Management is often a problem if the recipient is physically mobile, as he/she may wander off either randomly or with the vague intention to "going home." Recognizes need to use toilet.

Characteristics

- Completes single step task with cuing.
- Recalls over learned behavioral sequencing, e.g., tooth brushing, feeding, dressing.
- Responds to sequencing two-step commands, e.g., put the toothpaste on brush and brush teeth.
- Understands phrases and short sentences.

- Speech is appropriate to stimuli, e.g., answers questions.
- Occasionally names objects with activities correctly when stimulus is present.
- Can copy single words.
- Occasionally aggressive and resistant.
- Usually complies with activities.
- Usually stops an inappropriate behavior if corrected, but will not retain correction.
- Greets other people and says thank you.
- Feeds self with adaptive equipment and supervision.
- Initiates and partially completes upper body dressing and bathing, needs assistance to complete.
- Recognizes need to use toilet, frequently incontinent.

Level 6: Confused –Appropriate

Recipient shows goal-directed behavior, but is dependent on external input for direction. Response to discomfort is appropriate, and he/she is able to tolerate unpleasant stimuli when need is explained. Simple directions are followed consistently and carryover for tasks he/she has relearned (in self-care) is shown. Individual is at least supervised with old learning; may be unable or need maximum assistance with new learning with little or no carryover. Responses may be incorrect, due to memory problems, but are appropriate to the situation. Responses may range from being delayed to immediate, showing decreased ability to process information with little or no anticipation or prediction of events. Past memories show more depth and entail than recent memory. The realizing he/she doesn't know an answer and can ask for assistance. He/she no longer wanders and is inconsistently oriented to time and place. Selective attention to tasks may be impaired, especially with difficult tasks and in unstructured setting, but is now functional for common daily activities (30 minutes, with structure). Increased awareness of self, family and basic needs (as food) may be shown.

Characteristics

- Completes single step task with directions given once, no cuing.
- Completes multi-step task with no cuing.
- Inconsistent self-correction.
- Inconsistently recalls basic personal information, e.g., occupation, location of home, current place, names of family members.
- Recalls names of staff.
- Recalls information immediately after presented, e.g., lists three objects.
- Understand the written language at short sentence or phrase level, e.g., reads menu.
- Understands and completes spoken multi-step task, e.g., get dressed and go to lunch.
- Writes sentences.
- Uses gestured expression.
- Names objects or activities correctly when stimulus is present.

- Appropriately requests assistance from others. Occasionally initiates conversation.
- Consistent compliance with activities.
- Occasionally needs supervision for feeding.
- Completes most of upper body dressing and bathing, needs assistance to complete, e.g., with fasteners, positioning clothing.
- Initiates and partially completes lower body dressing and bathing, needs assistance to complete, e.g., helps get pants over hips. Occasional incontinence.

Level 7: Automatic-Appropriate

Recipient appears appropriate and oriented within hospital and home settings, goes through daily routine automatically, but frequently robot-like. There is minimal-to-absent confusion, but shallow recall of what he/she has been doing. There may be increased awareness of self, body, family, foods, people and interaction in the environment. The recipient may show superficial awareness of, but lack of insight into condition, along with decreased judgment and problem-solving, and a lack of realistic planning for the future. Carryover for new learning is present, but at a decreased rate. Minimal supervision for learning and for safety purposes is required. The individual is independent in self-care activities and supervised in home and community skills for safety. With structure, he/she is able to initiate social or recreational activities if there is an interest. Judgment remains impaired, such that he/she is unable to drive a car. Pre-vocational or a vocational evaluation and counseling may be indicated.

Characteristics

- Completes familiar multi-step tasks with directions given once, no cuing.
- Consistent self-correction.
- Recalls details of personal history, e.g., activities of former job, marriage, history of academics, performance, hobbies.
- Recalls activities of previous day, e.g., schedule of appointments, activities in therapies.
- Inconsistently performs recently learned multi-step task.
- Recalls information presented after a short delay, e.g., three objects recalled after 10 minute second delay.
- Understands writing and spoken information in short paragraphs.
- Word retrieval without stimulus.
- Length of utterance and gestured expression approximate normal.
- Writes short paragraph.
- Comments with cuing about topics of personal interest (egocentric) outside of present situation.
- Initiates conversation.
- Occasionally offers assistance to others.
- Independent for feeding.
- Independent for upper body dressing and bathing.

Level 8: Purposeful and Appropriate

Recipient is alert and oriented, able to recall and integrate past and recent events, and is aware of and responsive to culture. Carryover for new learning is present if acceptable in new life role, and no supervision is needed once activities are learned.

Characteristics

- Shifts attention from one familiar multi-step task to another without cuing.
- Attends to unrelated stimuli while maintaining attention to primary stimulus.
- Performs recently learned multi-step task.
- Recalls information presented after a long delay, e.g., three objects recalled after 5 minutes' delay.
- Understand information in short stories.
- Writes related paragraphs.
- Converses about topics beyond self without cuing.
- Responds to criticism by actively attempting to change his/her behavior.
- Seeks out involvement with other people
- Maintains relationships with other people
- Completes all of lower body dressing and bathing.
- Occasionally needs assistance in activities of daily living.
- Continent.
- Independent for feeding, dressing, bathing and toileting.
- Within physical capabilities, the individual is independent in home and community skills, including driving.
- Vocational rehabilitation, to determine ability to return as a contributor to society (perhaps in a new capacity), is indicated.
- The recipient may continue to show a decreased ability, relative to pre-morbid abilities, in abstract reasoning, tolerance for stress, judgment in emergencies or unusual circumstances.
- Although functional in society, social, emotional and intellectual capacities may continue to be at a decreased level.

Some information taken from Professional Staff Association, Rancho Los Amigos Hospital Inc., Downey, CA: Authors: Chris Hagen, Ph.D., Danese Malkmus, M.A. & Patricia Durham, M.S. Some information taken from injury recover scale developed by L. Brier, C. Green & J. Rosen at the Rehabilitation Medicine Unit, Medical Center Hospital of Vermont.

**State of Vermont
Adult Services Division
TBI Program**

PROGRESS SCALE

Purpose:

To identify individual strengths, weaknesses, and progress in behavioral, cognitive, emotional, and / or physical functioning.

Utilization:

Used specifically in completing the TBI ILA, Life Skills Aide Report, and TBI Evaluation. This information will provide the basis for developing and evaluating the TBI Service Plan.

<u>Individual Response</u>	<u>Score**</u>
Unable to perform	1 – 2
Severe difficulty	3 – 4
Needs assistance or cueing	5 – 6
Independent	7 – 8

** A range provides flexibility in evaluating the consumer's progress and is measured in whole numbers.

**State of Vermont
Adult Services Division
TBI Program**

PROCEDURES FOR COMPLETING TBI INDEPENDENT LIVING ASSESSMENT

Purpose:

This form is used to evaluate the consumer's functional, cognitive, and behavioral deficits soon after the accident and as an on-going evaluation of his/her rehabilitation status.

The results of this evaluation will be used in determining eligibility for the TBI Program and confirming eligibility depending on the recipient's progress or lack of progress.

The evaluations will identify strengths and deficits in specific areas and will be used by case managers in developing a TBI Service Plan. The TBI Service Plan will be developed based on the consumer's deficits and intensity of the program required. Evaluations will be required bi-annually for rehabilitation consumers and annually for long term consumers and should be utilized in filling out the consumer's TBI Evaluation.

Procedures:

The following procedures should be used by all individuals who complete this form regardless of where the recipient is residing.

1. The form is to be completed by the consumer's case manager with input from other team members and/or consultants of the team.
2. The keys used to evaluate each area are self-explanatory. In some instances, a consumer in one specific area may vary from "unable to perform" to be "independent." Notes assist Case Managers when utilizing this form in the development of the care plan. Please make comments as necessary in the notes section of SAMS TBI Independent Living Assessment (ILA).
3. All long-term care rehabilitation facilities and acute rehabilitation facilities are required to complete this form before discharge back to the community. The case manager should obtain a copy of this document at the time of discharge, which will be needed for developing the initial TBI Service Plan and first TBI Evaluation.
4. The case manager is required to complete the first TBI ILA within 30 days after admission into the program and every six months for rehabilitation consumers and annually for long term consumers.

See Appendix for a sample SAMS TBI Independent Living Assessment.

**State of Vermont
Division of Disability and Aging Services
TBI Program**

PROCEDURES FOR COMPLETING TBI SERVICE PLAN

Purpose:

To develop a service plan, created by the consumer and treatment team that delineates the services the consumer is eligible to receive under the TBI Program. This service plan includes an outline of the client summary, funded services, safety precautions, medications, long term outcomes, and goals and outcomes. This is a living document that must be updated as changes occur. The TBI Service Plan must be submitted within 30 days of the program initiation and updated annually for long-term consumers or every six -months for rehabilitation consumers.

Headings:

Recipient data

Annual Physical Exam:

An annual physical exam is required for all individuals receiving TBI Program Services, unless otherwise documented, in writing, by the primary care physician. Monitoring and follow-up to the physician's recommendations is the responsibility of the TBI provider. Only a notation of the date of the annual physical exam is required for the TBI Service Plan.

Dental Exam:

The American Dental Association recommends semi-annual dental cleanings and exams. In certain situations, an individual's dentist may specify a different frequency i.e., more or less frequently. Monitoring and follow-up to the Dentist's recommendations is the responsibility of the TBI provider. Only a notation of the date of the annual dental exam is required for the TBI Service Plan.

Vision Exam:

It is recommended that individuals receive a comprehensive eye exam following any injury. Monitoring and follow-up to the Ophthalmologist's recommendations is the responsibility of the TBI provider. Only a notation of the date of the annual vision exam is required for the TBI Service Plan.

Immunizations (Tetanus):

Dates of Tetanus Immunizations should be maintained in the TBI providers' files.

Client Summary:

This section should include a narrative of the individual's strengths and challenges, current environment, natural supports available, and any other pertinent information regarding the individual that the TBI Program should consider.

Funded Services:

Check off the areas of service that are *currently being funded* by the TBI Program.

Other Services:

List additional services (private or publicly funded) outside of the TBI Program Services that the individual is receiving. Examples: counseling, medication management, Alcoholics Anonymous, and therapies, such as physical therapy, occupational therapy, or speech language therapy.

Safety Precautions / Functional Activity:

Check off relative precautions listed on form. Fill in blanks where appropriate.

Diagnoses:

Describe other co-occurring medical and psychological issues. Examples: seizure disorder, manic depression, bi-polar, high blood pressure, diabetes, etc.

Medications and Dosage:

List all medications, dosages, purpose for taking the medication, and prescribing physician.

Allergies:

List all allergies that the individual may have. Examples could include, but is not limited to: medication allergies, bee stings allergies, food allergies, mold and dust allergies, and seasonal allergies.

Advanced Directives

Check off appropriate box.

Diet / Nutrition Needs:

Describe special diet or food intake restrictions. Examples: must follow diabetic diet, tube feeding requirements, thickened liquids, etc.

Long Term Outcomes:

Describe the specific goals that the consumer will work on for each outcome. This should be used in conjunction with the TBI ILA. All areas need to be addressed and should be based around the consumer's abilities, unless a consumer is fully independent within a specific outcome.

Discharge Plan:

Describe the long-term discharge plan in detail.

Consumer Input:

Include the consumer's input. This could include the consumer's personal thoughts on the plan or preferences.

See appendix for sample SAMS TBI Service Plan.

**State of Vermont
Adult Services Division
TBI Program**

PROCEDURES FOR COMPLETING THE CARE PLAN

Purpose:

This form is utilized to establish initial and ongoing service requirements for the recipient. The TBI Program Supervisor or designee when appropriate will complete this form and send it to the Provider Agency via the TBI SAMS database. The Provider Agency will be required to acknowledge receipt of the Care Plan via the TBI database Activities and Referrals Alert system.

The Care Plan will be revised or extended every six (6) months or as needed utilizing the above process. For long term clients, the Care Plan will be revised or extended every (12) months or as needed utilizing the above process.

Procedure:

Care Plan is generated by the TBI Program Manager or designee and will include hours and units approved, cost per units, and total cost per month.

Prior Approval:

If the individual requires Crisis Support, Psychological & Counseling Supports, Employment Support or Environmental & Assistive Technology, the Case Manager will be required to submit a written request for these services to the TBI Program Manager. Crisis Support, Psychological & Counseling Services, Employment Support, and Environmental & Assistive Technology are pre-authorization services only.

NOTE:

- Failure to adhere to these procedures will result in a delay in reimbursement
- In the event that Employment Support is not fully utilized, the difference in hours may be used through rehabilitation services with written justification and upon State approval.

Right to Appeal: check for the latest version

The approved service plan includes the amount of time and list of services recipients are eligible to receive. Recipients may appeal this decision. If you wish to appeal, you must do so within 90 days of the postmark date of this notice. To appeal, write to the Commissioner's Office, 280 State Drive HC-2 South, Waterbury VT 05671-2020 or call 802-241-2401. You may also call toll-free at 1-800-250-8427 and ask to be transferred to the TBI Program.

You may also request a fair hearing from the Human Services Board by writing the Human Services Board, 120 State Street, Montpelier, VT 05620-4301. If you wish to request a Fair Hearing, you must write to the Human Services Board within 90 days of the postmark date of the notice or within 30 days of the Commissioner's review.

**State of Vermont
Adult Services Division
TBI Program**

**TBI ALL INCLUSIVE DAILY RATE
REQUEST FORM**

Purpose:

This form is used by the provider to

Procedure:

The Daily Rate is an all-inclusive daily rate that combines all the standard TBI services and allows the provider more flexibility. The TBI Program Manager has the authority to determine which program (daily rate or standard services) is most appropriate, given individual medical or behavioral challenges.

Providers should continue to maintain all required documentation for services that are being provided.

The all-inclusive daily rate is determined on an individual basis as described below. The chosen provider agency will develop an individualized budget utilizing the TBI All Inclusive Daily Rate Request Form located in Section VI.

The individualized budget will address the person's needs and strengths identified through the needs assessments and the clinical assessments, and will reflect supports and services provided by unpaid, natural supports and other providers, and will take into account any existing contract for care.

The care plan should reflect *all* services, but ASD will pay only for those which are not otherwise paid for.

ASD may grant, reduce, change or decline to fund a daily rate plan / proposal, or send it back for further consideration.

**TBI ALL INCULSIVE DAILY RATE
REQUEST FORM**

Consumers Name: _____ ☐ Long Term ☐ Rehab ☐ Mental Health

Provider: _____ ☐ Initial Assessment ☐ Reassessment ☐ Change

Start Date: _____ Requested Start Date: _____

Service	Hours of Service Requested	Rate Requested	Cost/Month
☐ Case Management			
☐ Rehabilitation (LSA)			
☐ Community Supports			
☐ Respite			
☐ Psychology Support			
☐ Employment Support			
☐ Assistive Technology			
Total Monthly Cost			\$

Special circumstances:

Service Plan Changes:

Case Managers Name / Print

Agency

Phone #

Case Manager Signature

Date

Revision Date:06/24/16

**State of Vermont
Adult Services Division
TBI Program**

Section VII: DOCUMENTATION TO BE KEPT ON FILE WITH PROVIDER AGENCY

1. Life Skills Aide Report
 - Tracks activities and progress
 - Providers may choose to use either the LSA Daily Report or the LSA Weekly Report
2. Case Management Reporting Log
 - Substantiates hours billed
 - Serves as record of activities
3. Care Conference Minutes with appropriate signatures
 - Documents results of monthly team meetings
4. A weekly activities schedule
 - Promotes independence
 - Provides consistency and structure
5. Admission / Transfer / Discharge Checklist
 - Required to be completed when transitioning a consumer to another program.

**State of Vermont
Adult Services Division
TBI Program**

PROCEDURES FOR COMPLETING DAILY LIFE SKILLS AIDE REPORT

When this form is used over a significant period of time it will substantiate the consumer's progress or lack of progress and the development of future program planning by case managers.

When consumers have behavioral issues it is important to describe what was happening at the time of the inappropriate behavior in detail. This is useful in developing strategies on how to assist the recipient in developing coping skills in stressful situations.

A copy of these reports must be kept on file in the consumer's record for review by the State upon request.

Life Skills Aide:

Name of the Life Skills Aide working with the consumer.

Provider Agency Name:

List the Name of the agency providing services.

Consumer's Name:

List the consumer's name

Date of Service:

Indicate the day you work with the consumer in the community.

Independent Living / Community Re-entry Skills Guidelines:

Rate all areas for each day and the total hours spent with the recipient. Once an area is identified for the day's activity, then the comments/narrative section needs to specifically describe what the activity was and the results/progress.

Narrative:

Use this section to describe the specific tasks or activities and the results for that day.

Comments:

This section is designed to report any significant progress, challenges, and observations related to that activity.

**State of Vermont
Adult Services Division
TBI Program**

DAILY LIFE SKILLS AIDE REPORT

Life Skills Aide: _____

Provider Agency: _____

Consumer's Name: _____

Date of Service: _____

Independent living / community re-entry skills focused on (enter the results/progress number code for each applicable area):

1 – 2	Unable to Perform	3 – 4	Severe Difficulty
5 – 6	Needs Assistance or Cueing	7 – 8	Independent
9	Not applicable		

_____ Physical Development & Mobility
_____ Communication / Cognitive Skills
_____ Eating Behaviors
_____ Food Preparation / Cooking
_____ Personal Hygiene / Grooming
_____ Health / Safety
_____ Other, please describe:

_____ Social Behavior / Leisure Time
_____ ADL's and Household Chores
_____ Budgeting & Numerical Skills
_____ Transportation & Travel
_____ Vocational Skills

Narrative - description of activity:

Comments: (use back of form or additional paper for additional comments or suggestions)

**State of Vermont
Division of Disability and Aging Services
TBI Program**

PROCEDURES FOR COMPLETING DAILY LIFE SKILLS AIDE REPORT

Purpose:

When this form is used over a significant period of time it will substantiate the consumer's level of progress and lend guidance to development of future program planning by the case manager and the individual receiving services. Additionally, this form can be used as a quick reference tool to determine: program goals to work on, consumer progress, commentary for effective rehabilitation strategies or problematic behaviors that occur, and to maintain continuity of daily rehabilitation programming.

It is important for Life Skills Aides to accurately describe their observations each day. This information will be key in developing the consumer's TBI Evaluation.

When consumers exhibit behavioral challenges, it is important to describe the ABCs:

A - Antecedent, what was happening prior to the behavior?

B - Behavior, describe the behavior itself. What actually occurred?

C - Consequence, what needed to be put in place to stop the undesired behavior?

Describing the ABC's will help the case manager and rehabilitation team develop a consistent, structured program aimed at helping the consumer recover from his/her brain injury.

A copy of these reports must be kept on file in the consumer's record for review by the State upon request.

Recipients Name:

Write in the individual's name.

Life Skills Aide:

The Life Skills Aide writes in his/her initials in the appropriate day.

Provider Agency:

Write in the name of the agency providing services.

Week Services Provided:

List the range of dates covered on the report.

Goals/Activities to Track:

List a general description of the goals to be worked on for each of the areas of rehabilitation.

Tracking Progress:

For each day, score the individual's progress using the results/progress scale listed at

the bottom of the page. Be sure the score corresponds with the goals listed under the Goals/Activities to Track column.

Narrative Comments:

On the back side of the report write additional comments/observations under the appropriate day. Be sure to include enough information so another Life Skills Aide or Case Manager will understand the behavior or incident observed, successful strategies used or client's comments (if recorded).

**State of Vermont
Adult Services Division
TBI Program
LIFE SKILLS AIDE REPORT**

Life Skills Aide: **Monday:** **Tuesday:** **Wednesday:** **Thursday:** **Friday:** **Saturday:** **Sunday:**

Recipient's Name: _____

Provider Agency: Week Services Provided: to

GOALS/ ACTIVITIES TO TRACK:

Thursday Friday Sat/ Sunday Monday Tuesday Wednesday

Physical Development/Mobility:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Communication & Cognition:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Eating Behavior:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Meal prep/Cooking:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Personal Hygiene:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Social Behavior/Leisure skills:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.

Health and Safety:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Laundry/ Clothing Care/ Home Duties:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Independent Travel:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Vocational Skills:	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.	1. 2. 3.
Other:						

Results/progress: 1-2 – Unable to perform 3-4 -- Severe Difficulty 5-6 – Needs Assistance or Cuing
7-8-- Independent

Please make comments and document significant incidents from the week: (use back of form or additional paper for additional comments or suggestions if needed):

Monday—

Tuesday--

Wednesday--

Thursday--

Friday--

Saturday--

Sunday--

**State of Vermont
Adult Services Division
TBI Program**

PROCEDURES FOR COMPLETING CASE MANAGEMENT REPORTING LOG

Procedures:

This form is utilized in recording any activities involving case management services for which the program will be billed and provides an ongoing record of the amount of time and type of case management services required for each consumer.

It is expected that intensive services for new consumers may be required and a reduction of these intensive services for most consumers will happen as progress occurs. This monthly form should be kept with the case manager, and be available at the time a contact and service occurs for accurate reporting.

Case Manager:

The person responsible for the consumer's program in the reporting month. If someone else is filling in for the regular case manager, simply include their name and the date they started.

Date:

The day of the month the activities or telephone contact occurred.

Time:

Report time spent for each service (i.e., from 9:00 a.m. to 9:30 a.m.)

Type of Contact:

Type of contact to be reported may include, but is not limited to the following:

- Supervision of staff
- Developing daily activities schedule
- Budget management activities for each consumer
- Lengthy telephone calls involving the consumer's individualized programs or scheduling of appointments
- Monthly care conferences meeting
- Emergency situations/problem solving activities

Contact Results:

A summary of action resulting from the contact that was made.

Initials:

This is the initials of the case manager or individual who provided the service.

At the end of each month, this form must be filed in the consumer's record and made available for review upon request.

**State of Vermont
Adult Services Division
TBI Program**

CASE MANAGEMENT REPORTING LOG (SAMPLE)

Instructions: One form for each consumer is to be utilized monthly for documentation of the time spent in performing case management activities. The documentation in most instances can be brief or when necessary a separate sheet can be attached for a detailed report.

Consumer: _____

SSN: _____

Case Manager: _____

Provider Agency: _____

Date	Time Spent	Type of Contact	Contact Results	Initials

TOTAL TIME PER FORM: _____

**State of Vermont
Adult Services Division
TBI Program**

PROCEDURES FOR COMPLETING CARE CONFERENCE MINUTES

Purpose:

This form is utilized in recording Care Conference Team meetings and is meant only as an example of a document to be utilized by the Case Manager. The team will be comprised of the consumer, guardian, case manager, appropriate consultants, and caregivers. This may also include LSAs, educational personnel, TBI Program Manager, a Vocational Rehabilitation Counselor, primary care physician, physiatrist, therapist, and other professionals with expertise in traumatic brain injury. This team shall meet once a month or more often if deemed necessary. This is an opportunity for the members to discuss, review, and evaluate the plan of care, and establish goals for the next month.

It is the responsibility of the case manager to:

- Develop and schedule the team meetings
- Set the agenda, in consultation with the client and team members
- Establish roles, expectations, and functions of the team members
- Facilitate the discussion to include review and evaluation of the Care Plan and establish goals for the next month
- Distribute minutes of the meeting as requested by the members
- Direct, develop, implement, coordinate, supervise, and monitor the plan and goals as discussed by the team

Procedure:

Team meetings will be held and documented once a month or more frequently as deemed necessary. This document should include topics discussed, changes in the Care Plan, and goals for the following month. This record shall include the consumer's signature, which may result in changes in the TBI Service Plan. A copy of the team meeting minutes must be maintained by the Provider Agency and available on request by members of the team.

**State of Vermont
Adult Services Division
TBI Program**

CARE CONFERENCE MINUTES (SAMPLE)

Consumer: _____ **SSN:** _____

Location: _____

Present: _____

1. Case Management

2. Rehabilitation

3. Community Support

4. Respite

5. Environmental and Assistive Technology

6. Next Meeting

Signature: _____ Date: _____
Case Manager

Signature: _____ Date: _____
Consumer/Guardian

**State of Vermont
Adult Services Division
TBI Program**

PROCEDURES FOR COMPLETING A WEEKLY ACTIVITIES SCHEDULE

PURPOSE:

A schedule is necessary as an aid in assisting the individual in organizing their day. It promotes independence and is especially useful for those who experience short-term memory loss. This form is an example of a tool that can be used. Other examples that may be helpful include, but are not limited to: calendars, white boards, PDA's (Personal Data Assistant), etc. On a weekly basis, the consumer, with assistance from the Life Skills Aide (LSA), will develop an activity schedule. It should include appointments, leisure time, skill development activities, employment, etc. It should cover 24 hours/day, 7 days/week.

1. The schedule should be simple, basic and easily understood by the consumer and include his/her participation in the development. A copy must be available for the consumer.
2. Respite services as needed per the program limits are to be included in the weekly schedule. Respite services, when provided by family members, should also be identified on the recipient's weekly schedule.

*See attached copy of an example of a completed schedule.

**State of Vermont
Adult Services Division
TBI Program**

ACTIVITIES SCHEDULE CLIENT / LIFE SKILLS AIDE (SAMPLE)

CONSUMER NAME: _____

I.D. # _____

CAREGIVER: _____

TELEPHONE: _____

AGENCY: _____

WEEK: FROM _____ TO _____

LSA = Life skills Aide

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
LSA: a.m.	LSA: a.m.	LSA: a.m.	LSA: a.m.	LSA: a.m.	LSA: a.m.	LSA: a.m.
LSA: p.m.	LSA: p.m.	LSA: p.m.	LSA: p.m.	LSA: p.m.	LSA: p.m.	LSA: p.m.
TOTAL HOURS:	TOTAL HOURS:	TOTAL HOURS:	TOTAL HOURS:	TOTAL HOURS:	TOTAL HOURS:	TOTAL HOURS:

LSA TOTAL HOURS FOR WEEK: _____

**State of Vermont
Adult Services Division
TBI Program**

ACTIVITIES SCHEDULE CLIENT / LIFE SKILLS AIDE

CONSUMER NAME: Mary Sunshine I.D. # 012-34-5678

CAREGIVER: Min E. Mouse TELEPHONE: (802) 911-0911 AGENCY: Happiness 4 U

WEEK: FROM: 05/06/07 TO: 05/12/07 LSA = Life skills Aide

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
LSA: a.m.	LSA: Lisa a.m. 8 - 12	LSA: Jim a.m. 8 - 1	LSA: Lisa a.m. 10 - 12	LSA: Jim a.m. 9 - 12	LSA: Lisa a.m. 8 - 12	LSA: a.m.
Respite ↓	7 - 8: ADL's 8: Breakfast with LSA 9:30: Pick up kitchen and room 10: work on weekly menu, grocery list 11:30 prepare lunch and pick up	→ → 9:30: Collect & sort laundry 10: grocery shop for week 12: bag lunch at Laundromat	→ → → 10: speech therapy 12: lunch out	→ → → 10: library 12: lunch out	→ → → 10: speech therapy 12: bag lunch	Respite with sister ↓
LSA: p.m.	LSA: Lisa p.m. 12 - 4	LSA: Joe p.m. 1 - 4	LSA: Lisa p.m. 12 - 4	LSA: Jim p.m. 12 - 4	LSA: Lisa p.m. 1 - 4	LSA: p.m.
6: Respite ends 6-9: Leisure time 9: bedtime & meds	1 - 4: attend gym 4: leisure time 5: supper guest, Goofy 7: Leisure time 8: snack →	1: cognitive activity (card games, crafts) 4: leisure 5 - 7: supper, news, 8: snack →	1: - 3: attend gym 3 - 5: math, reading, writing → → →	1: - 4: volunteer at food bank 4 - 5: leisure, 5 - 11: Go to local car races at track	1: - 3: attend gym 3 - 5: math, reading 5 - 9: rent movie, watch movie and popcorn	
TOTAL HOURS:	TOTAL HOURS: 8	TOTAL HOURS: 8	TOTAL HOURS: 6	TOTAL HOURS: 7	TOTAL HOURS: 8	TOTAL HOURS: 0

LSA TOTAL HOURS FOR WEEK: 37

**State of Vermont
Adult Services Division
TBI Program**

ADMISSION / TRANSFER / DISCHARGE CHECKLIST

Application Procedures Checklist:

- ☐ After going through application process, Individual gets approved for TBI Program and has Community or Long Term Medicaid
- ☐ Individual/Guardian is contacted by mail with list of potential Provider Agencies
- ☐ TBI Program Manager is notified with the agency of choice
- ☐ TBI Program staff will contact the provider of choice and will give the Provider Agency the option to agree to provide services or chose to pass
- ☐ If agency of choice chooses to pass, another agency can be selected
- ☐ If chosen agency agrees to provide services, the guardian / consumer / caregiver will be contacted and coordination and transition to the TBI Program will begin
- ☐ Team meeting occurs with TBI Program, referring provider, family, consumer, etc
- ☐ All pertinent releases are signed by guardian and medical records are sent
- ☐ Discharge plan developed to transfer consumer to TBI Program

The Transferring Provider Should Provide the Following:

- ☐ Info on pre-injury status (social history including substance abuse issues if pertinent, preferences, hobbies, interests) See back of form for more specifics
- ☐ Overview of current status and short and long term plans
- ☐ Any knowledge regarding history of outstanding offenses (if pertinent)
- ☐ Therapy (SLP, PT, OT, etc.) information, including current schedule, status, future recommendations, and referrals, if needed
- ☐ Medical appointments – dentist, eye doctor, etc., dates and locations of appointments, etc.
- ☐ Counseling referrals and recommendation information
- ☐ Name of doctors, phone numbers, and location of appointments
- ☐ Guardian contact information, phone number, best times to reach, etc.
- ☐ Medications with dosages and follow up for where to get prescriptions filled
- ☐ Vocational Rehabilitation referrals / transfers of cases to different location with counselor's name(s)
- ☐ Information on who will transfer belongings and transportation on day of transfer
- ☐ Review roles & clarify with family, provider, etc, (continue to follow up with family)
- ☐ Develop checklist for family (make sure that family is delegated specific responsibilities to keep them involved and to help empower!)
- ☐ Review schedule of weekly activities
- ☐ Medical documentation, past TBI ILAs, TBI Service Plans, etc. (if not transferring from another TBI provider, TBI Program staff will mail documentation)
- ☐ Schedule next team meeting
- ☐ A Discharge Summary (final TBI Evaluation with recommendations) will need to be sent to TBI Program staff and transferring provider when an individual is transferred to another provider or discharged from the program.

Listed below is some information on common Post TBI Health Issues to be aware of and for providers to gather/share information on. Please gather (if accepting someone into services) or provide (if transferring) information on all pertinent areas listed below for the future service provider.

Physical conditions the injury or accident such as:

- ☐ Impaired mobility- esp. balance issues
- ☐ Pain
- ☐ Seizures
- ☐ Shunts
- ☐ Sleep disturbances
- ☐ Spasticity
- ☐ Urinary incontinence
- ☐ Sensory deficits
- ☐ Impaired thermoregulation
- ☐ Skin and hair changes
- ☐ Arthritis
- ☐ Weight changes
- ☐ Thyroid conditions (in women)
- ☐ Sexual dysfunction
- ☐ Heterotopic ossification
- ☐ Bone and nerve injuries

Emotional and Mental Health issues:

- ☐ Grief
- ☐ Depression
- ☐ Substance abuse issues
- ☐ Behavior issues

Cognitive issues:

- ☐ Impaired short or long term memory
- ☐ Impaired attention and concentration
- ☐ Impaired executive functioning
- ☐ Impulsivity
- ☐ Disorientation
- ☐ Speech disturbances/ language deficits

**State of Vermont
Division of Disability and Aging Services
TBI Program**

MANDATED REPORTER PROTOCOL

Please refer to mandated reporter protocol located in Section X.

Substantiated occurrences are to be reported to TBI Program Manager or designee.

**State of Vermont
Adult Services Division
TBI Program**

Section VIII: TRAINING, OUTLINE & JOB DESCRIPTIONS

PRE SERVICE TRAINING COMPONENTS

Purpose: Traumatic Brain Injury Program pre-service training must be completed prior to working with individuals and should include the following components:

1. Normal Brain Function
2. Effects of damage to the brain due to TBI, i.e., physical problems, cognitive impairments, behavior disorders
3. Speech Therapy
 - a. Communication / cognition strategies / insight / judgment /problem solving
 - b. Linguistic functioning
 - c. Cognitive / memory retraining techniques
 - d. Executive functioning
4. Occupational Therapy
 - a. Pre-vocational activities
 - b. Budget / Money management
 - c. Independent living skills, i.e., money management, cooking, personal hygiene / safety in the home
 - d. Cuing techniques
 - e. Leisure skills
 - f. Implementation of a daily schedule
 - g. Community activities
 - h. Medication use / dispensing
5. Behavioral management
 - a. Sexual issues
 - b. Physically / verbally aggressive
 - c. Counseling
 - d. Client / family interactions
 - e. Emotional problems
 - f. Motivation / resistance / denial
 - g. Eating behavior
6. Physical Therapy
 - a. Physical development / mobility / safety and ambulation
 - b. Physical fitness / endurance / stamina
 - c. Equipment needs / Assistive Technology
7. Philosophy and goals of the Care Conference Team to assist TBI consumers to

achieve their maximum independence in the home and community through a rehabilitation program.

8. Administrative Component
 - a. Role clarification
 - b. Record keeping / documentation
 - c. Billable services / claims processing

Training Resources

The following resources are available for TBI pre-service training:

- PRIDE, Inc. – conducts TBI pre-service training on a quarterly basis. Contact the PRIDE, Inc. office at 802-479-5801 to find out the next training date.
- Michigan Brain Injury Association training – found online at the following website: <http://www.mitbitraining.org/>. Only modules 1 to 3.
- Division of Disability and Aging Services (DDAS) – has training materials available for loan and on our website. Contact the TBI Program at 802-241-1228. Available www.ddas.vermont.gov.
- Certification for Brain Injury Specialist – information is available at the following website: www.AACBIS.net.
- Annual Traumatic Brain Injury Conference and additional resources through the Brain Injury Association of Vermont. Information available at www.biavt.org or by calling 1-877-856-1772.
- It is recommended to provider agencies to develop their own TBI trainings and resource library.
- Webinars

**State of Vermont
Adult Services Division
TBI Program**

CASE MANAGER JOB DESCRIPTION

DEFINITION:

Secures, develops coordinates, evaluates and manages services for consumers. Supervises Life Skills Aide (LSA) in the community setting.

EXAMPLES OF WORK PERFORMED:

Develops and implements a variety of rehabilitation services for each consumer's TBI Program. Supervises and coordinates life skills aides in activities which promote and enhance independent living skills. Coordinates and assists with the development of ongoing program needs. Acts as a coordinator with the individual, family, schools, and other agencies. Schedules necessary care conferences and other appointments. Completes necessary written forms and documentation, and submits as required. Budget management to support rehabilitation in the community setting.

KNOWLEDGE, SKILLS AND ABILITIES REQUIRED:

- Considerable knowledge of traumatic brain injury models and service delivery programs.
- Working knowledge of casework principles and practices
- Working knowledge of resources available for TBI consumers
- Working knowledge of community resources and facilities
- Ability to communicate effectively, both orally and in writing
- Ability to establish and maintain effective working relationships
- Considerable knowledge of Medicaid services and other insurance programs
- Considerable knowledge of TBI Program requirements
- Considerable knowledge of relevant provider agency programs and statewide service delivery systems
- Ability to manage within budgetary limits
- Ability to act as an advocate or represent the needs of the individual with traumatic brain injury

ENVIRONMENTAL FACTORS:

Duties are performed primarily in a community setting. Travel will be necessary. A private means of transportation, a valid driver's license, and insurance are required. This position requires considerable human relation's skills and the ability to deal with people in very stressful situations. The nature of this position may require performance of duties outside of the normal workday and may include evenings and weekends.

MINIMUM QUALIFICATIONS FOR APPLICATION:

1. Case managers shall have a BS, BA or R.N.
2. Two-three years experience in community services
3. Knowledge, skills and abilities in working with traumatic brain injury

4. Completion of the TBI pre-service training.

On a case-by-case basis, the TBI Program Manager may approve staff to provide services when they have an equivalent combination of education, experience, and skill specific to working with individuals with TBI. The Provider Agency shall maintain documentation of the State's approval of such a variance.

**State of Vermont
Adult Services Division
TBI Program**

LIFE SKILLS AIDE JOB DESCRIPTION

DEFINITION:

Carries out specific rehabilitation programs identified in the TBI Service Plan under the supervision of the Provider Agency case manager. Requires working with consumers, one-to-one, focusing on independent living skills and re-integration into the community. Decision-making is normally limited to situations involving the consumer's specific program and/or established standards or policy.

EXAMPLES OF WORK PERFORMANCE:

Provides support and guidance as indicated in the TBI Service Plan, for the individual in the TBI Program in such areas as memory, speech, writing, household/independent living, community activities, physical activities, personal care and daily management, cognitive re-training, behavioral management, and safety. This position requires considerable human relation's skills and the ability to deal with people in very stressful situations. Works as part of a team and is cooperative with others. Provides and/or coordinates transportation to necessary appointments and community activities as identified by the TBI Service Plan.

KNOWLEDGE, SKILLS AND ABILITIES:

- Ability to exercise sound judgment in a variety of situations
- Ability to comprehend and follow written and oral instructions
- Ability to prepare written reports in a prescribed format
- Ability to communicate effectively, both orally and in writing
- Ability to establish and maintain effective working relationships
- Working knowledge of traumatic brain injuries and disabilities
- Working knowledge of program policies and requirements
- Awareness of techniques for working with survivors of traumatic brain injuries
- Ability to participate effectively with members of the care conference team

ENVIRONMENTAL FACTORS:

Duties are performed in both community and home. Private means of transportation, a valid driver's license and insurance are required.

MINIMUM QUALIFICATIONS FOR APPLICATION:

Education: High school graduate or possession of an equivalence certificate.

Experience: Two years in human services, education, or job service work involving direct client contact.

OR

Experience as a full-time homemaker including household management and care of family may be substituted for up to one year of the non-trainee work experience.

Revision Date: 06/24/2016

College training may be substituted for the work experience on a semester for six months basis.

AND

Completion of the TBI pre-service training

**State of Vermont
Adult Services Division
TBI Program**

CAREGIVER FUNCTIONS AND STANDARDS

DEFINITION:

Service of a paraprofessional nature conducted in the caregiver's home, and/or the consumer's home and/or in the community. This service requires a basic understanding of traumatic brain injuries and disabilities in general.

EXAMPLES OF WORK PERFORMED:

Service at this level includes 24-hour supervision and one to one involvement with the consumer. The purpose is to address rehabilitation needs as indicated by the case manager in the TBI Service Plan. This includes all areas of independent living skills, community activities, personal care and physical activities. Services include coordination through the Provider Agency case manager and effective interaction with family, professionals, and other paraprofessionals. Assistance with coordination and transportation to all appointments as indicated in the TBI Service Plan as appropriate. Must be capable of working with individuals with cognitive deficits and behavioral management problems.

KNOWLEDGE, SKILLS AND ABILITIES REQUIRED:

- Awareness of TBI rehabilitation principles and practices
- Ability to exercise sound judgment in a variety of situations both in the home and community
- Ability to comprehend and follow written and oral instructions or schedules
- Ability to prepare written reports in a prescribed format
- Ability to communicate effectively, both orally and in writing
- Ability to establish and maintain effective working relationships
- Working knowledge of TBI Program and requirements
- Awareness of individual and group attitudes and reactions to situations
- Ability to follow individualized schedules
- Ability to deal with anger, frustration and stressful situations
- Ability to use analytical and assessment skills for assisting in future individualized TBI program planning
- Ability to adapt to changes, i.e., flexibility
- Ability to participate effectively with members of the care conference team

ENVIRONMENTAL FACTORS:

Services are performed either in the consumer's home or community. Services are provided alone or with other family members, friends, etc. A caregiver will be confronted with a variety of situations at which strong emotions and/or opinions may be present. A private means of transportation, a valid driver's license, and insurance are required. A working telephone must be available.

MINIMUM QUALIFICATIONS:

Experience: Two years in human services, education, or job service work involving direct client contact.

OR

Experience as a full-time homemaker, including household management and care of family may be substituted for up to one year of work experience.

College training may be substituted for the work experience on a semester for six months basis.

AND

1-2 years prior experience working with individuals with disabilities in the community.

Completion of the TBI pre-service training

VERMONT STATE TBI PROVIDER AGENCIES SHALL DEVELOP CONTRACTS WITH CAREGIVERS AS APPROPRIATE.

**State of Vermont
Adult Services Division
TBI Program**

RESPITE CAREGIVER FUNCTIONS AND STANDARDS

DEFINITION:

Service of a paraprofessional nature conducted in the respite caregiver's home, and/or the consumer's home and/or in the community. This service requires a basic understanding of traumatic brain injuries and disabilities in general.

EXAMPLES OF WORK PERFORMED:

Service at this level includes 24-hour supervision and one-to-one involvement with the consumer to address rehabilitation needs as indicated by the case manager in the TBI Service Plan. Service may include effective interaction with families, professionals and other paraprofessionals. The respite caregiver must have some capabilities in working with individuals with cognitive deficits and behavioral management problems. Must prepare required reports and participate in care conference meetings when appropriate.

KNOWLEDGE, SKILLS AND ABILITIES

- Awareness of TBI rehabilitation principles and practices
- Ability to adapt to change and exercise sound judgment in a variety of situations, both in the home and community
- Ability to prepare, comprehend and follow written and oral instructions or schedules
- Ability to communicate effectively, both orally and in writing
- Working knowledge of TBI Program and requirements
- Ability to follow individualized schedules
- Ability to deal with anger, frustration and stressful situations
- Ability to participate effectively with members of a Care Conference Team

ENVIRONMENTAL:

Respite services are performed in the respite caregiver's home and can be provided alone or with other family members, friends, etc. Respite caregivers may be faced with a variety of potentially stressful and emotionally charged situations. A calm demeanor, good insight, and sound judgment are required in order to provide adequate care. A private means of transportation, a valid driver's license and insurance are required. A working telephone must be available.

MINIMUM QUALIFICATIONS:

Experience: Two years in human services, education, or job service work involving direct client contact.

OR

Experience as a full-time homemaker, including household management and care of family may be substituted for up to one year of work experience.

Revision Date: 06/24/2016

College training may be substituted for the work experience on a semester for six-month basis.

AND

1-2 years prior experience working with individuals with disabilities in the community.

Completion of TBI pre-service training.

VERMONT STATE TBI PROVIDER AGENCIES SHALL DEVELOP CONTRACTS WITH CAREGIVERS AS APPROPRIATE

Brain 101

The Neurotypical Brain

After completion of this module, the learner will be able to:

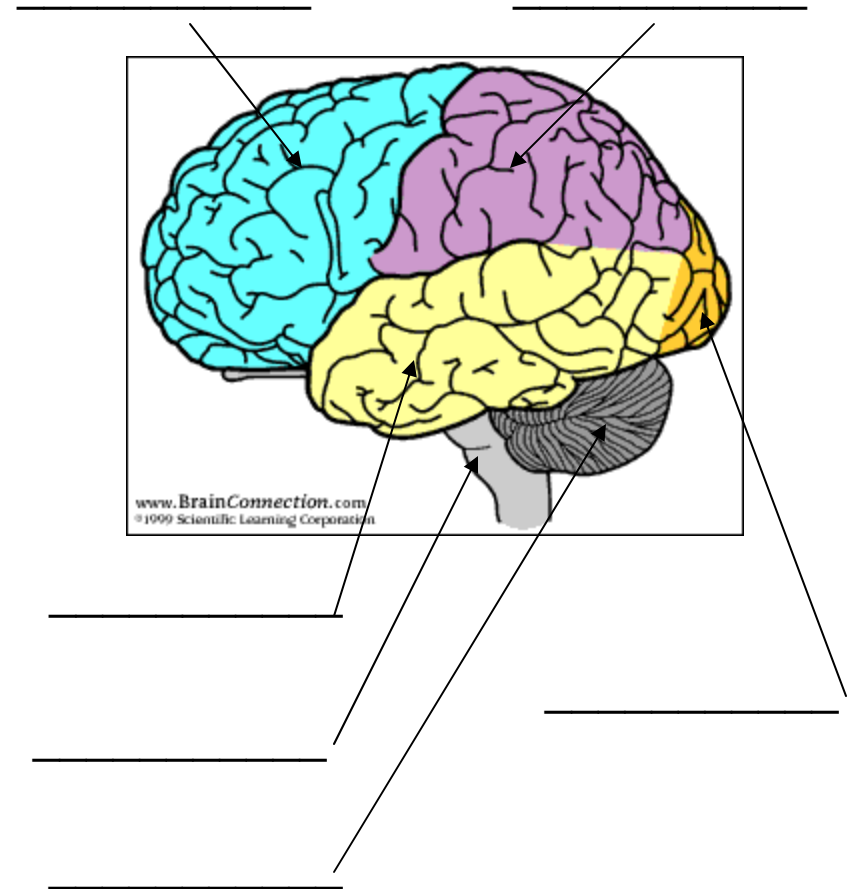
- Identify:
 - the basic structures of the brain: hemispheres, lobes, and levels.
 - the basic structures and functions of neurons, axons and dendrites.
 - the basic systems of the brain – physical, chemical, and electrical.
- Explain:
 - neurotypical development of the brain.
 - the basic functions of each lobe.

Pre-Quiz – Part 1

Label the Brain

True or False

- _____ 1. The average brain weighs 7 pounds.
- _____ 2. The brain is attached to the skull.
- _____ 3. The corpus callosum connects the two hemispheres of the brain.
- _____ 4. There are four lobes in each hemisphere.
- _____ 5. The brain floats in cerebrospinal fluid.
- _____ 6. Neurons are the basic brain cells.
- _____ 7. The brain communicates via chemicals.
- _____ 8. Neurotransmitters pass directly from the axon to the dendrite.
- _____ 9. The brain continues to grow new neurons after birth.
- _____ 10. Each lobe of the brain has specific functions.



Pre-Quiz – Part 2

For each statement, decide whether it is a function of the:

1. Brain Stem
3. Occipital Lobes
5. Temporal Lobes

2. Cerebellum
4. Parietal Lobes
6. Frontal Lobes

_____ 1. Breathing

_____ 2. Vision

_____ 3. Judgment

_____ 4. Language

_____ 5. Balance

_____ 6. Attention

_____ 7. Goal Setting

_____ 8. Touch Perception

_____ 9. Coordination

_____ 10. Memory Acquisition

_____ 11. Sensory Integration

_____ 12. Time Perception

_____ 13. Swallowing

_____ 14. Recognition of Printed Words

_____ 15. Control of Emotional Response

_____ 16. Hearing Ability

_____ 17. Inhibition

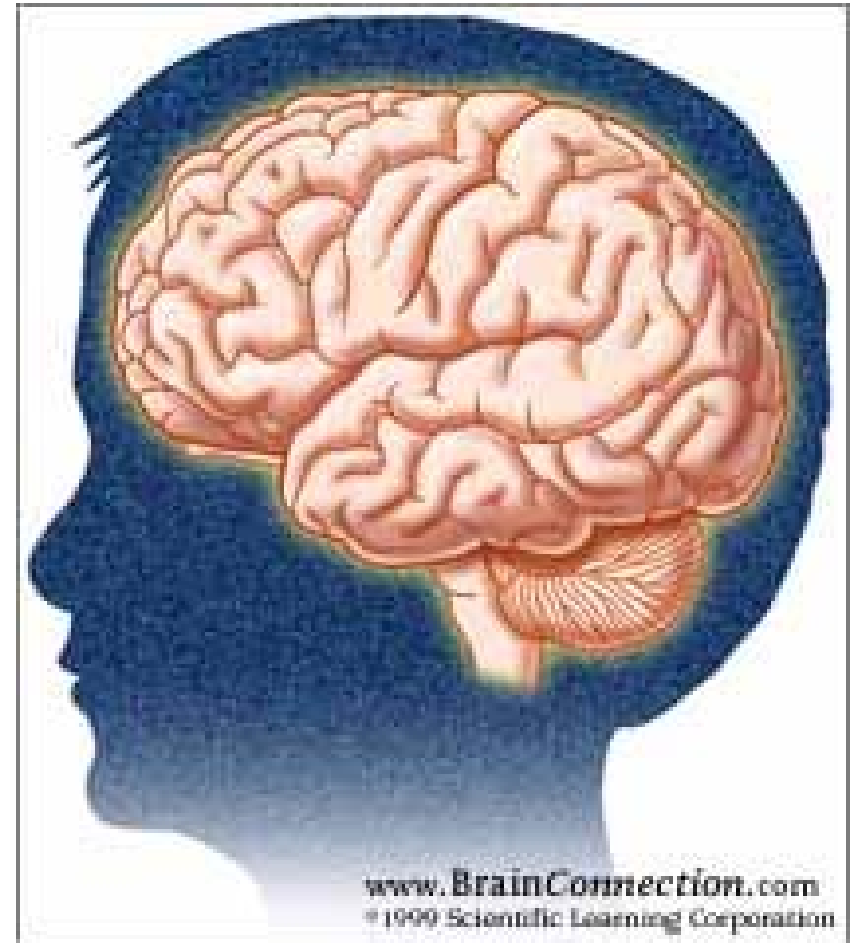
_____ 18. Initiation

_____ 19. Startle Response

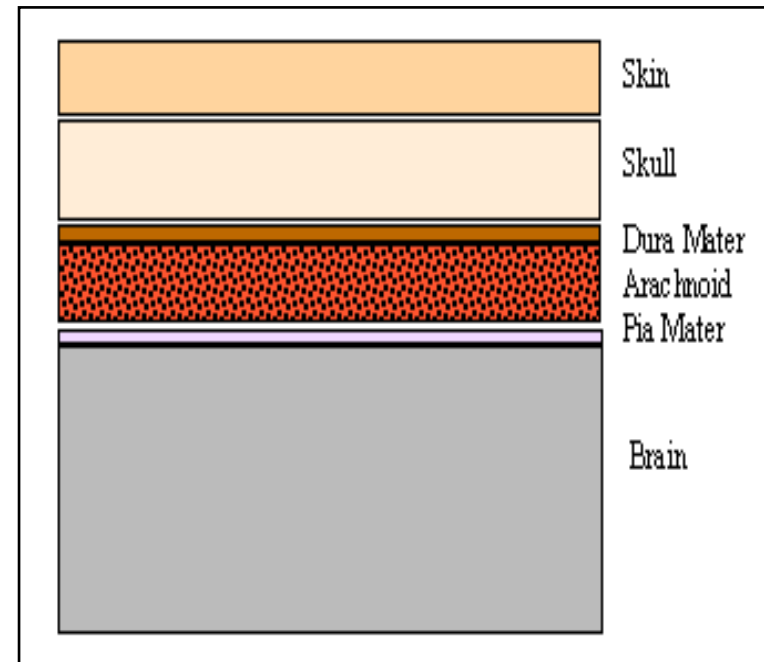
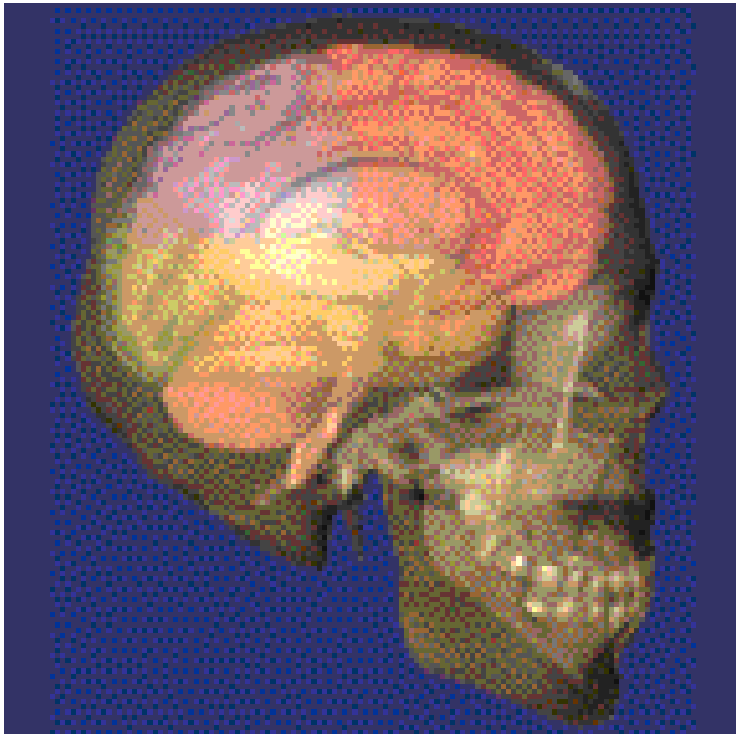
_____ 20. Categorization of Objects

The Brain - Overview

- The Average Brain:
 - Weighs 3.3 pounds.
 - Is protected by layers:
 - Hair.
 - Skin.
 - Cranium (Skull).
 - Meninges.
 - Maters.
 - Has 100 billion Neurons.
 - Has 100 trillion Snyapses.

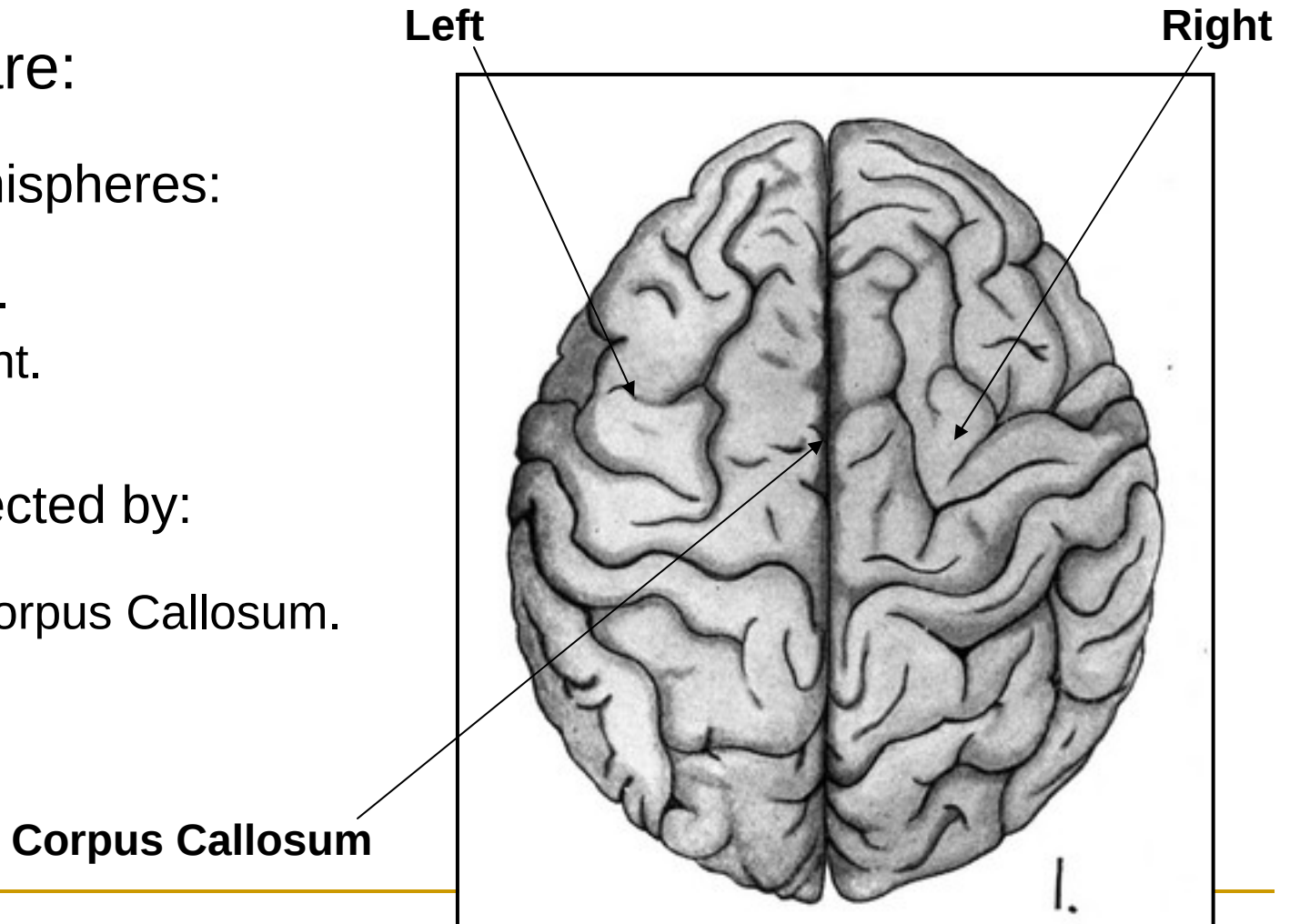


The Skull & Meninges



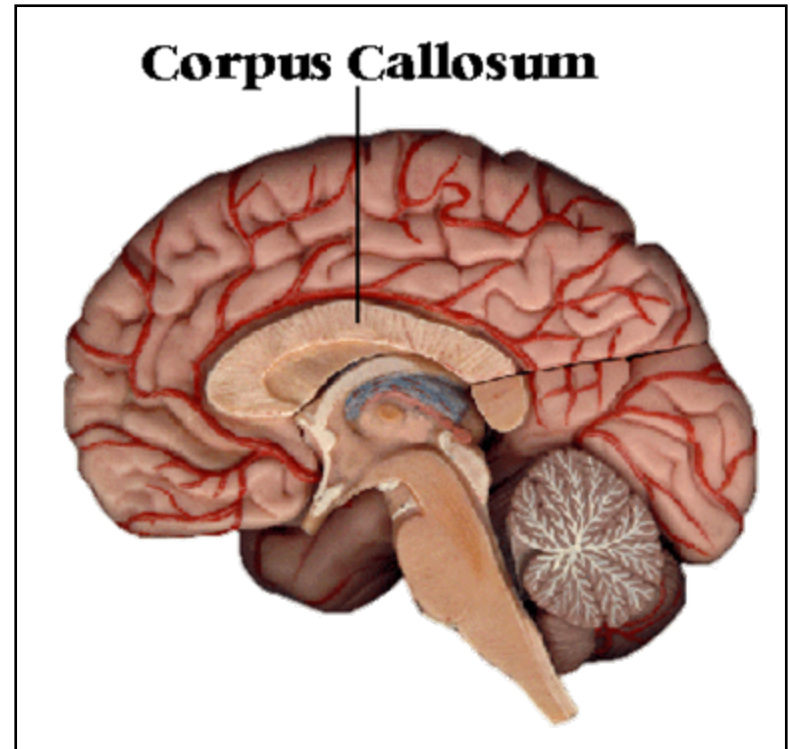
The Hemispheres

- There are:
 - 2 Hemispheres:
 - Left.
 - Right.
 - Connected by:
 - 1 Corpus Callosum.



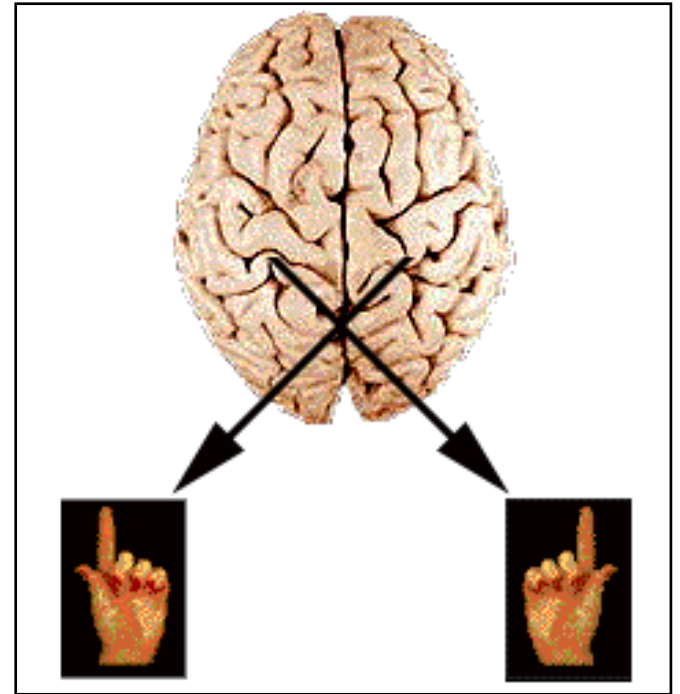
Corpus Callosum

- Major tract of “White Matter” connecting the left and right hemispheres.
- Composed of approximately 200 million nerve fibers.
- Contain both myelinated and unmyelinated axons.
- Majority of connections are between the cortical association areas.



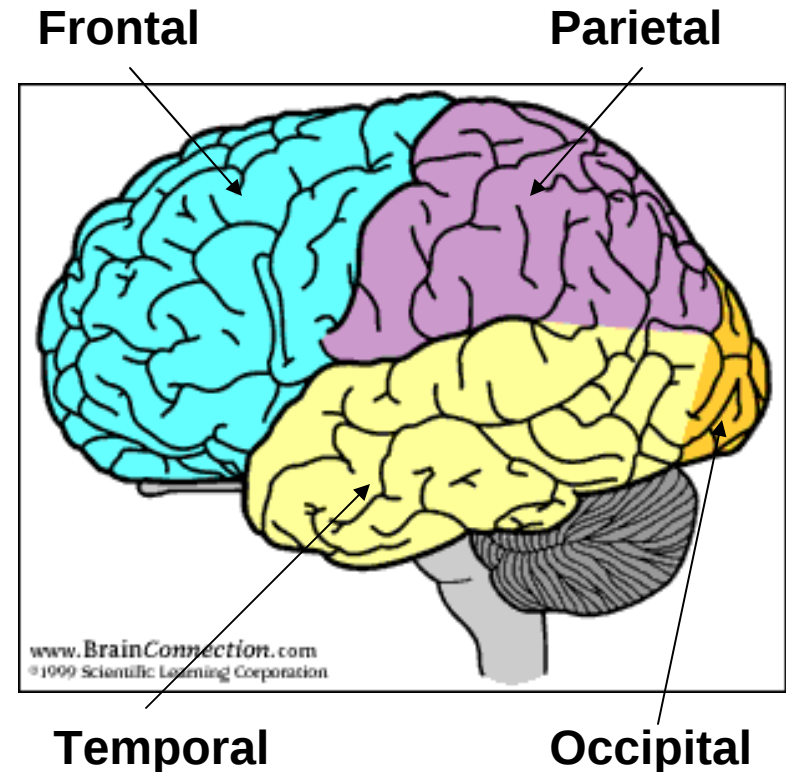
Left & Right

- The Corpus Callosum enables the two hemispheres to communicate with each other.
- The right hemisphere controls the left side of the body.
- The left hemisphere controls the right side of the body.
- The hemispheres mirror each other physically.



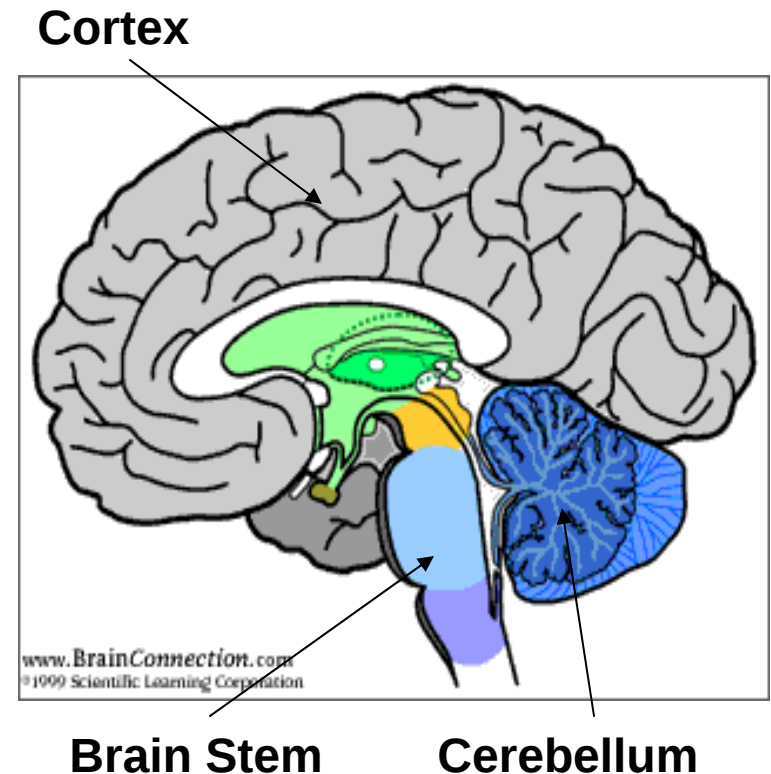
The Lobes

- There are 4 Lobes in each hemisphere:
 - Frontal.
 - Parietal.
 - Temporal.
 - Occipital.



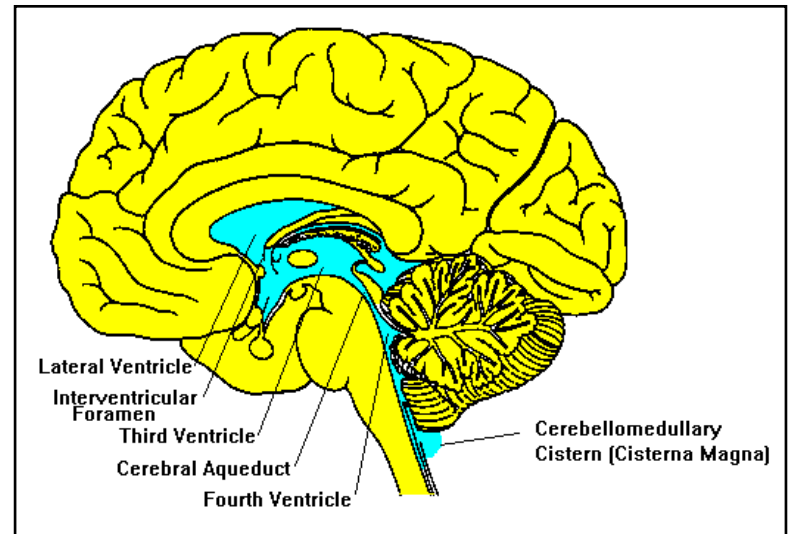
Three Brains in One

- The human brain as evolved over time and has three levels:
 - Oldest - Brain Stem.
 - Middle – Cerebellum.
 - Newest – Cortex.



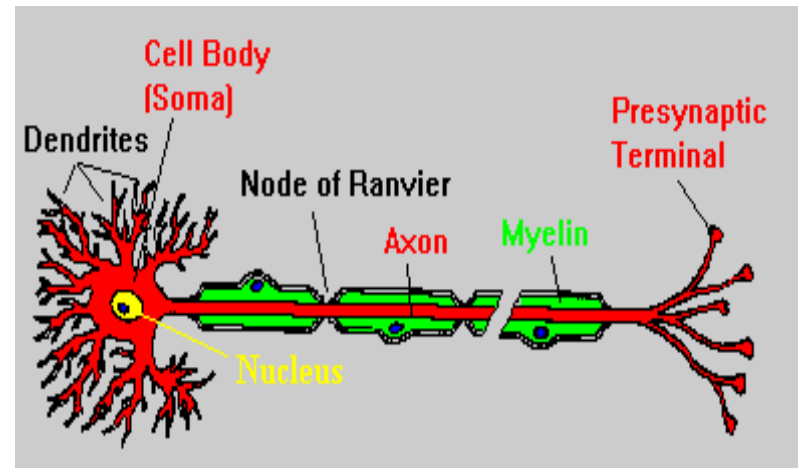
Cerebrospinal Fluid (CSF)

- CSF:
 - Clear, colorless fluid.
 - Contained in ventricles.
 - Volume: 125-150 ml.
 - Has 4 functions:
 - Buffers brain from skull.
 - Buoy brain on spine.
 - Excretes waste products.
 - Transports hormones.



The Neuron

- The working cells of the brain.
- Parts of the Neuron:
 - Cell Body (Soma).
 - Nucleus.
 - Dendrites.
 - Axon.
 - Myelin.
 - Synapses.



Neurons Communicate

- Electrochemically:

- Chemicals cause electrical signal.

- Chemicals become ions:

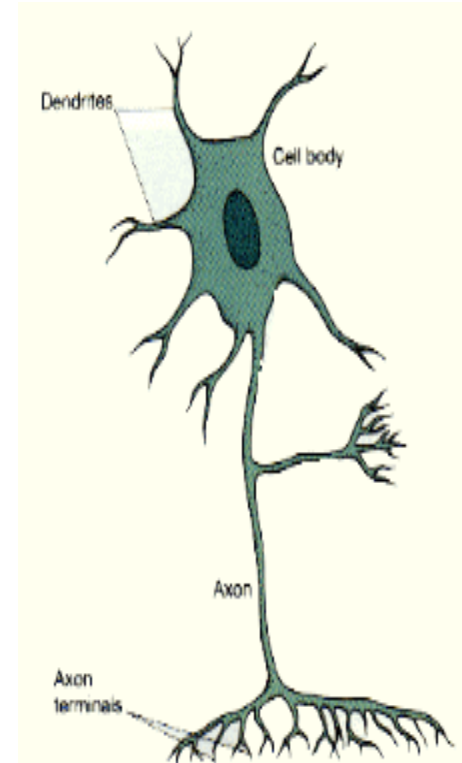
- Sodium.

- Potassium.

- Calcium.

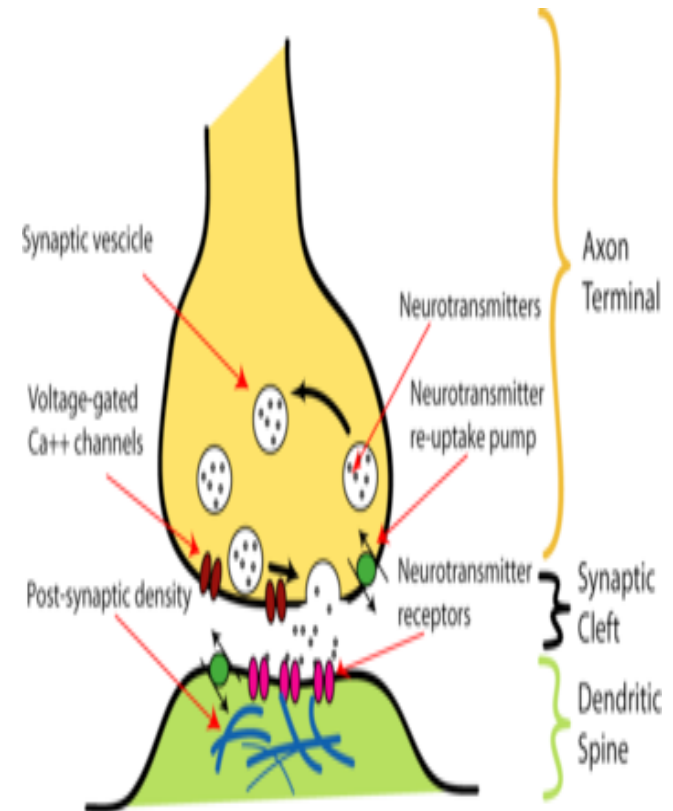
- Chloride.

- Axon membranes limit which ones pass through.



Neurotransmitters

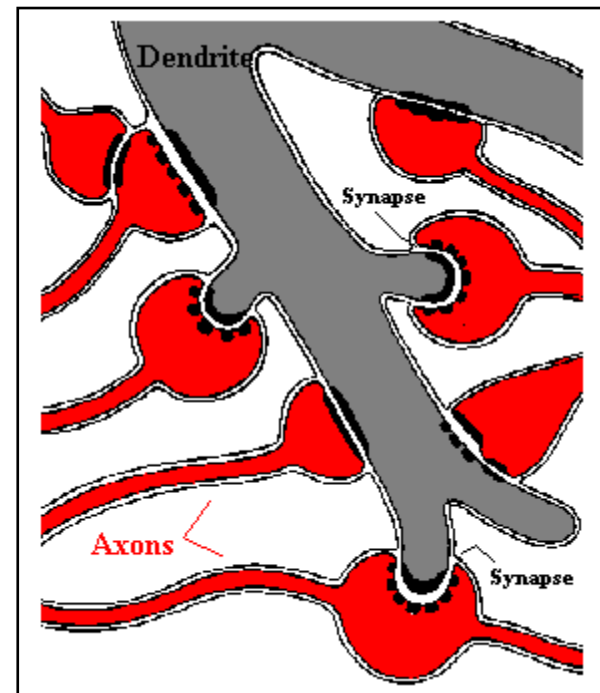
- Neurotransmitters:
 - Are chemicals:
 - Created in the neuron.
 - Transported down the axon.
 - Stored in vesicles.
 - Pass messages:
 - From axon terminal.
 - Across the synapse (gap).
 - Accepted by receptor.
 - Outcome:
 - Excite action potential.
 - Inhibit action potential.



Neurotransmitters

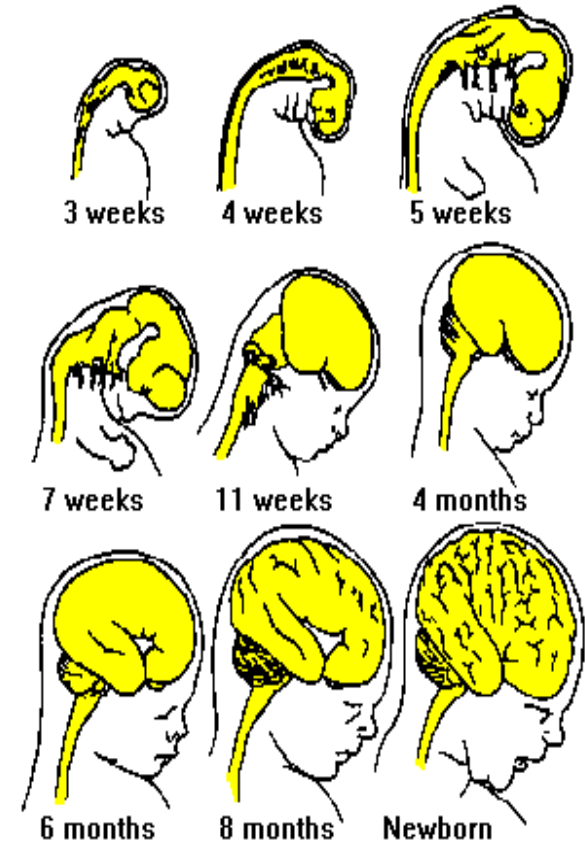
■ 7 basic substances:

- Acetylcholine
- Serotonin
- Dopamine
- Histamine
- Norepinephrine
- Epinephrine
- GABA



In-Utero Brain Development

- Typical Development:
 - 250,000 neurons daily.
 - 16th day - Neural Plate.
 - 18th day – Neural Groove.
 - 21st day – Neural Tube.
 - 7th week – 3 major areas:
 - Forebrain.
 - Midbrain.
 - Hindbrain.



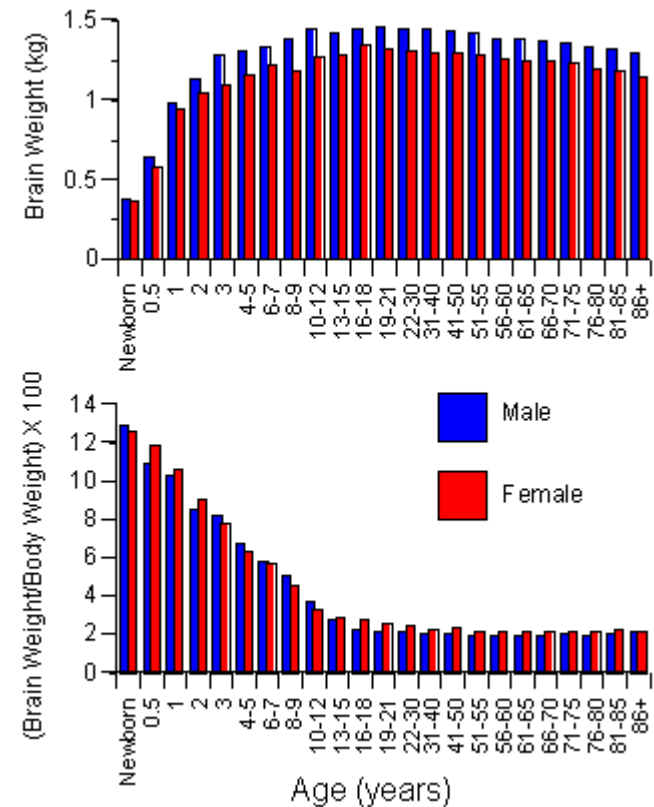
Development Continues

Feeling brain-dead? Don't worry - your tired old gray matter may work hard for you yet. Research to be published November in the journal *Nature Medicine* suggests that at least one area of the adult brain can reproduce and generate new cells, even after death. That is, of course, utterly contrary to everything we thought about the brain up until now. It was assumed that at some point in your grown-up life, brain cells stopped generating and started dying off. Not true - at least not in the hippocampus, according to a team of American and Swedish scientists who took samples of this portion of the brain from cancer patient autopsies.

The results confirm a number of other studies made - but essentially ignored -- over the past 30 years, which saw the same growth occur in the same area of the brain in rats and birds. The hippocampus is our learning and memory center - and in adult birds, it grew every time they learned new songs. Could lifelong education literally boost your brainpower? "We have to try to determine whether we might be able to have some positive control over how the human brain cells divide," said Dr. Fred Gage, the team leader.

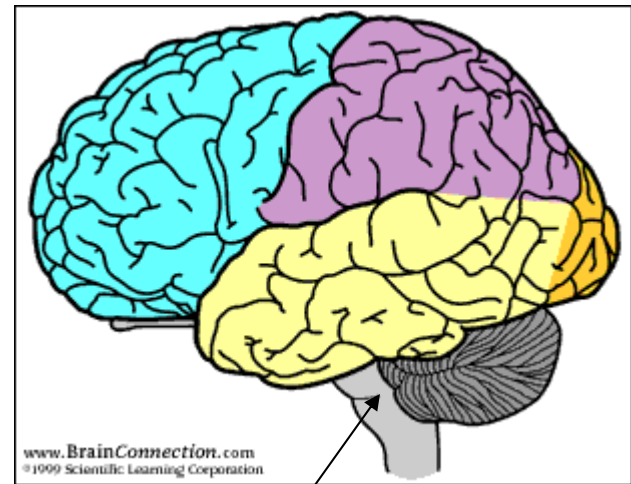
FIND THIS ARTICLE AT:

<http://www.time.com/time/nation/article/0,8599,15541,00.html>



Brain Stem - Functions

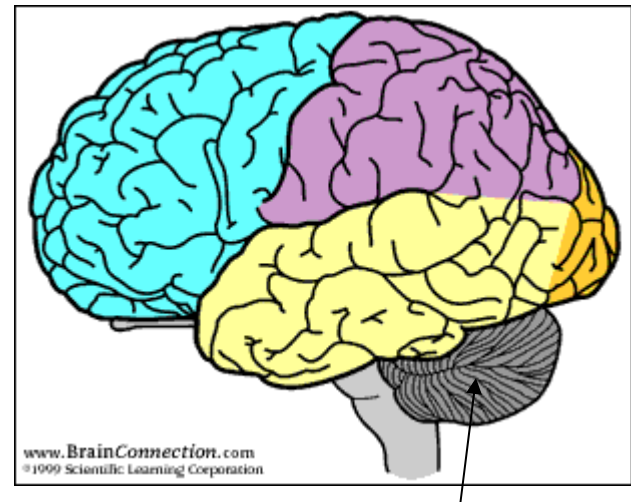
- Functions:
 - Breathing.
 - Heart rate.
 - Swallowing.
 - Startle response.
 - Autonomic nervous system.
 - Level of alertness.
 - Ability to sleep.
 - Sense of balance.



Brain Stem

Cerebellum - Functions

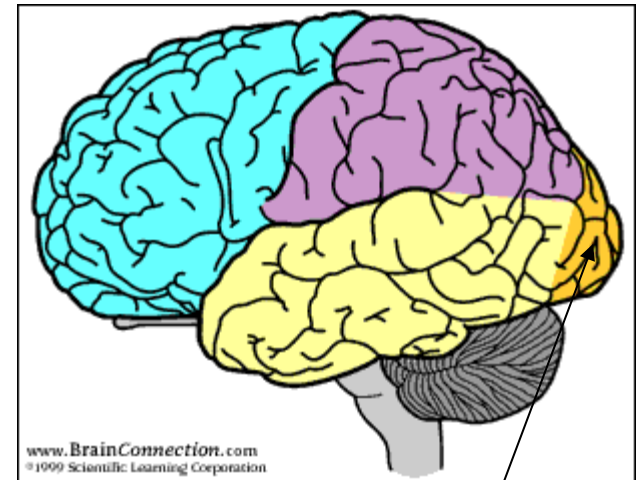
- Functions:
 - Balance.
 - Equilibrium.
 - Coordination of voluntary movement.
 - Memory for reflex motor acts.



Cerebellum

Occipital Lobes - Functions

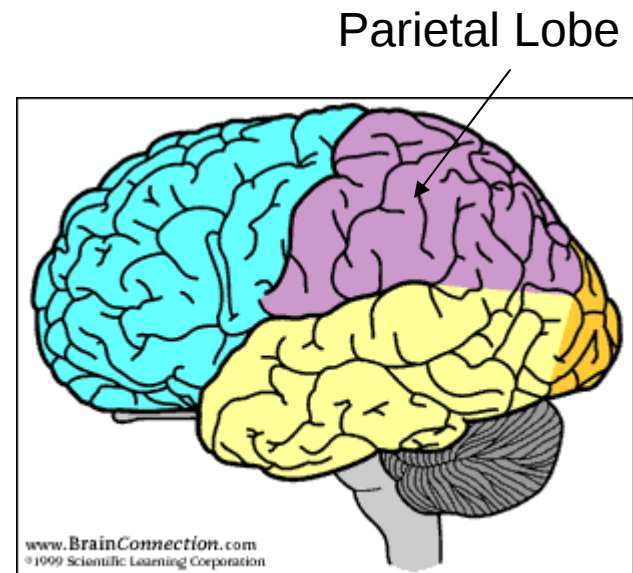
- Functions:
 - Visual input.
 - Visual perception.
 - Recognition of printed words.



Occipital Lobe

Parietal Lobes - Functions

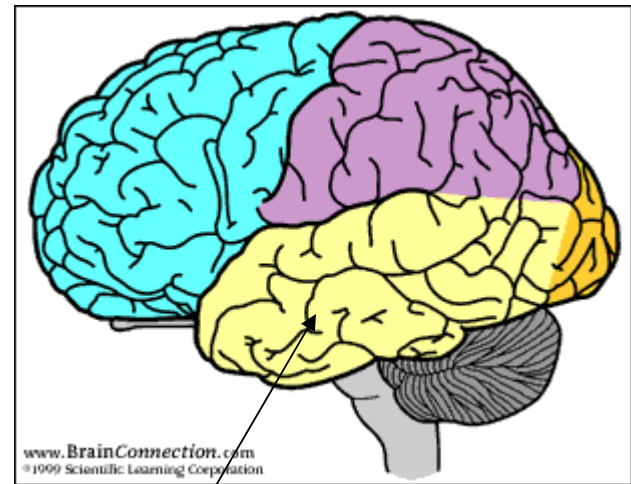
- Functions:
 - Visual attention.
 - Touch perception.
 - Goal-oriented voluntary movements.
 - Manipulation of objects.
 - Integration of different senses that allows for understanding of a single concept.



Temporal Lobes - Functions

■ Functions:

- Hearing ability.
- Memory acquisition.
- Some visual perceptions.
- Categorization of objects.
- Emotions.
- Language.
 - Wernicke's Area – Receptive.
 - Broca's Area – Expressive.



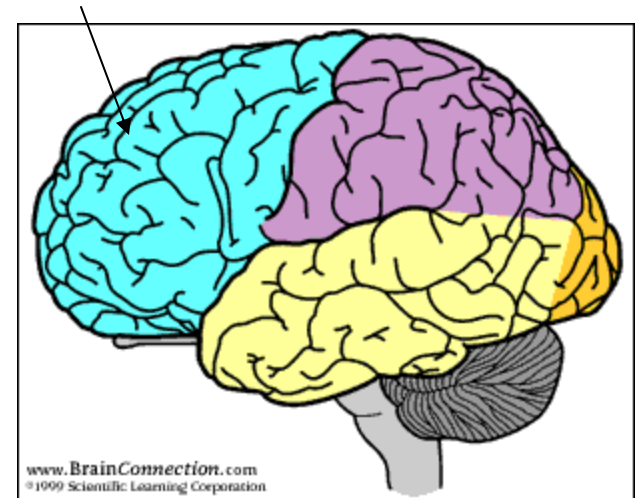
Temporal Lobe

Frontal Lobes - Functions

■ Functions:

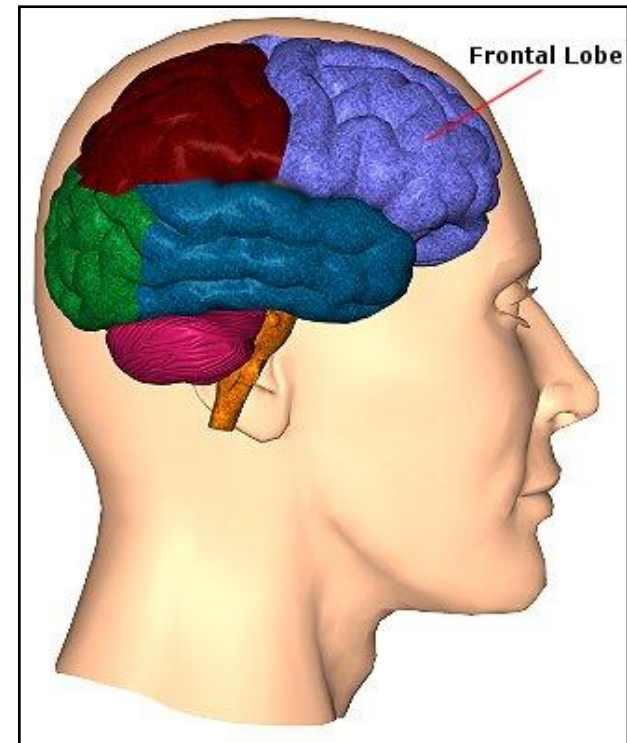
- Consciousness.
- Goal setting.
- Inhibition.
- Attention.
- Time perception.
- Initiation of response of environment.
- Judgment.
- Control of emotional response.
- Internalization of language.
- Volition.
- Memory for habits & motor activities.

Frontal Lobe



Prefrontal Lobes – Uniqueness

- Functions continue developing and maturing through adolescence.
- Reach maturity around age 25.
- Almost nothing is done by the brain without prefrontal lobe involvement.
- Most vulnerable part of brain in accidents – due to location and boney protrusions inside front of skull.



Prefrontal Lobes – Executive Functions

Everyone's Executive Functions fall along a continuum of development.

Child.....Adult

Disinhibition

Inhibition

Inattention

Attention

No Concept of Time

Time Perception

No Delaying Gratification

Self-Regulation

No Self-Starting

Initiation

Poor Judgment

Ability to Judge

Live in Moment

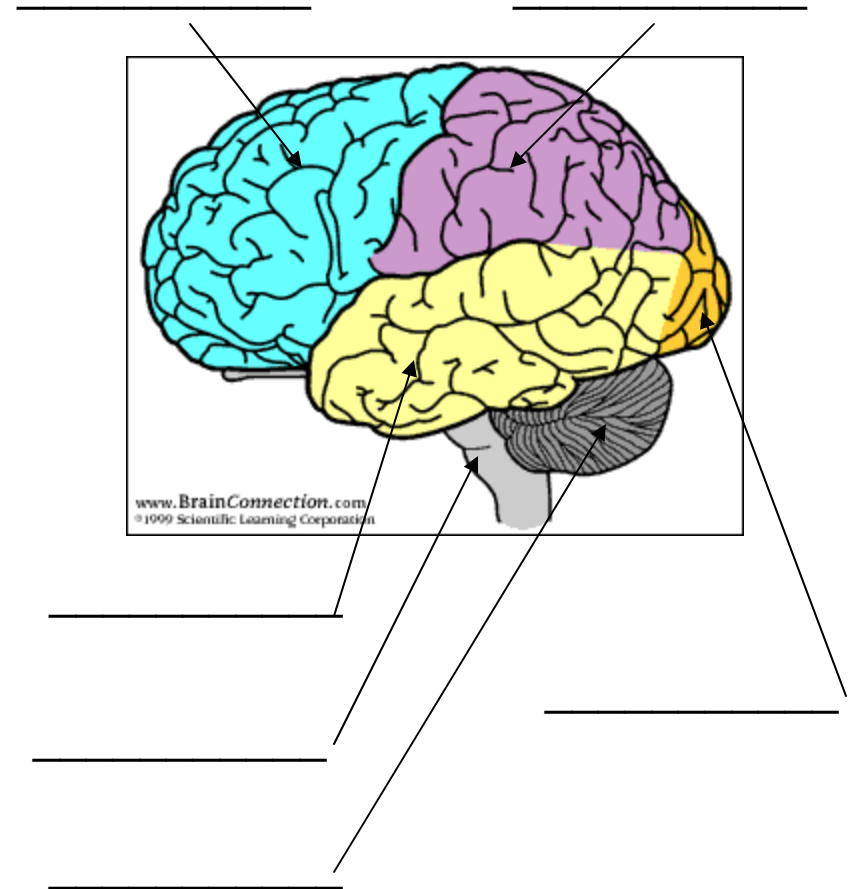
Goal-Setting

Post-Quiz – Part 1

Label the Brain

True or False

- _____ 1. The average brain weighs 7 pounds.
- _____ 2. The brain is attached to the skull.
- _____ 3. The corpus callosum connects the two hemispheres of the brain.
- _____ 4. There are four lobes in each hemisphere.
- _____ 5. The brain floats in cerebrospinal fluid.
- _____ 6. Neurons are the basic brain cells.
- _____ 7. The brain communicates via chemicals.
- _____ 8. Neurotransmitters pass directly from the axon to the dendrite.
- _____ 9. The brain continues to grow new neurons after birth.
- _____ 10. Each lobe of the brain has specific functions.



Post-Quiz – Part 2

For each statement, decide whether it is a function of the:

1. Brain Stem
3. Occipital Lobes
5. Temporal Lobes

2. Cerebellum
4. Parietal Lobes
6. Frontal Lobes

- ____ 1. Breathing
- ____ 2. Vision
- ____ 3. Judgment
- ____ 4. Language
- ____ 5. Balance
- ____ 6. Attention
- ____ 7. Goal Setting
- ____ 8. Touch Perception
- ____ 9. Coordination
- ____ 10. Memory Acquisition

- ____ 11. Sensory Integration
- ____ 12. Time Perception
- ____ 13. Swallowing
- ____ 14. Recognition of Printed Words
- ____ 15. Control of Emotional Response
- ____ 16. Hearing Ability
- ____ 17. Inhibition
- ____ 18. Initiation
- ____ 19. Startle Response
- ____ 20. Categorization of Objects

Post-Quiz – Part 3

- Explain the neurotypical development of the brain.
- Explain the basic function(s) of each lobe of the brain:

Learning Outcomes Checklist

Can you:

☐ Identify:

- ☐ the basic structures of the brain: hemispheres, lobes, and levels.
- ☐ the basic structures and functions of neurons, axons and dendrites.
- ☐ the basic systems of the brain – physical, chemical, and electrical.

☐ Explain:

- ☐ neurotypical development of the brain.
- ☐ the basic functions of each lobe.

Brain 101

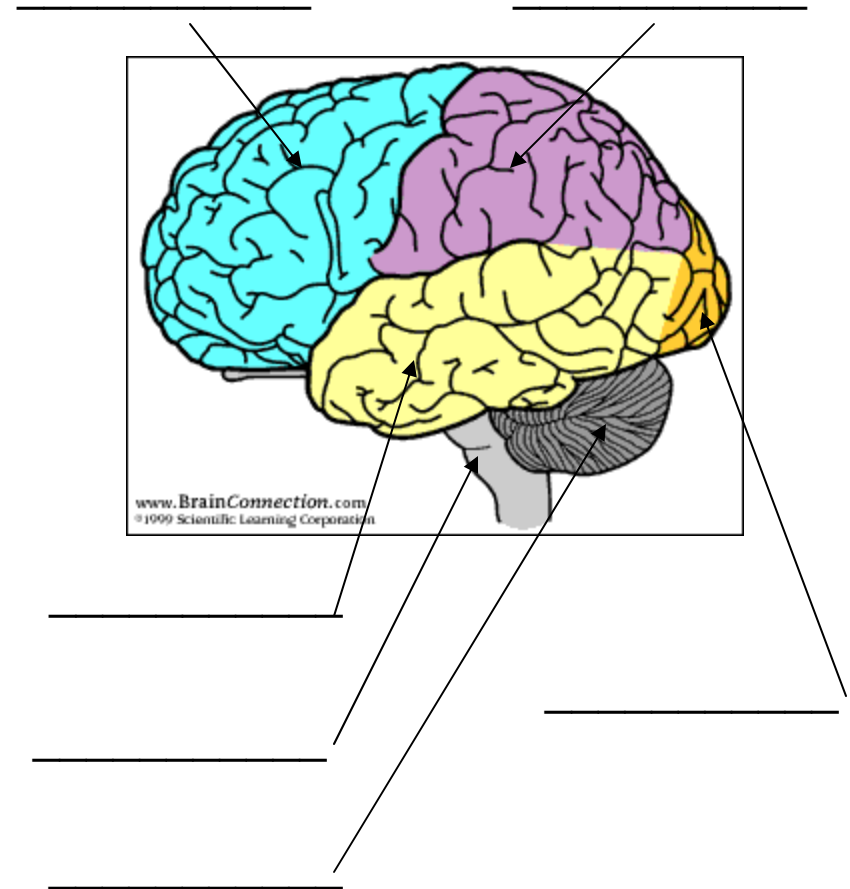
Workbook

Pre-Quiz – Part 1

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Pre-Quiz – Part 2

For each statement, decide whether it is a function of the:

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5. Temporal Lobes

2. Cerebellum
4. Parietal Lobes
6. Frontal Lobes

- ____ 1. Breathing
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- ____ 16. Hearing Ability
- ____ 17. Inhibition
- ____ 18. Initiation
- ____ 19. Startle Response
- ____ 20. Categorization of Objects

Worksheet 1

1. What protects the brain?
2. What are the two hemispheres of the brain?
3. What connects the 2 hemispheres? What is it made of?
4. What are the 4 lobes of the brain?
5. What are the three evolutionary levels of the brain?

Worksheet 2

1. Draw and label a neuron.
2. Describe how the electrical system of the brain works.
3. Describe how neurotransmitters work.
4. Explain how the brain develops neurotypically.
5. Discuss when the brain stops developing.

Worksheet 3

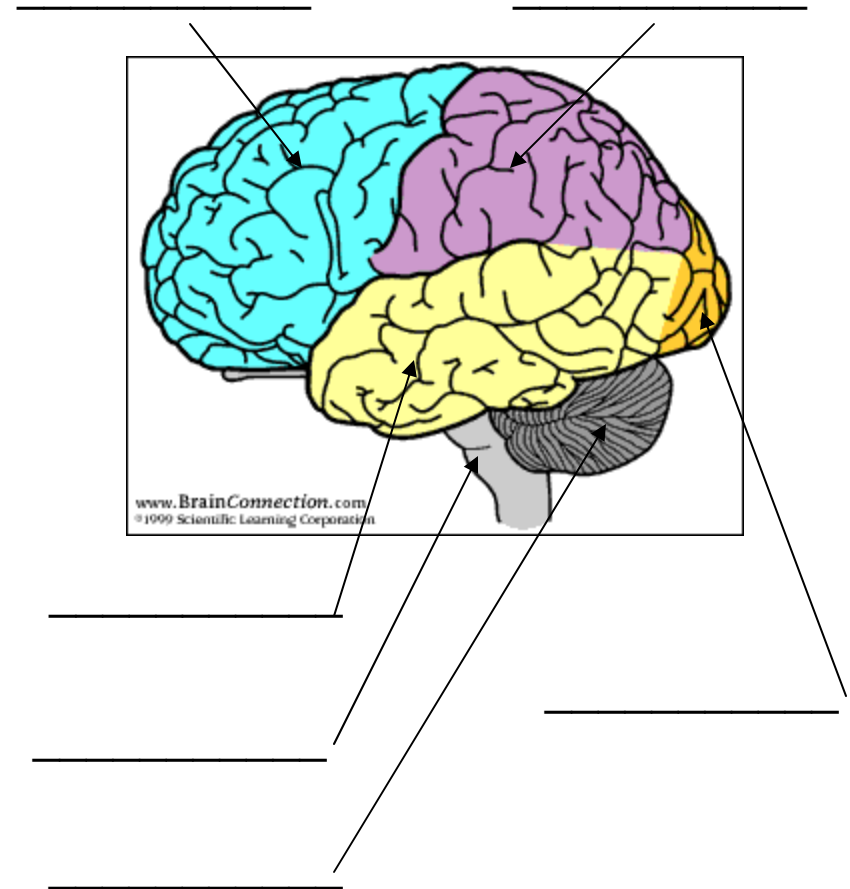
1. What are the functions of the occipital lobes?
2. What are the functions of the parietal lobes?
3. What are the functions of the temporal lobes?
4. What are the functions of the frontal lobes?
5. Summarize in a few words the basic function of each lobe.

Post-Quiz – Part 1

Label the Brain

True or False

- _____ 1. The average brain weighs 7 pounds.
- _____ 2. The brain is attached to the skull.
- _____ 3. The corpus callosum connects the two hemispheres of the brain.
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Post-Quiz – Part 2

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- Explain the basic function(s) of each lobe of the brain:

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- ☐ the basic systems of the brain – physical, chemical, and electrical

- ☐ Explain

- ☐ neurotypical development of the brain
- ☐ the basic functions of each lobe

Brain 101

The Neurotypical Brain

After completion of this module, the learner will be able to:

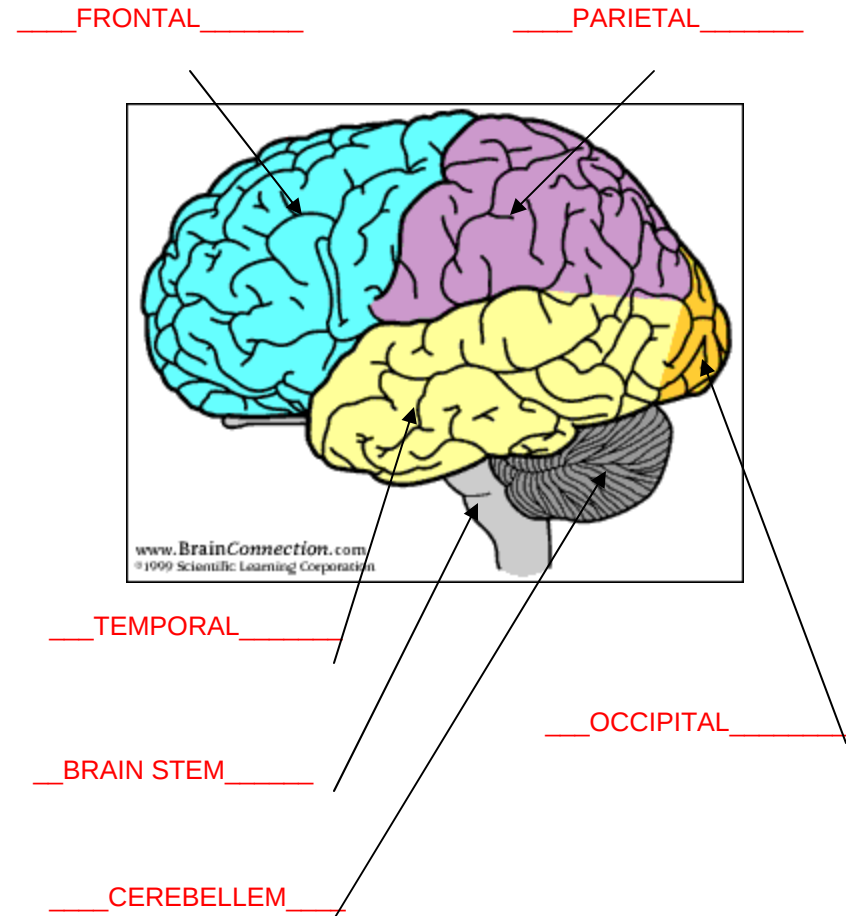
- Identify:
 - the basic structures of the brain: hemispheres, lobes, and levels.
 - the basic structures and functions of neurons, axons and dendrites.
 - the basic systems of the brain – physical, chemical, and electrical.
- Explain:
 - neurotypical development of the brain.
 - the basic functions of each lobe.

Pre-Quiz – Part 1

True or False

- ___F___ 1. The average brain weighs 7 pounds.(3.3 lbs)
- ___F___ 2. The brain is attached to the skull. (FLOATS IN CSF)
- ___T___ 3. The corpus callosum connects the two hemispheres of the brain.
- ___T___ 4. There are four lobes in each hemisphere.
- ___T___ 5. The brain floats in cerebrospinal fluid.
- ___T___ 6. Neurons are the basic brain cells.
- ___T___ 7. The brain communicates via chemicals.
- ___F___ 8. Neurotransmitters pass directly from the axon to the dendrite. MAY PASS AXON TO AXON, AXON TO DENDRITE AND DENDRITE TO DENDRITE
- ___T___ 9. The brain continues to grow new neurons after birth.
- ___T___ 10. Each lobe of the brain has specific functions.

Label the Brain



Pre-Quiz – Part 2

For each statement, decide whether it is a function of the:

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5. Temporal Lobes

2. Cerebellum
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__1__ 1. Breathing

__3__ 2. Vision

__6__ 3. Judgment

__5__ 4. Language

__2__ 5. Balance

__6__ 6. Attention

__4__ 7. Goal Setting

__4__ 8. Touch Perception

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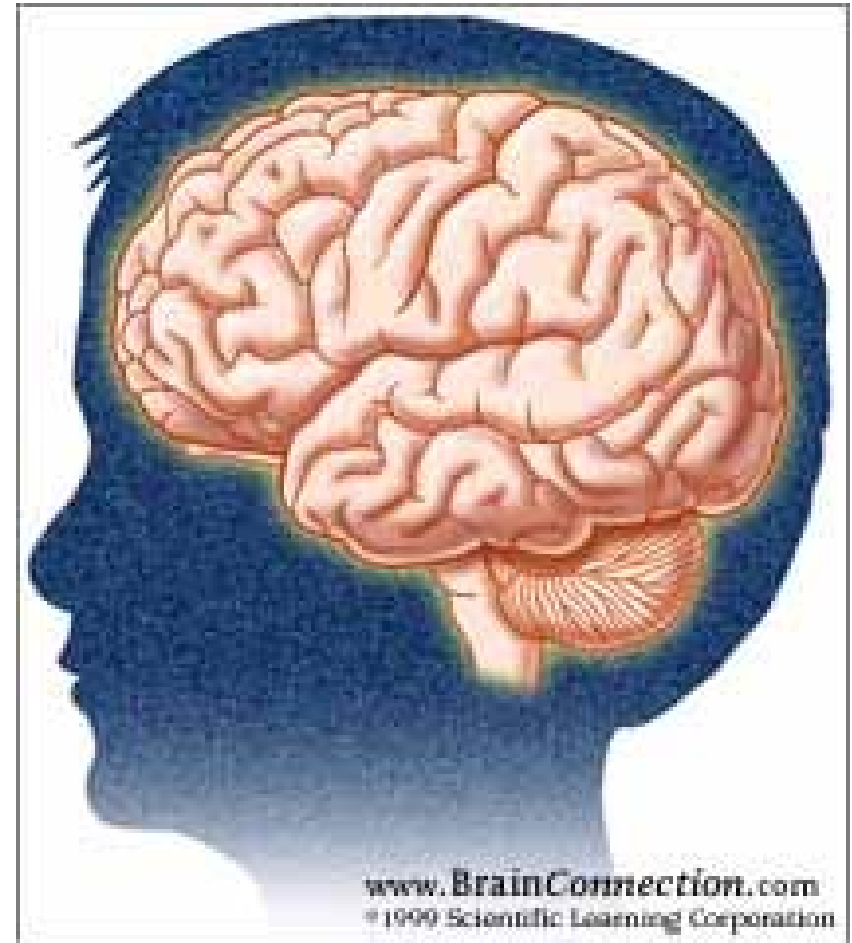
__6__ 18. Initiation

__1__ 19. Startle Response

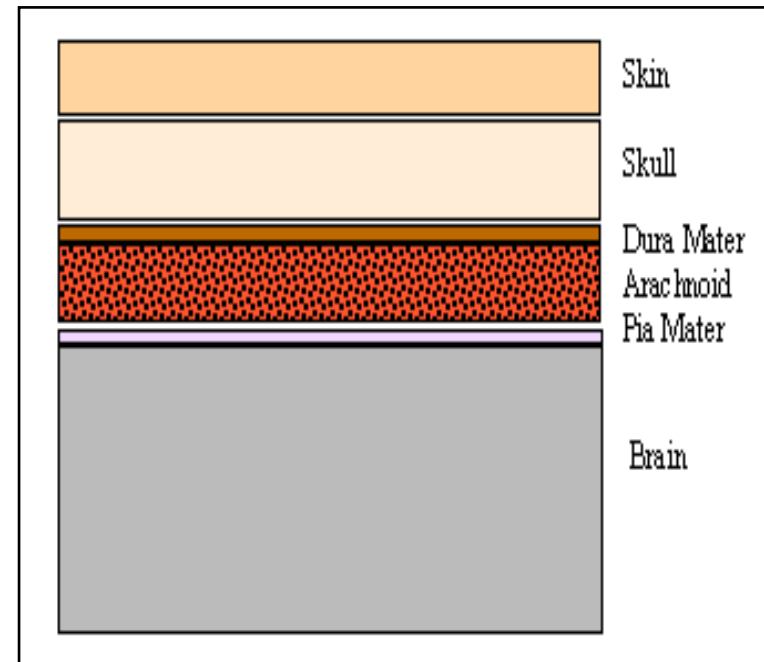
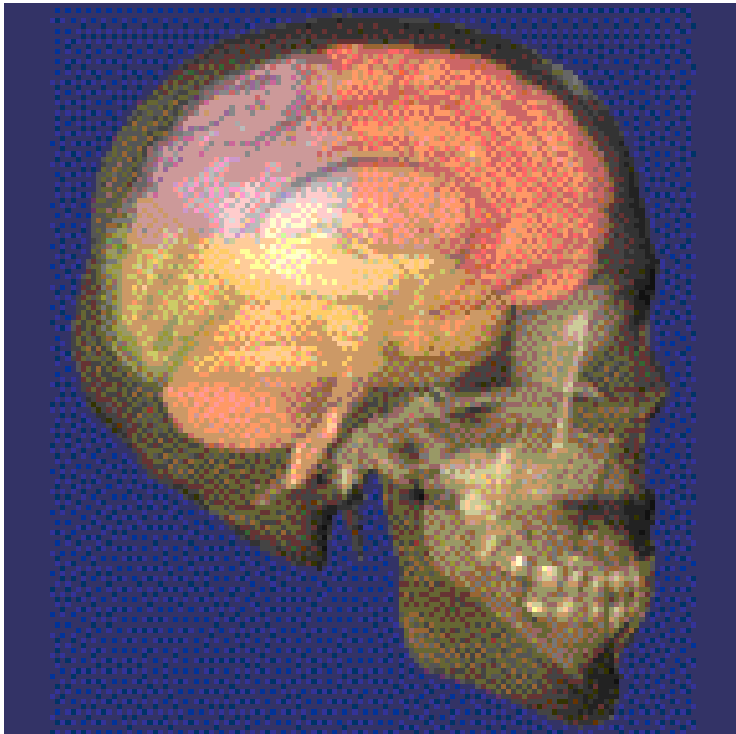
__5__ 20. Categorization of Objects

The Brain - Overview

- The Average Brain:
 - Weighs 3.3 pounds.
 - Is protected by layers:
 - Hair.
 - Skin.
 - Cranium (Skull).
 - Meninges.
 - Maters.
 - Has 100 billion Neurons.
 - Has 100 trillion Snyapses.

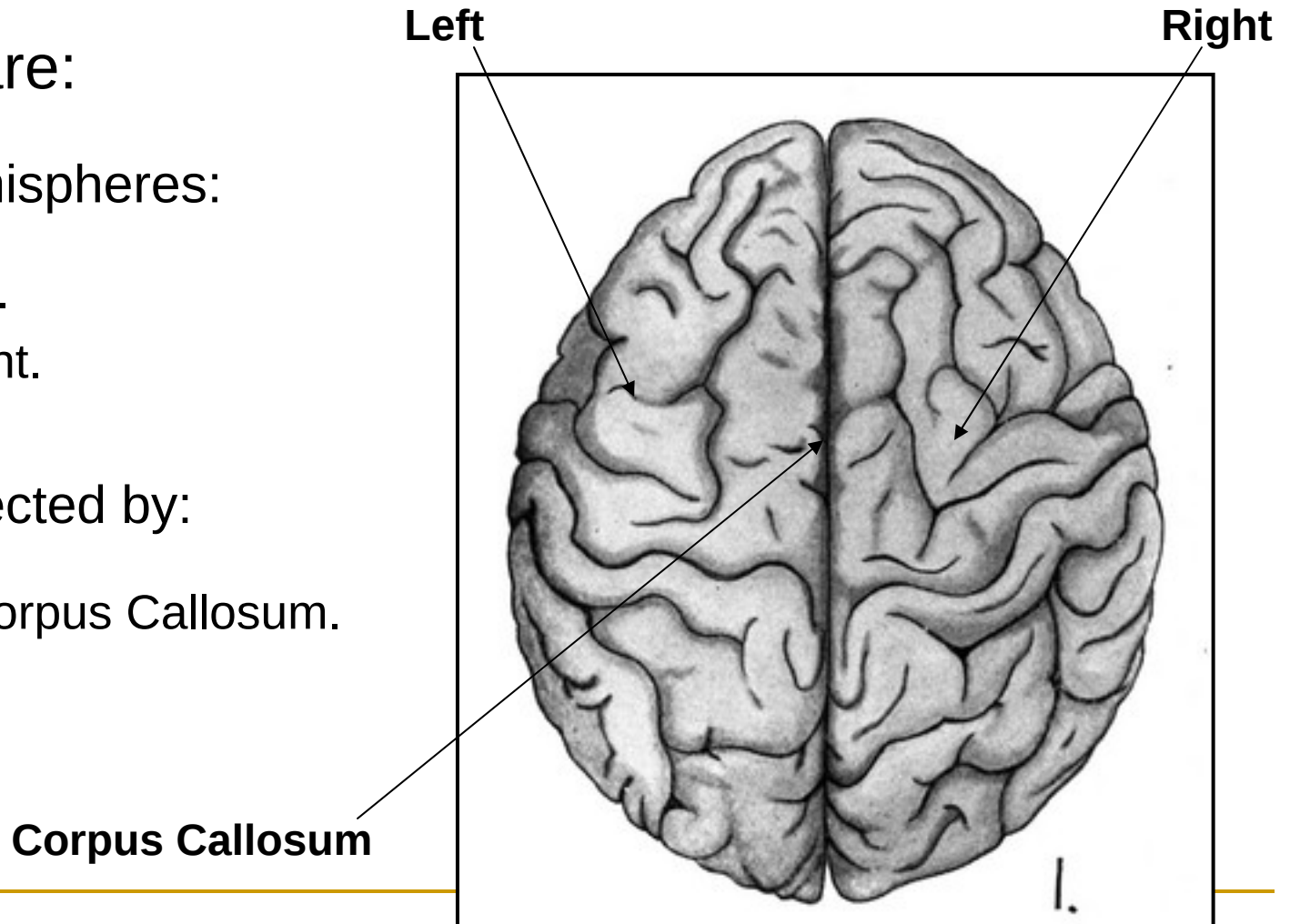


The Skull & Meninges



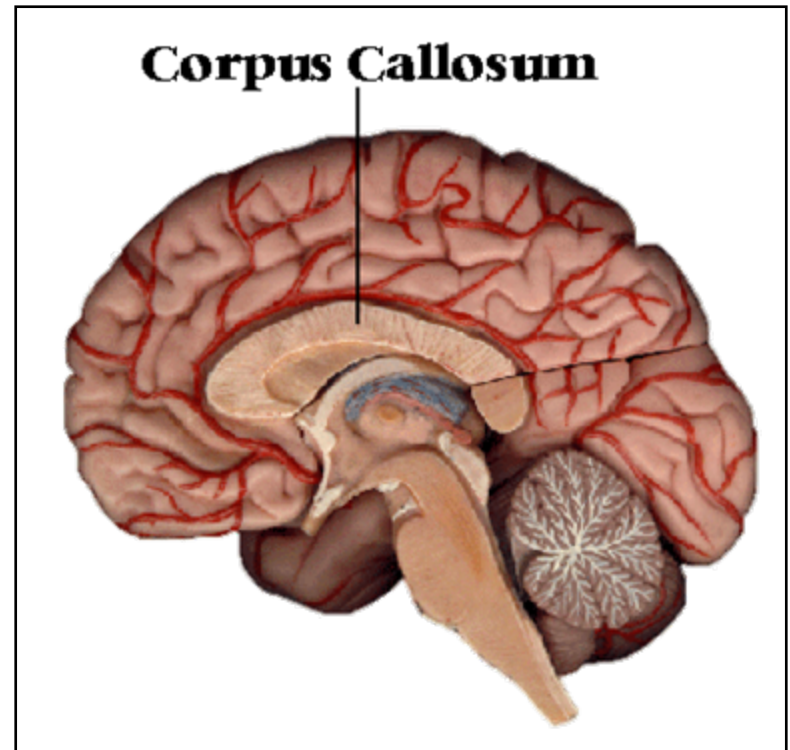
The Hemispheres

- There are:
 - 2 Hemispheres:
 - Left.
 - Right.
 - Connected by:
 - 1 Corpus Callosum.



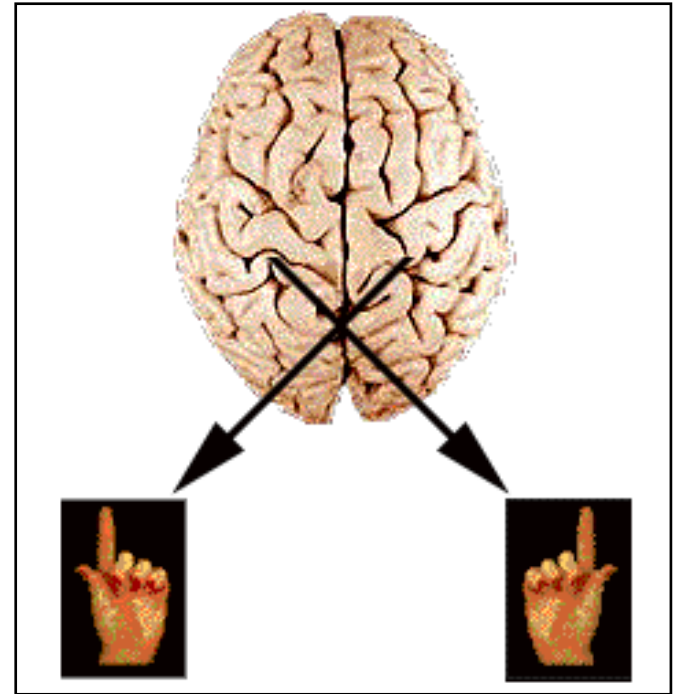
Corpus Callosum

- Major tract of “White Matter” connecting the left and right hemispheres.
- Composed of approximately 200 million nerve fibers.
- Contain both myelinated and unmyelinated axons.
- Majority of connections are between the cortical association areas.



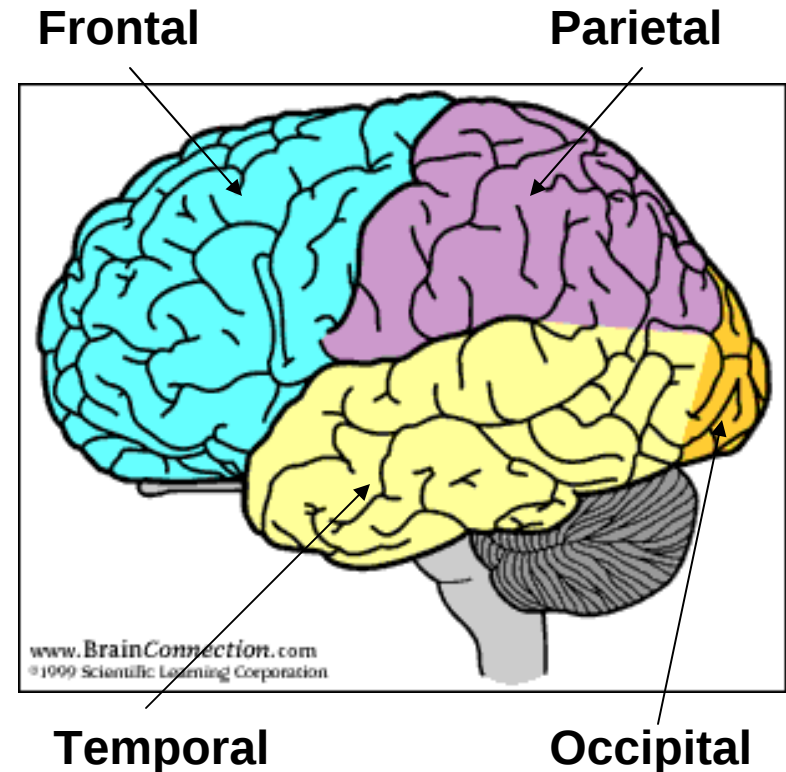
Left & Right

- The Corpus Callosum enables the two hemispheres to communicate with each other.
- The right hemisphere controls the left side of the body.
- The left hemisphere controls the right side of the body.
- The hemispheres mirror each other physically.



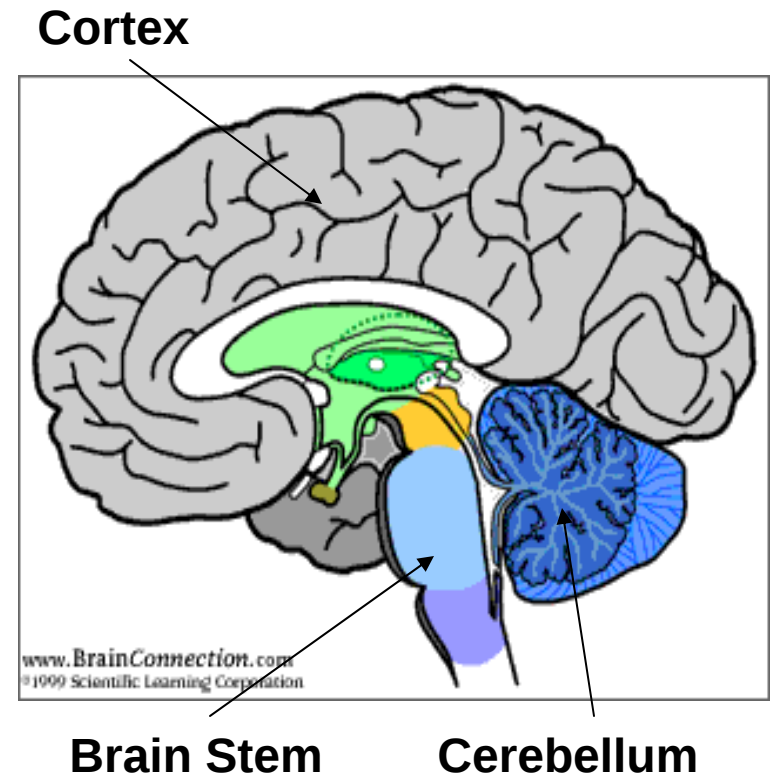
The Lobes

- There are 4 Lobes in each hemisphere:
 - Frontal.
 - Parietal.
 - Temporal.
 - Occipital.



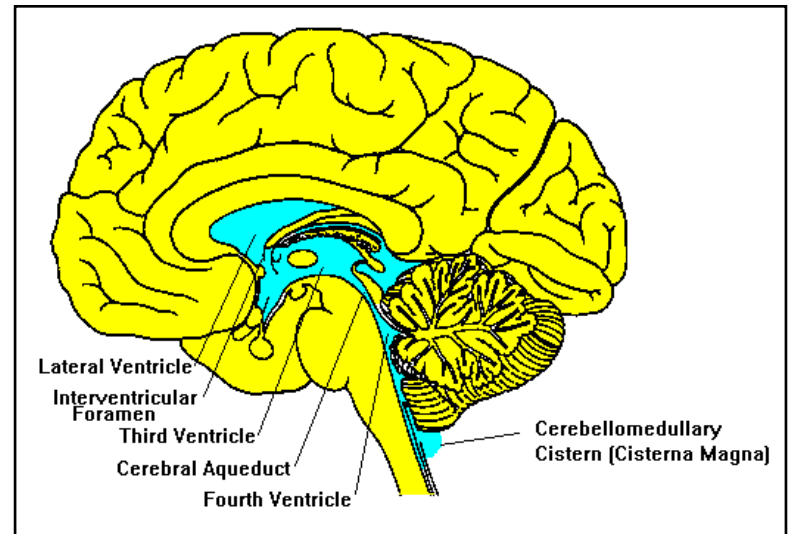
Three Brains in One

- The human brain as evolved over time and has three levels:
 - Oldest - Brain Stem.
 - Middle – Cerebellum.
 - Newest – Cortex.



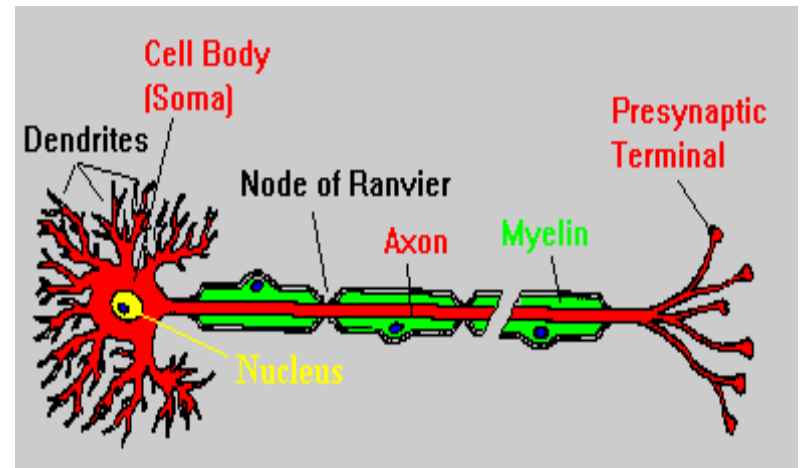
Cerebrospinal Fluid (CSF)

- CSF:
 - Clear, colorless fluid.
 - Contained in ventricles.
 - Volume: 125-150 ml.
 - Has 4 functions:
 - Buffers brain from skull.
 - Buoy brain on spine.
 - Excretes waste products.
 - Transports hormones.



The Neuron

- The working cells of the brain.
- Parts of the Neuron:
 - Cell Body (Soma).
 - Nucleus.
 - Dendrites.
 - Axon.
 - Myelin.
 - Synapses.



Neurons Communicate

- Electrochemically:

- Chemicals cause electrical signal.

- Chemicals become ions:

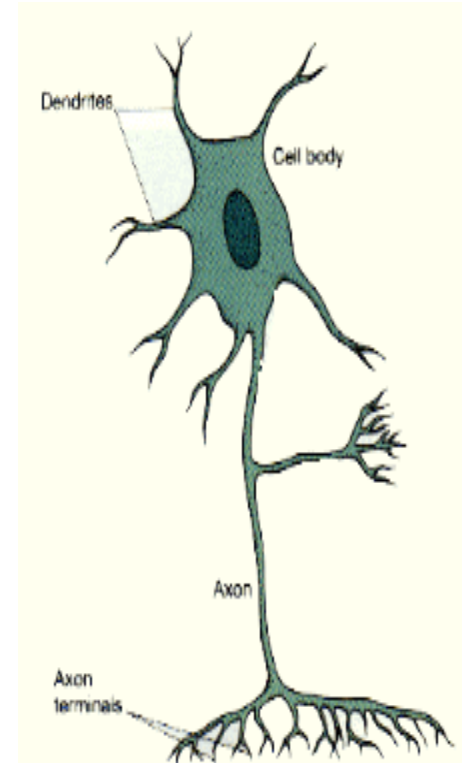
- Sodium.

- Potassium.

- Calcium.

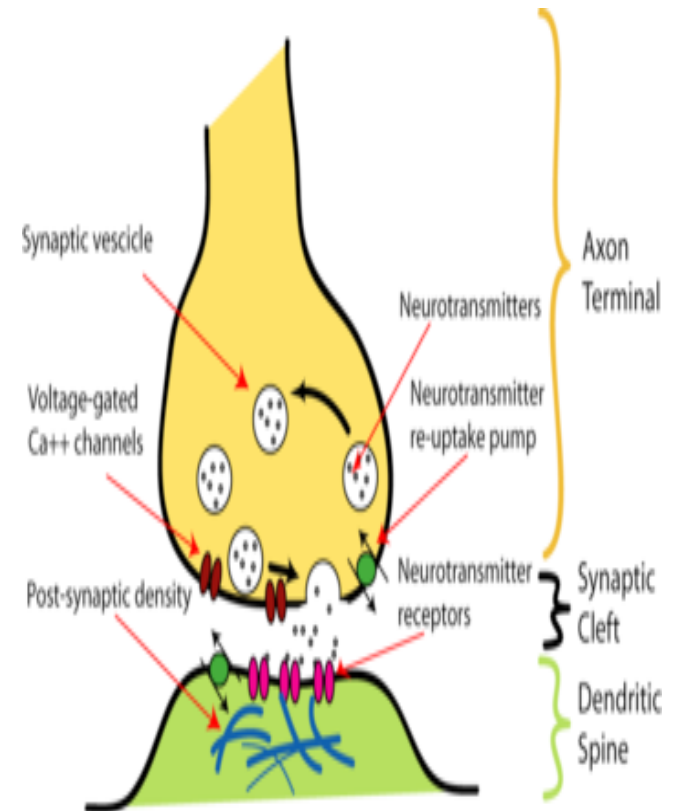
- Chloride.

- Axon membranes limit which ones pass through.



Neurotransmitters

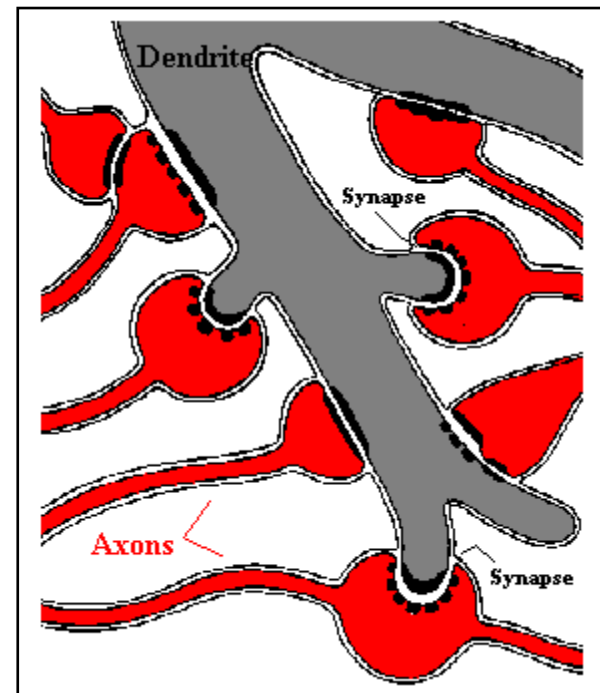
- Neurotransmitters:
 - Are chemicals:
 - Created in the neuron.
 - Transported down the axon.
 - Stored in vesicles.
 - Pass messages:
 - From axon terminal.
 - Across the synapse (gap).
 - Accepted by receptor.
 - Outcome:
 - Excite action potential.
 - Inhibit action potential.



Neurotransmitters

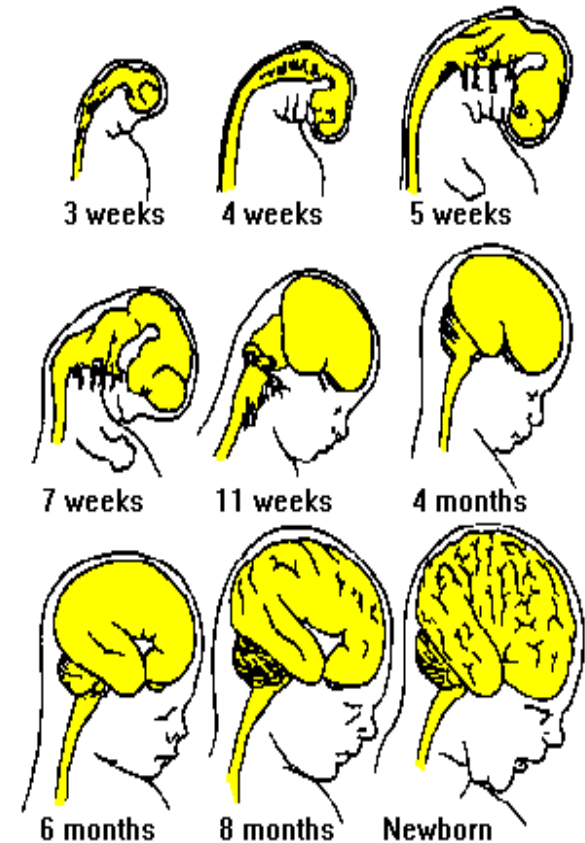
■ 7 basic substances:

- Acetylcholine
- Serotonin
- Dopamine
- Histamine
- Norepinephrine
- Epinephrine
- GABA



In-Utero Brain Development

- Typical Development:
 - 250,000 neurons daily.
 - 16th day - Neural Plate.
 - 18th day – Neural Groove.
 - 21st day – Neural Tube.
 - 7th week – 3 major areas:
 - Forebrain.
 - Midbrain.
 - Hindbrain.



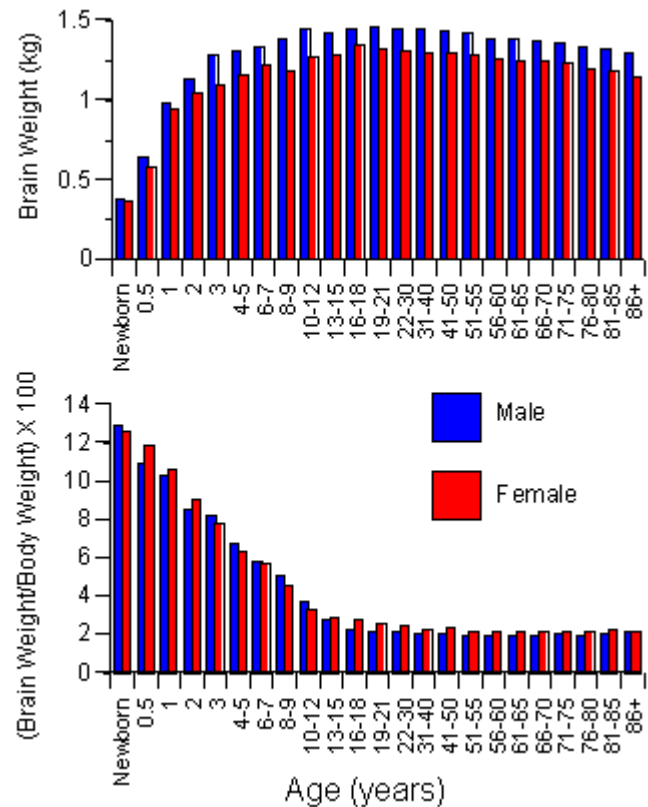
Development Continues

Feeling brain-dead? Don't worry - your tired old gray matter may work hard for you yet. Research to be published November in the journal Nature Medicine suggests that at least one area of the adult brain can reproduce and generate new cells, even after death. That is, of course, utterly contrary to everything we thought about the brain up until now. It was assumed that at some point in your grown-up life, brain cells stopped generating and started dying off. Not true - at least not in the hippocampus, according to a team of American and Swedish scientists who took samples of this portion of the brain from cancer patient autopsies.

The results confirm a number of other studies made - but essentially ignored -- over the past 30 years, which saw the same growth occur in the same area of the brain in rats and birds. The hippocampus is our learning and memory center - and in adult birds, it grew every time they learned new songs. Could lifelong education literally boost your brainpower? "We have to try to determine whether we might be able to have some positive control over how the human brain cells divide," said Dr. Fred Gage, the team leader.

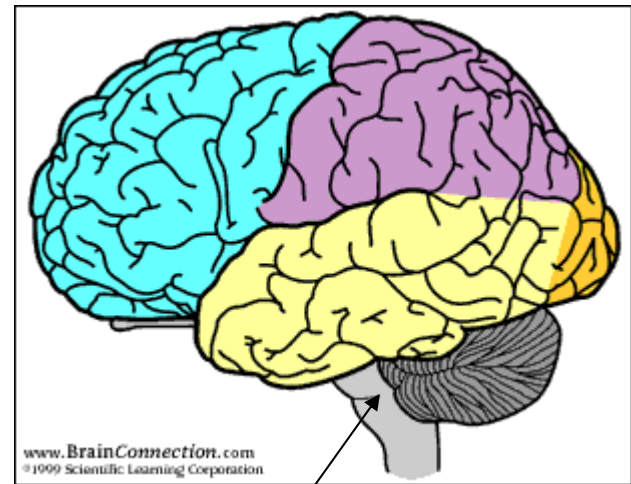
FIND THIS ARTICLE AT:

<http://www.time.com/time/nation/article/0,8599,15541,00.html>



Brain Stem - Functions

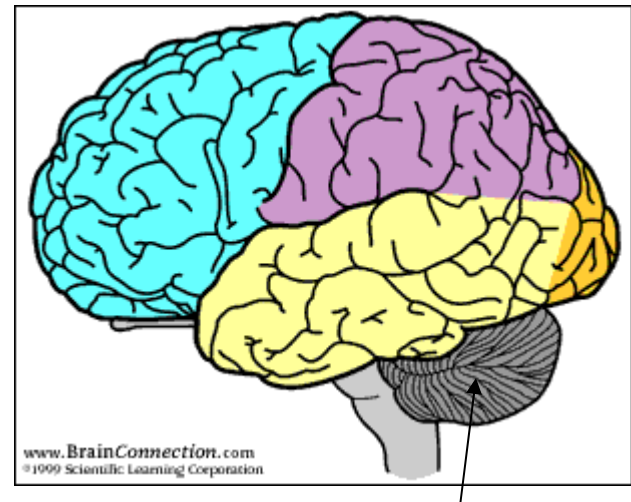
- Functions:
 - Breathing.
 - Heart rate.
 - Swallowing.
 - Startle response.
 - Autonomic nervous system.
 - Level of alertness.
 - Ability to sleep.
 - Sense of balance.



Brain Stem

Cerebellum - Functions

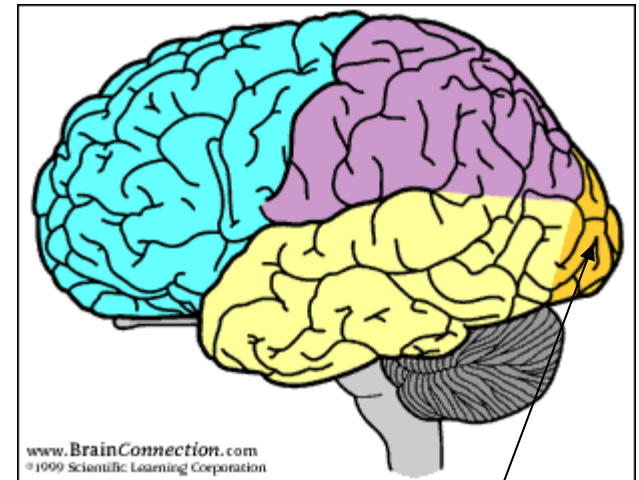
- Functions:
 - Balance.
 - Equilibrium.
 - Coordination of voluntary movement.
 - Memory for reflex motor acts.



Cerebellum

Occipital Lobes - Functions

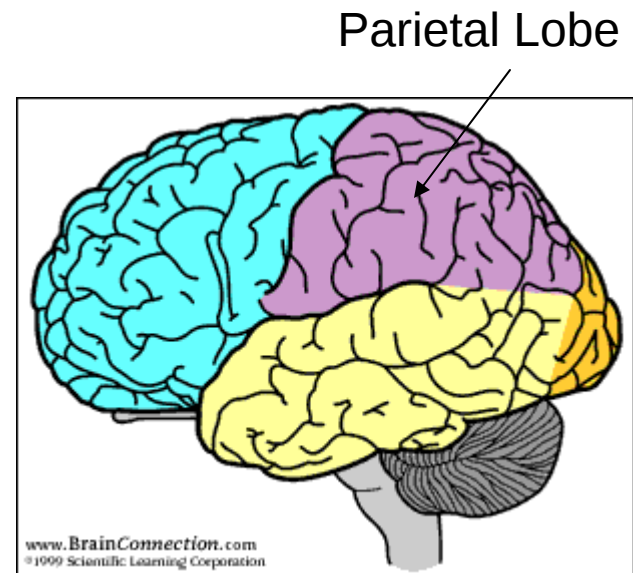
- Functions:
 - Visual input.
 - Visual perception.
 - Recognition of printed words.



Occipital Lobe

Parietal Lobes - Functions

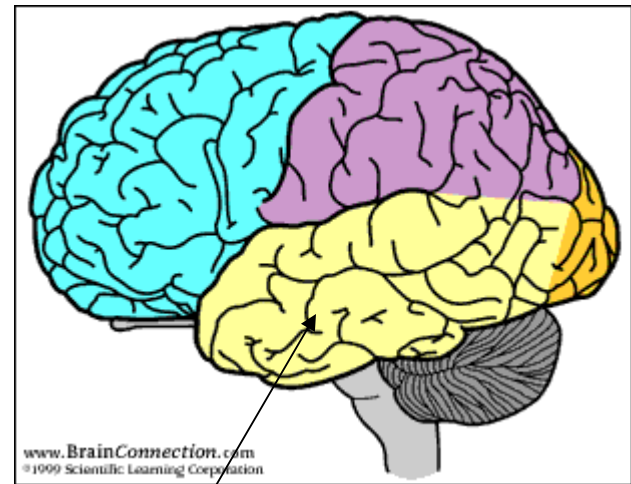
- Functions:
 - Visual attention.
 - Touch perception.
 - Goal-oriented voluntary movements.
 - Manipulation of objects.
 - Integration of different senses that allows for understanding of a single concept.



Temporal Lobes - Functions

■ Functions:

- Hearing ability.
- Memory acquisition.
- Some visual perceptions.
- Categorization of objects.
- Emotions.
- Language.
 - Wernicke's Area – Receptive.
 - Broca's Area – Expressive.



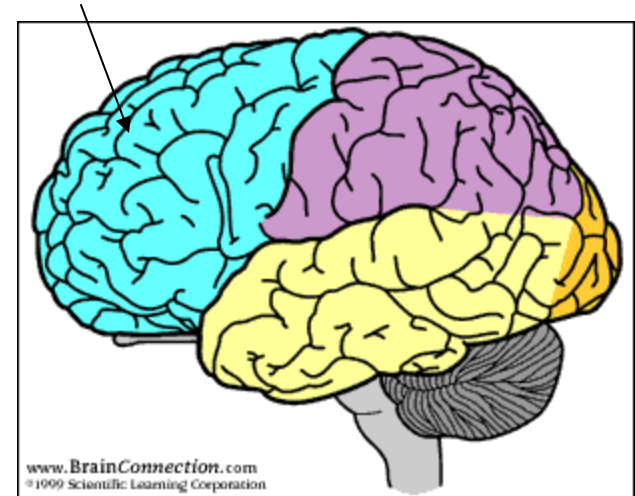
Temporal Lobe

Frontal Lobes - Functions

■ Functions:

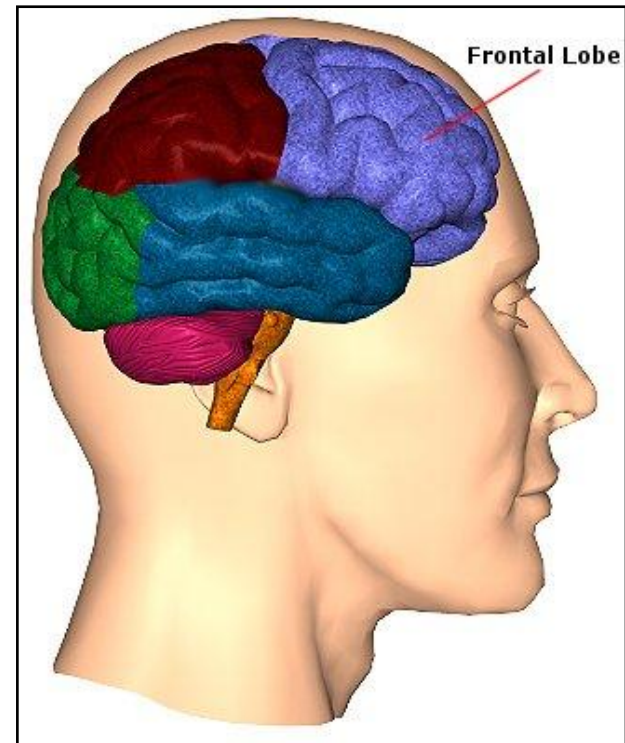
- Consciousness.
- Goal setting.
- Inhibition.
- Attention.
- Time perception.
- Initiation of response of environment.
- Judgment.
- Control of emotional response.
- Internalization of language.
- Volition.
- Memory for habits & motor activities.

Frontal Lobe



Prefrontal Lobes – Uniqueness

- Functions continue developing and maturing through adolescence.
- Reach maturity around age 25.
- Almost nothing is done by the brain without prefrontal lobe involvement.
- Most vulnerable part of brain in accidents – due to location and boney protrusions inside front of skull.



Prefrontal Lobes – Executive Functions

Everyone's Executive Functions fall along a continuum of development.

Child.....Adult

Disinhibition

Inhibition

Inattention

Attention

No Concept of Time

Time Perception

No Delaying Gratification

Self-Regulation

No Self-Starting

Initiation

Poor Judgment

Ability to Judge

Live in Moment

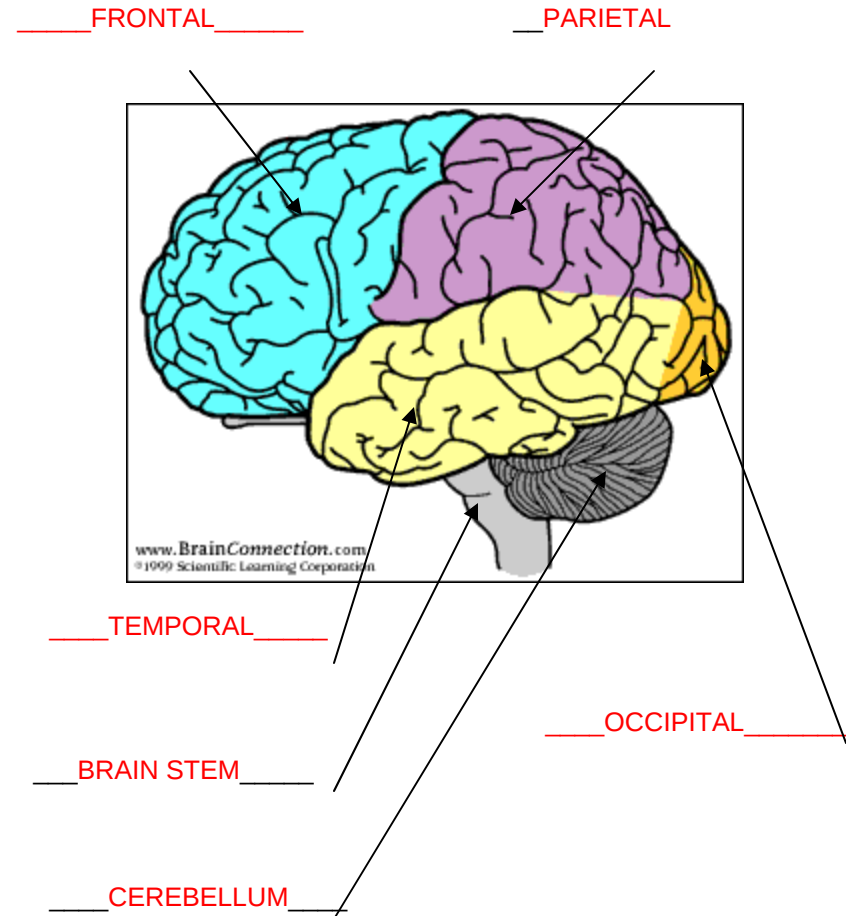
Goal-Setting

Post-Quiz – Part 1

Label the Brain

True or False

- F 1. The average brain weighs 7 pounds.
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Post-Quiz – Part 2

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2. Cerebellum
4. Parietal Lobes
6. Frontal Lobes

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 3 2. Vision

 6 3. Judgment

 5 4. Language

 2 5. Balance

 6 6. Attention

 4 7. Goal Setting

 4 8. Touch Perception

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 6 15. Control of Emotional Response

 5 16. Hearing Ability

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 6 18. Initiation

 1 19. Startle Response

 5 20. Categorization of Objects

Post-Quiz – Part 3

■ Explain the neurotypical development of the brain.

- 250,000 neurons develop daily
- 16th day neural plate, 18th day neural groove, 21st day neural tube,
- 7th week 3 major areas: forebrain, midbrain, hindbrain

■ Explain the basic function(s) of each lobe of the brain:

- Occipital lobe = sight and other visual information
- Parietal lobe = control of sensory processing, including touch
- Frontal lobe = reason, memory and speech
- Temporal lobe = hearing, taste and smell

Learning Outcomes Checklist

Can you:

☐ Identify:

- ☐ the basic structures of the brain: hemispheres, lobes, and levels.
- ☐ the basic structures and functions of neurons, axons and dendrites.
- ☐ the basic systems of the brain – physical, chemical, and electrical.

☐ Explain:

- ☐ neurotypical development of the brain.
- ☐ the basic functions of each lobe.

Brain Injury 102

The Basics

After completion of this module, the learner will be able to:

- Identify:
 - the basic types of brain injuries.
 - the types of insults to the brain's anatomy.
 - the potential effect(s) of the insult(s) to the anatomy of the brain.
 - the labeling systems used to classify the severity of brain injuries.
- Define “traumatic brain injury.”
- Explain:
 - how “severity” of brain injury is measured.
 - how “severity” and “impairment” do not measure the same impact.
 - typical sequelae based on where the insult(s) to the brain is(are).
 - impact of injury on an individual's life: Physical; Social; Emotional; Cognitive.

Pre-Quiz – Part 1

True or False.

- ___ 1. All TBI are caused by an external blow to the skull.
- ___ 2. Risk of a 2nd TBI is 3 times greater than the first.
- ___ 3. Stroke is a type of brain injury.
- ___ 4. Open head injury always involves a skull fracture.
- ___ 5. All secondary injuries to the brain involve bleeding.
- ___ 6. “Mild,” “moderate,” and “severe” refer to levels of impairment after brain injury.
- ___ 7. Effects of TBI can totally change a person’s personality.
- ___ 8. Some TBIs are localized to one area of the brain.
- ___ 9. CSF can cause complications, including death.
- ___ 10. The Rancho Los Amigos and Glasgow Coma Scale can predict levels of impairment.

Identify the type of brain Injury for which each statement is true: open head injury (O), closed head injury (C), or internal (I). May be more than one answer for each statement.

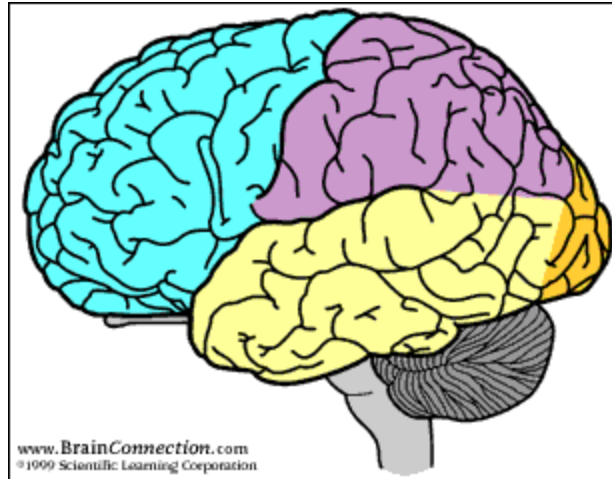
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- ___ 2. impact from outside source.
- ___ 3. skull fractured.
- ___ 4. brain deprived of oxygen.
- ___ 5. impairment localized.
- ___ 6. meninges and mater are compromised.
- ___ 7. coup-contrecoup actions cause damage.
- ___ 8. hemorrhaging may be involved.
- ___ 9. neurons and axons are sheared.
- ___ 10. biochemical cascade may occur.

Pre-Quiz – Part 2

For each area, list 3 possible ways an brain injury may impact an individual.

Frontal Lobe:

- 1.
- 2.
- 3.



Parietal Lobe:

- 1.
- 2.
- 3.

Temporal Lobe:

- 1.
- 2.
- 3.

Brain Stem:

- 1.
- 2.
- 3.

Cerebellum:

- 1.
- 2.
- 3.

Occipital Lobe:

- 1.
- 2.
- 3.

Traumatic Brain Injury

Definition:

“Brain Injury is an insult to the brain, not of degenerative or congenital nature, the result of either an external physical force or internal cause, that produces an altered mental status, which results in an impairment of behavioral, cognitive, emotional, and/or physical functioning.”

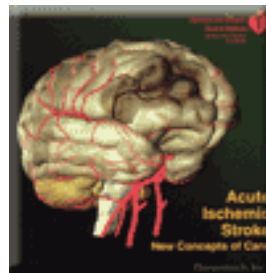
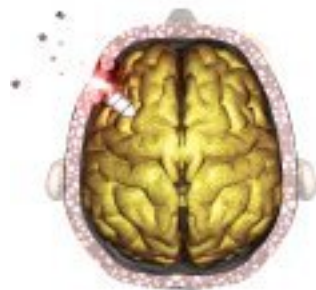
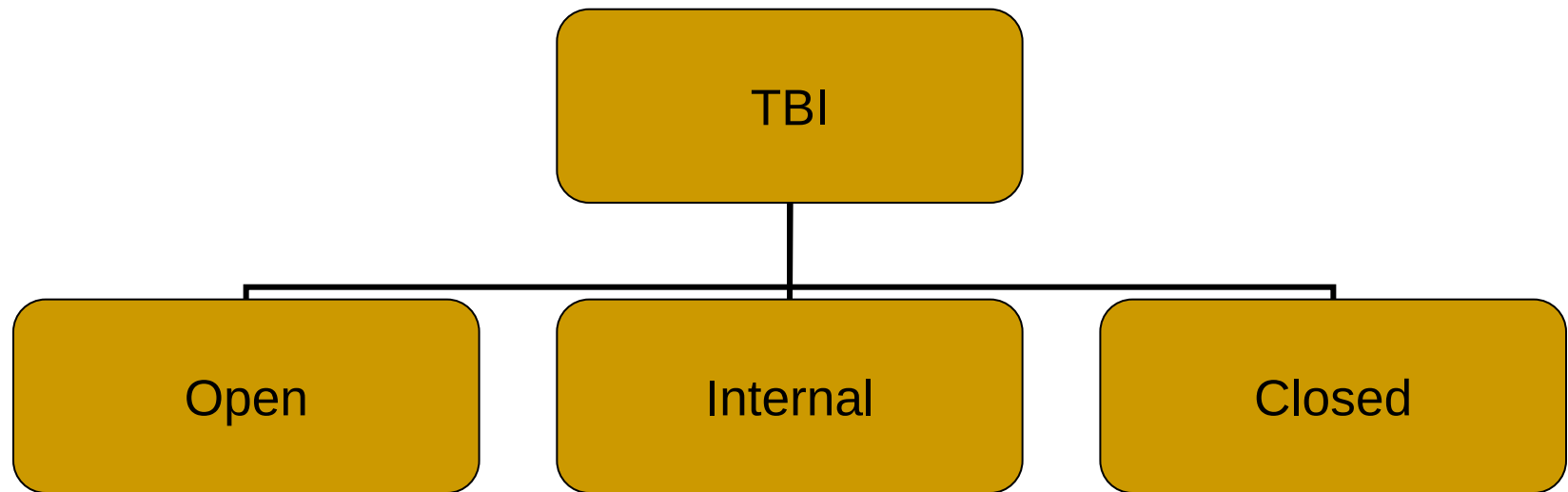
[Vermont Division of Vocational Rehabilitation, 1999]

Statistically:

- A TBI occurs every 21 seconds.
- 1.4 million people sustain a TBI annually in the United States.
- 235,000 people hospitalized annually with TBI.
- After 1st TBI, risk for 2nd is 3 times greater.
- After 2nd TBI, risk for 3rd is 8 times greater.
- TBI injuries cost more than \$48.3 billion annually.

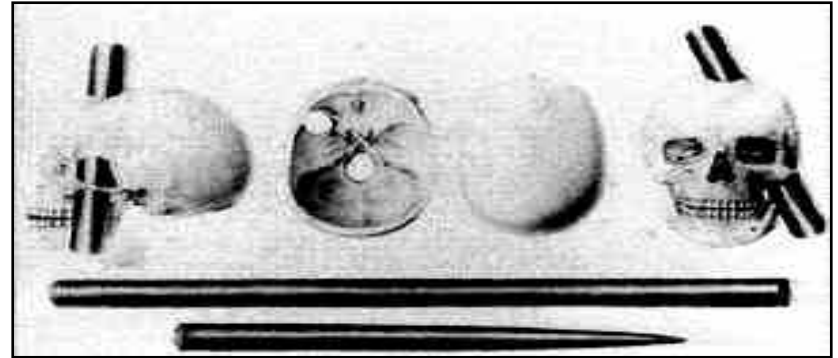
[Center for Disease Control, 2007]

Types of Traumatic Brain Injuries



Open Head Injury

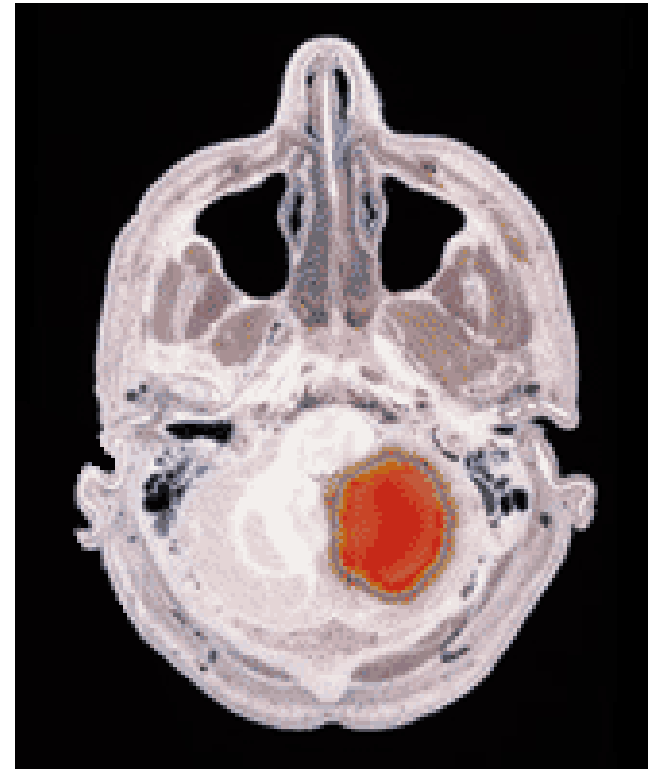
- Head receives an impact from an outside source.
- Skull is fractured or displaced.
- Meninges and mater are penetrated.
- May be bone fragments within brain tissue.
- Entire brain is at risk for more injury and/or infection.
- Impairment may be:
 - localized to area of brain penetrated.
 - Generalized due to ricochet effect of object within skull.



Phineas Gage, of Cavendish, Vermont, is the most celebrated example of an individual with an open head injury. In 1848, a steel tamping rod (13 lbs., 1.25" diameter) exploded through his skull and his left frontal cortex. He remained conscious until he saw the doctor who removed the iron. He developed a fungal infection and was semi-comatose for a couple of weeks. He physically recuperated and returned to work, but everyone found him to have become extraordinarily rude and profane. He died in 1860 following a series of seizures.

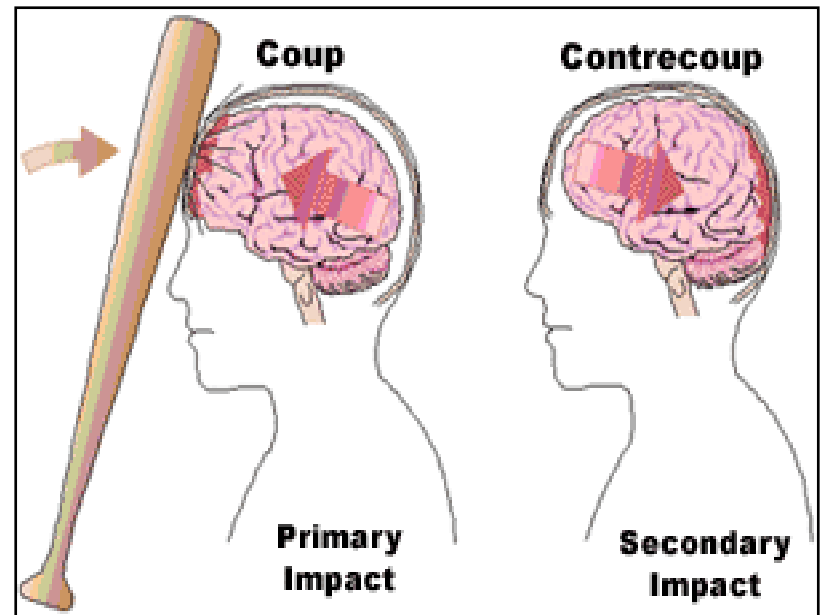
Internal Brain Injury

- Stroke occurs when blood vessels:
 - Burst (hemorrhagic).
 - Clog (ischemic).
- Deprives brain area of:
 - Oxygen.
 - Blood.
- Neurons die from:
 - Lack of oxygen & blood.
 - Pressure from fluid.



Closed Head Injury

- Also known as Coup-Contrecoup.
- Occurs when brain is accelerated, decelerated, or rotated rapidly.
- Usually the result of an impact from an outside source.
- Skull does not fracture or displace.
- Damage occurs because of violent movement which can lacerate, tear, shear, and contuse neurons and their connections.

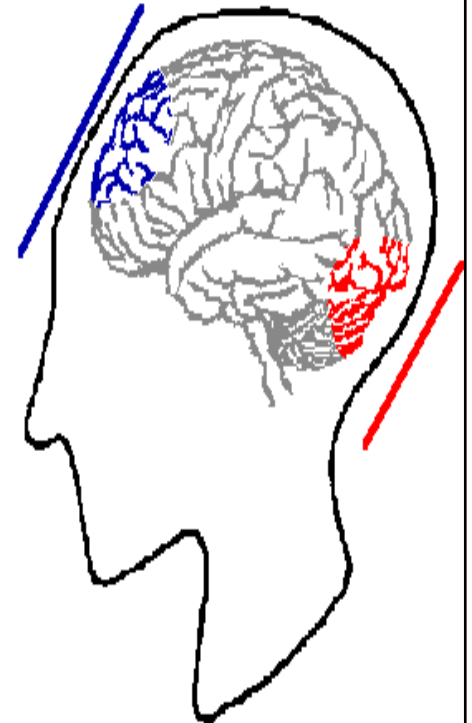


Effects of Coup-Contrecoup

- Bruising at points of impact.
- Tearing and shearing of neurons.
- Destruction of axonal connections & myelin.
- Biochemical cascading.
- Leaking of CSF.
- Hemorrhaging.

The **coup** injury is caused when the head is stopped suddenly and the brain rushes forward. It not only gets injured by hitting in the side of the skull but is also damaged as it rubs against all the inner ridges.

The **contrecoup** injury is caused when the brain bounces off the primary surface and impacts against the opposing side of the skull. Again, additional injury occurs as the brain again rubs against all the inner ridges.



Brain Injuries Secondary to Initial TBI

- **Edema** swelling of individual neurons due to influx of water following biochemical cascade in the brain.
- **Hydrocephalus** enlargement of the ventricles when cerebrospinal fluid (CSF) accumulates in the brain resulting in dilation of the ventricles and intracranial pressure (ICP).
- **Hemorrhaging** blood bleed from aneurysm or embolism of a blood vessel; can cause stroke; death of neurons; and/or increased intracranial pressure.
- **Anoxia** absence of oxygen to the brain; brain cells starve and die; may be caused by extensive bleeding elsewhere in the body, lack of breathing, or other gases replacing oxygen intake (e.g., carbon monoxide, helium).
- **Hypoxia** significant decrease in amount of oxygen getting to the brain; has same causes as anoxia; can trigger biochemical cascade.
- **Blood Clots** blockage elsewhere in body may travel to artery to the brain and cut off blood supply or hemorrhage; clotting within brain itself may cause stroke and hypoxia, triggering a biochemical cascade.
- **Biochemical Cascade** a series of chemical reactions within the brain as a result of all the cells firing at once; neurotransmitters are released which activate the receptors which spill out ions of calcium and potassium until the neurons become overwhelmed and go silent.
- **Seizures** abnormal electro-physiologic phenomena, resulting in abnormal synchronization of electrical neuronal activity; may manifest as an alteration in mental state, tonic or clonic movements, convulsions, and various other psychic symptoms.

Second Impact Syndrome

- a.k.a. as “Recurrent TBI.”
- Occurs when a person sustains a second TBI before the symptoms of the first TBI have healed.
- Risk for second TBI is three times greater.
- Risk for third TBI is eight times greater.

“What happens with multiple head injuries is that in some instances, you lose thousands, if not more, nerve cells. Then you reach a critical limit where you start not to have enough nerve cells to function at the level that you once did. You now pick up permanent rather than transient neurologic impairment. That’s a supply-and-demand way of looking at it.”

[Dr. R.C. Cantu as quoted in *Head Games* (2007)]

Scales to Measure Functioning

Rancho Los Amigos Cognitive Scale - Revised

■ 10-point scale

- Level I No Response: Total Assistance
- Level II Generalized Response: Total Assistance
- Level III Localized Response: Total Assistance
- Level IV Confused/Agitated: Maximal Assistance
- Level V Confused, Inappropriate Non-Agitated: Maximal Assistance
- Level VI Confused, Appropriate: Moderate Assistance
- Level VII Automatic, Appropriate: Minimal Assistance for Daily Living Skills
- Level VIII Purposeful, Appropriate: Stand-By Assistance
- Level IX Purposeful, Appropriate: Stand-By Assistance on Request
- Level X Purposeful, Appropriate: Modified Independent

Scales to Measure Functioning

Rancho Los Amigos Cognitive Scale - Revised

- Used to diagnose symptoms of TBI:
 - Awareness.
 - Cognition.
 - Behavior.
 - Interaction with environment.
- Short-hand communication within medical and rehabilitation field.
- Does **NOT** indicate severity of long-term impairments.

Scales to Measure Functioning

Glasgow Coma Scale

15-point scale:

I. Motor Response

- 6 – Obeys commands fully
- 5 – Localizes to noxious stimuli
- 4 – Withdraws from noxious stimuli
- 3 – Abnormal flexion, i.e. decorticate posturing
- 2 – Extensor response, i.e. decerebrate posturing
- 1 – No response

II. Verbal Response

- 5 – Alert and Oriented
- 4 – Confused, yet coherent, speech
- 3 – Inappropriate words & jumbled phrases consisting of words
- 2 – Incomprehensible sounds
- 1 – No Sounds

III. Eye Opening

- 4 – Spontaneous eye opening
- 3 – Eyes open to speech
- 2 – Eyes open to pain
- 1 – No eye opening

Scales to Measure Functioning

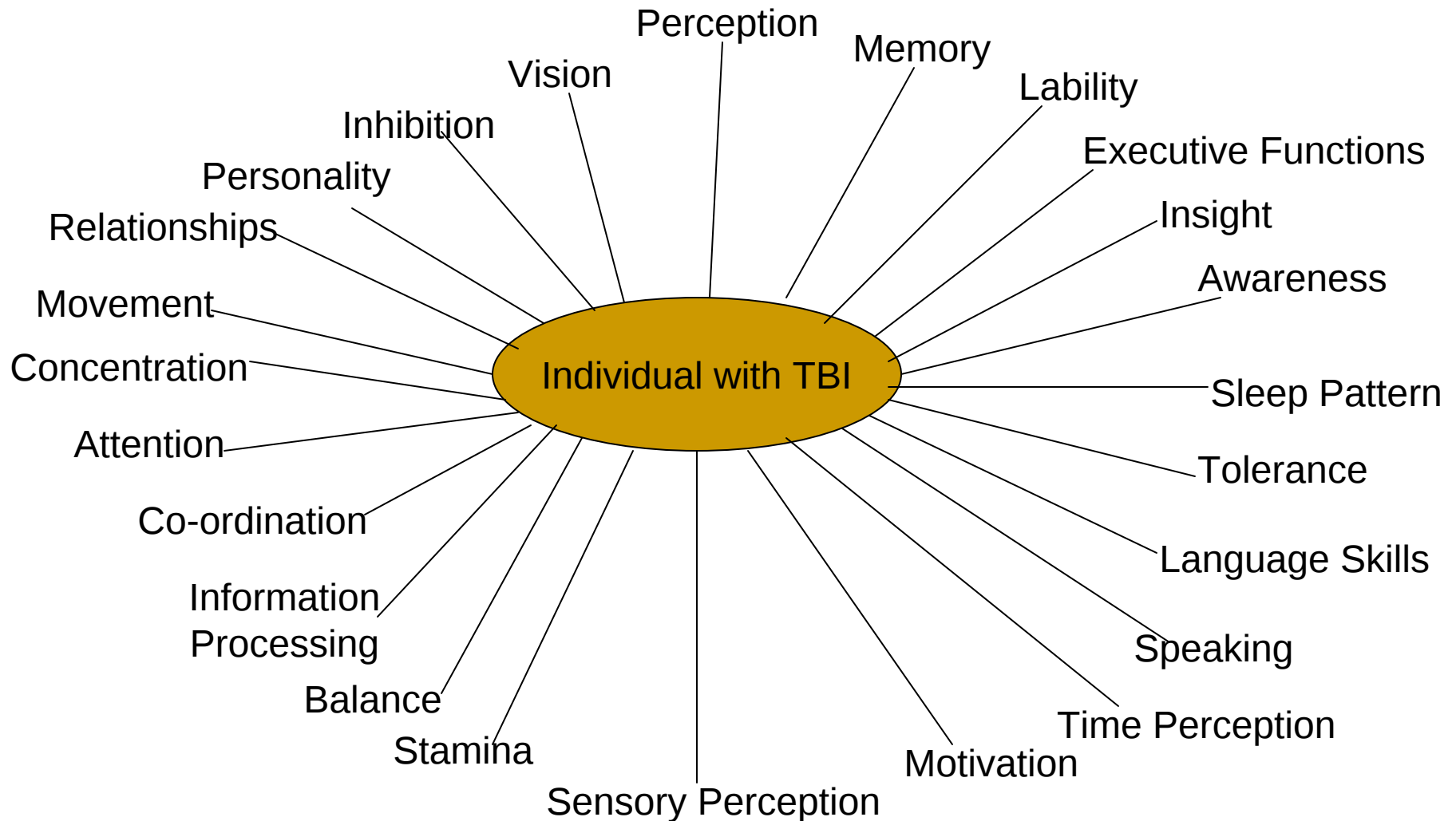
Glasgow Coma Scale

- Used to estimate and categorize outcomes of TBI on basis of overall social capability or dependence on others.
- Final score determined by adding I + II + III.
- Number communicates to medical workers 4 possible levels for survival (15 = best; 0 = worst).
- Levels:
 - Mild (13 - 15)
 - Moderate Disability (9 – 12)
 - Severe Disability (3 – 8)
 - Vegetative State (Less than 3)
 - Persistent Vegetative State
 - Brain Death
- Based on the severity of the coma, this scale does **NOT** indicate severity or sequelae of long-term impairments.

Impact of Brain Injury

- Labeling the level of brain injury (mild, moderate, severe) tends to be based on:
 - Length of loss of consciousness
 - Length of post-traumatic amnesia
 - Score on Glasgow Coma or Rancho Los Amigos scales
 - Number of residual symptoms at discharge
- Labeling does not involve:
 - Severity of long-term impairments
 - Physical, psycho-social, behavioral, or cognitive skills & deficits
 - Impact on daily living skills

Impact of Brain Injury



Impact of Brain Injury

■ Physical:

- Balance
- Movement
- Speech
- Vision
- Hearing
- Tactile
- Smell
- Taste
- Stamina
- Pain

■ Cognitive:

- Memory
- Attention/Concentration
- Processing Speed
- Quality of Thought Process
- Problem Solving
- Reading
- Writing
- Math

Impact of Brain Injury

■ Executive Functions:

- Goal Setting
- Problem Solving
- Reasoning
- Learning from Feedback
- Inhibition
- Self-Control
- Organizing
- Delaying gratification
- Initiation

■ Social:

- Poor Judgment
- Empathy
- Theory of Mind
- Language Pragmatics
- Friendship Maintenance
- Isolation
- Impulsivity
- Conversation Maintenance

Impact of Brain Injury

■ Personality:

- Aggression
- Passivity
- Lability
- Irritability
- Disinhibition
- Amotivation
- Indifference

■ Psychiatric:

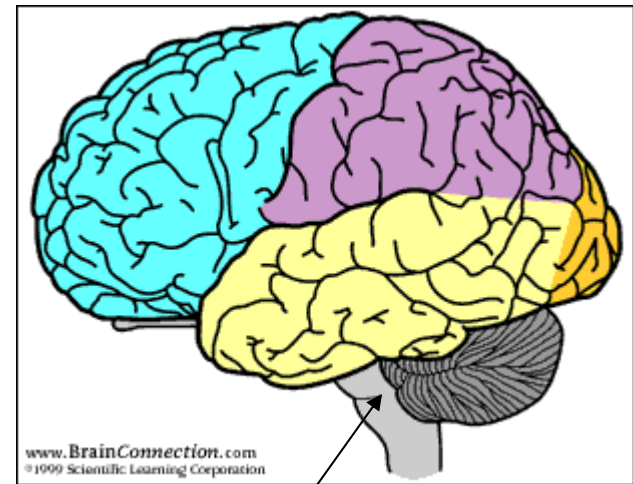
- Depression
- Mania
- Anxiety
- Psychosis
- Substance Abuse
- Rage
- Anger

Impact of Brain Injury

- **The most important things to remember:**
 - A person with a brain injury is a person who deserves dignity and respect.
 - No two brain injuries are exactly the same.
 - The effects of brain injury are complex and vary greatly from person to person.
 - While plateaus happen, recover from brain injury can improve for years after the injury – deficits can be rehabilitated.
 - The effects of a brain injury depend on such factors as severity, cause, and location within the brain.

Brain Stem – Possible Impairments

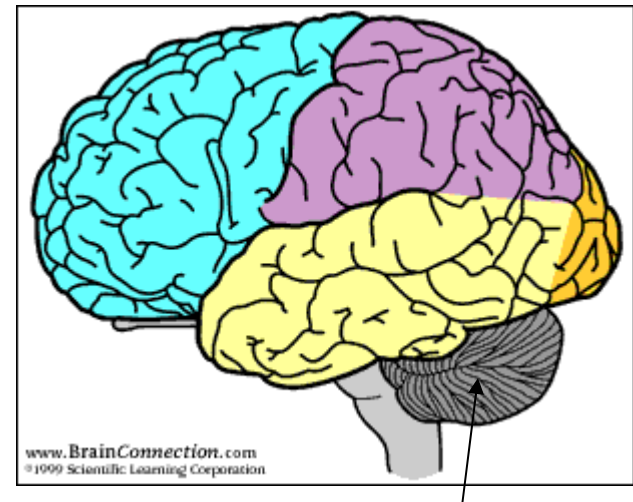
- Problems:
 - Decreased vital capacity in breathing.
 - Difficulty with organization.
 - Difficulty with perception of environment.
 - Problems with balance.
 - Problems with movement.
 - Vertigo.
 - Sleeping difficulties.



Brain Stem

Cerebellum – Possible Impairments

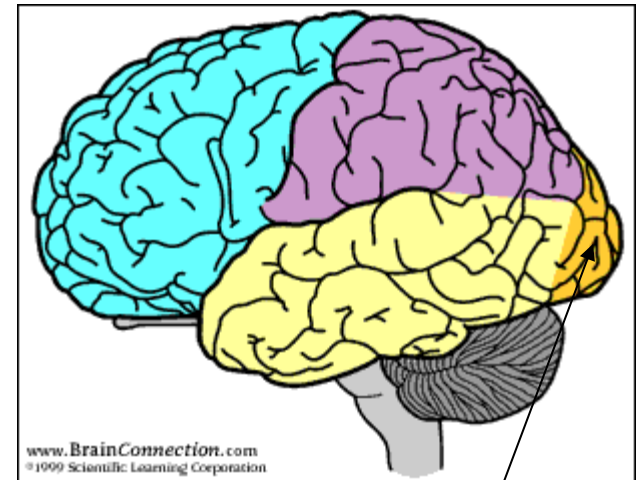
- Problems:
 - Loss of ability to coordinate fine movements.
 - Loss of ability to walk.
 - Inability to reach out and grab objects.
 - Inability to make rapid movements.
 - Tremors.
 - Vertigo.
 - Scanning speech.



Cerebellum

Occipital Lobes – Possible Impairments

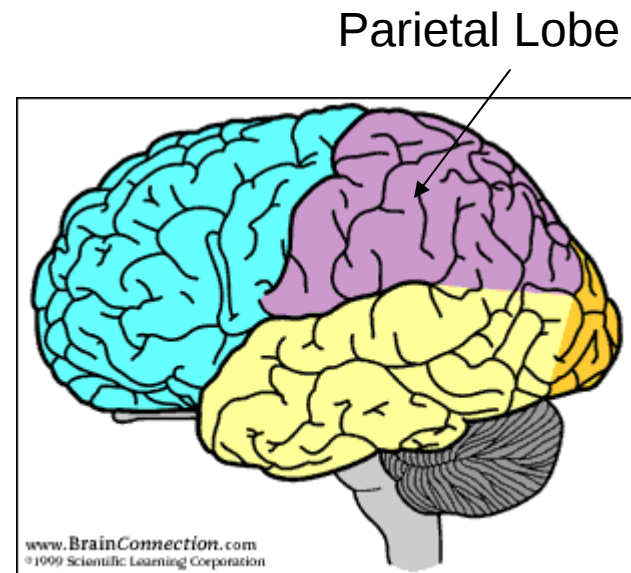
- Problems:
 - Visual field cuts.
 - Loss of vision of opposite field.
 - Color agnosia.
 - Difficulty locating objects in the environment.
 - Productions of hallucinations.
 - Visual illusions – inaccurately seeing objects.
 - Word blindness – inability to recognize words.
 - Movement agnosia.
 - Difficulty in reading.
 - Difficulty in writing.
 - Difficulty recognizing drawn objects.



Occipital Lobe

Parietal Lobes – Possible Impairments

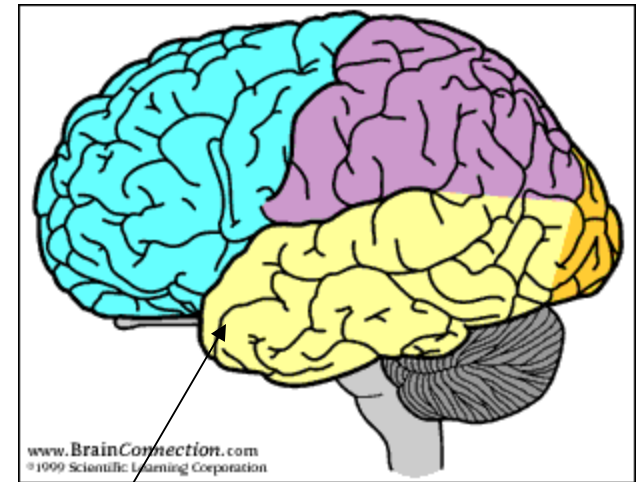
- Problems:
 - Splitting attention.
 - Anomia.
 - Agraphia.
 - Alexia.
 - Dyscalculia.
 - Difficulty drawing objects.
 - Difficulty distinguishing left from right.
 - Apraxia that leads to difficulties in self-care.
 - Inability to focus visual attention.
 - Difficulties with eye-hand coordinaton.



Temporal Lobes – Possible Impairments

■ Problems:

- Prosopagnosis.
- Wernicke's aphasia.
- Disturbance with selective attention.
- Short-term memory loss.
- Difficulty categorizing.
- Persistent talking.
- Auditory Deficits.
- Difficulty with concentration.
- Seizures.
- Change in sexual interest.
- Difficulty in locating objects in the environment.

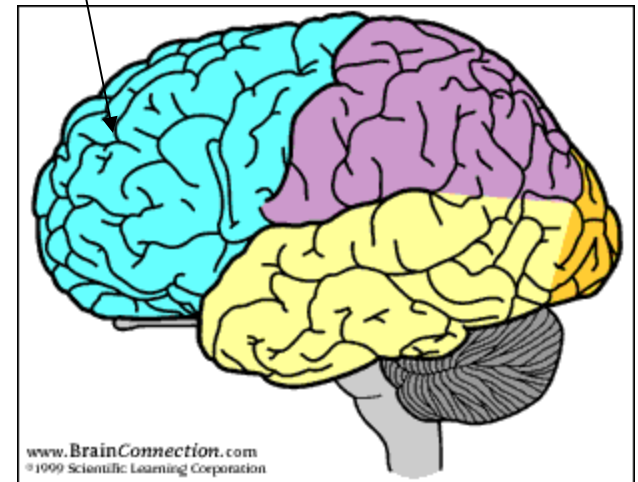


Temporal Lobe

Frontal Lobes – Possible Impairments

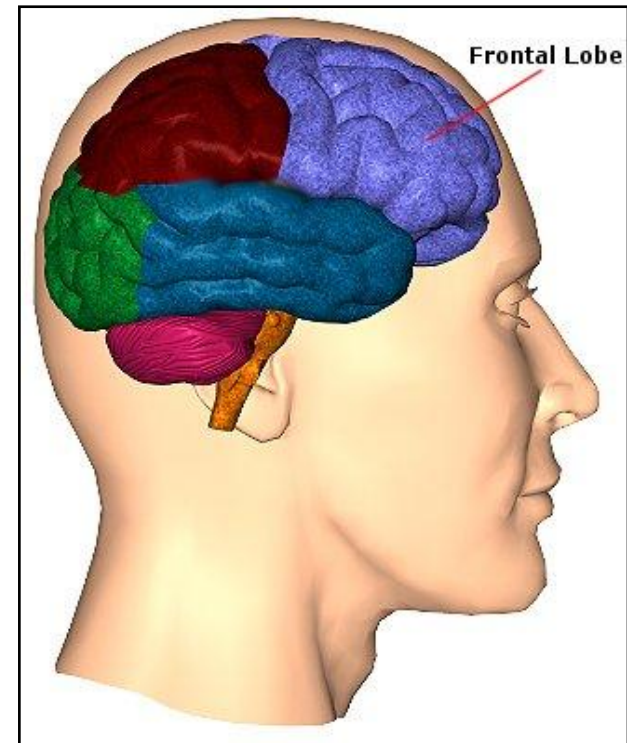
- Problems:
 - Loss of spontaneity in response to others and the environment.
 - Loss of flexibility in thinking.
 - Perseveration.
 - Attention deficits .
 - Emotional lability.
 - Changes in personality.
 - Changes in social behavior.
 - Difficulty in problem solving.
 - Broca's aphasia.
 - Disinhibition.
 - Loss of metacognitive skills.
 - Loss of self-monitoring.
 - Impaired working memory.

Frontal Lobe



Prefrontal Lobes – Uniqueness

- Largest group of individuals sustaining TBI are between the ages of 0 to 4 and 15 to 19.
- Most vulnerable part of brain in accidents – due to location and boney protrusions inside front of skull.
- The prefrontal lobes don't fully develop until age 25.
- Almost nothing is done by the brain without prefrontal lobe involvement.



Prefrontal Lobes – Executive Functions

Everyone's Executive Functions fall along a continuum of development.

Mature.....Impaired

Inhibition

Disinhibition

Attention

Inattention

Time Perception

No Concept of Time

Self-Regulation

No Delaying Gratification

Initiation

No Self-Starting

Ability to Judge

Poor Judgment

Goal-Setting

Living in the Moment

Post-Quiz – Part 1

True or False.

- ___ 1. All TBI are caused by an external blow to the skull.
- ___ 2. Risk of a 2nd TBI is 3 times greater than the first.
- ___ 3. Stroke is a type of brain injury.
- ___ 4. Open head injury always involves a skull fracture.
- ___ 5. All secondary injuries to the brain involve bleeding.
- ___ 6. “Mild,” “moderate,” and “severe” refer to levels of impairment after brain injury.
- ___ 7. Effects of TBI can totally change a person’s personality.
- ___ 8. Some TBIs are localized to one area of the brain.
- ___ 9. CSF can cause complications, including death.
- ___ 10. The Rancho Los Amigos and Glasgow Coma Scale can predict levels of impairment.

Identify the type of brain Injury for which each statement is true: open head injury (O), closed head injury (C), or internal (I). May be more than one answer for each statement.

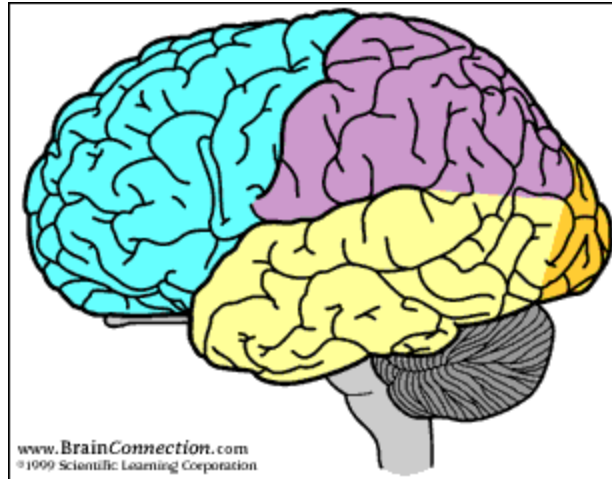
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- ___ 4. brain deprived of oxygen.
- ___ 5. impairment localized.
- ___ 6. meninges and mater are compromised.
- ___ 7. coup-contrecoup actions cause damage.
- ___ 8. hemorrhaging may be involved.
- ___ 9. neurons and axons are sheared.
- ___ 10. biochemical cascade may occur.

Post-Quiz – Part 2

For each area, list 3 possible ways an brain injury may impact an individual.

Frontal Lobe:

- 1.
- 2.
- 3.



Parietal Lobe:

- 1.
- 2.
- 3

Temporal Lobe:

- 1.
- 2.
- 3.

Brain Stem:

- 1.
- 2.
- 3.

Cerebellum:

- 1.
- 2.
- 3.

Occipital Lobe:

- 1.
- 2.
- 3

Post-Quiz – Part 3

Answer each of the following questions:

1. Define traumatic brain injury per the State of Vermont.
2. What do the labels “mild,” “moderate,” and “severe” indicate about a TBI?
3. Why is injury to the pre-frontal lobes so significant?
4. Explain why an individual with significant impairment in all areas (cognitive, physical, social-emotional, etc.) may be labeled with a “mild” TBI.
5. Explain the impact of TBI on an individual:
 - Physically::
 - Socially:
 - Cognitively:
 - Emotionally:

Learning Outcomes Checklist

Can you:

☐ Identify:

- ☐ the basic types of brain injuries.
- ☐ the types of insults to the brain's anatomy.
- ☐ the potential effect(s) of the insult(s) to the anatomy of the brain.
- ☐ the labeling systems used to classify the severity of brain injuries.

☐ Define “traumatic brain injury.”

☐ Explain:

- ☐ how “severity” of brain injury is measured.
- ☐ how “severity” and “impairment” do not measure the same impact.
- ☐ typical sequelae based on where the insult(s) to the brain is(are).
- ☐ impact of injury on an individual's life: Physical; Social; Emotional; Cognitive.

Brain Injury 102

Workbook

Pre-Quiz – Part 1

True or False.

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- ___ 2. Risk of a 2nd TBI is 3 times greater than the first.
- ___ 3. Stroke is a type of brain injury.
- ___ 4. Open head injury always involves a skull fracture.
- ___ 5. All secondary injuries to the brain involve bleeding.
- ___ 6. “Mild,” “moderate,” and “severe” refer to levels of impairment after brain injury.
- ___ 7. Effects of TBI can totally change a person’s personality.
- ___ 8. Some TBIs are localized to one area of the brain.
- ___ 9. CSF can cause complications, including death.
- ___ 10. The Rancho Los Amigos and Glasgow Coma Scale can predict levels of impairment.

Identify the type of brain Injury for which each statement is true: open head injury (O), closed head injury (C), or internal (I). May be more than one answer for each statement.

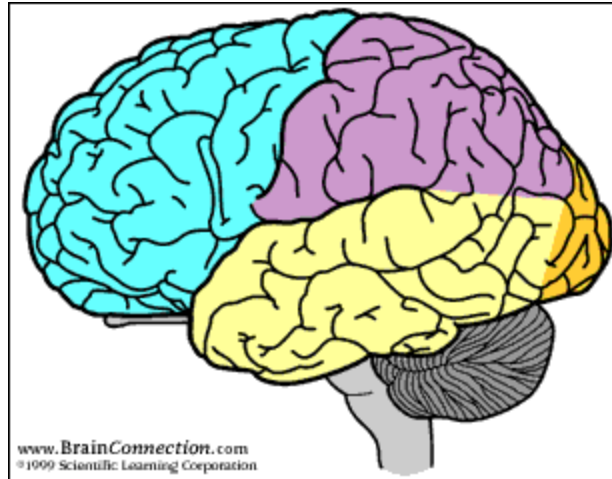
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- ___ 7. coup-contrecoup actions cause damage.
- ___ 8. hemorrhaging may be involved.
- ___ 9. neurons and axons are sheared.
- ___ 10. biochemical cascade may occur.

Pre-Quiz – Part 2

For each area, list 3 possible ways an brain injury may impact an individual.

Frontal Lobe:

- 1.
- 2.
- 3.



Parietal Lobe:

- 1.
- 2.
- 3

Temporal Lobe:

- 1.
- 2.
- 3.

Brain Stem:

- 1.
- 2.
- 3.

Cerebellum:

- 1.
- 2.
- 3.

Occipital Lobe:

- 1.
- 2.
- 3

Worksheet 1

1. Define traumatic brain injury.
2. List and describe the three types of TBI:
3. Explain the increased risk for second and third TBIs once an individual has a TBI.
4. Explain coup-contrecoup.
5. What are secondary brain injuries?

Worksheet 2

1. Explain the value of the Rancho Los Amigos and Glasgow Coma Scales.
2. Explain how the severity of TBI is measured.
3. Explain the difference between “severity” labels and “impairments.”
4. Explain the major life activity areas that can be impacted by TBI.
5. Explain why the impact of no two TBIs are identical.

Worksheet 3

Explain each term below:

1. Edema

2. Hydrocephalus

3. Anoxia

4. Biochemical cascade

5. Seizure

6. Post-traumatic amnesia

1. Aphasia

2. Agraphia

3. Dyscalculia

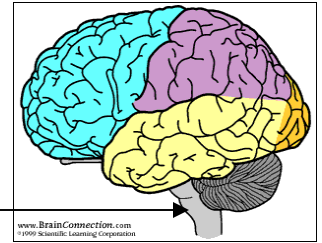
4. Agnosia

5. Visual field cut

6. Perseveration

Worksheet 4

The Brain Stem

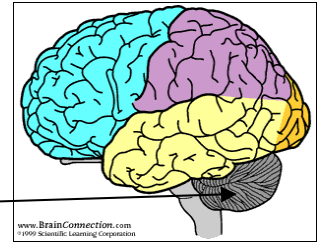


■ Functions:

■ Possible Impairments:

Worksheet 5

The Cerebellum

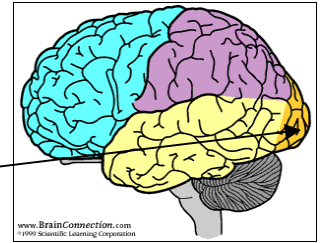


■ Functions:

■ Possible Impairments:

Worksheet 6

The Occipital Lobe

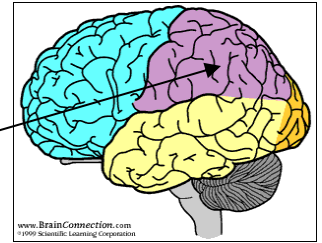


■ Functions:

■ Possible Impairments:

Worksheet 7

The Parietal Lobe

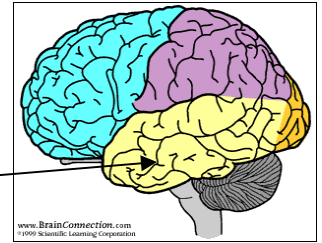


■ Functions:

■ Possible Impairments:

Worksheet 8

The Temporal Lobe

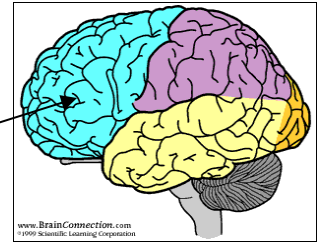


■ Functions:

■ Possible Impairments:

Worksheet 9

The Prefrontal Lobe



■ Functions:

■ Possible Impairments:

Post-Quiz – Part 1

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- ___ 10. The Rancho Los Amigos and Glasgow Coma Scale can predict levels of impairment.

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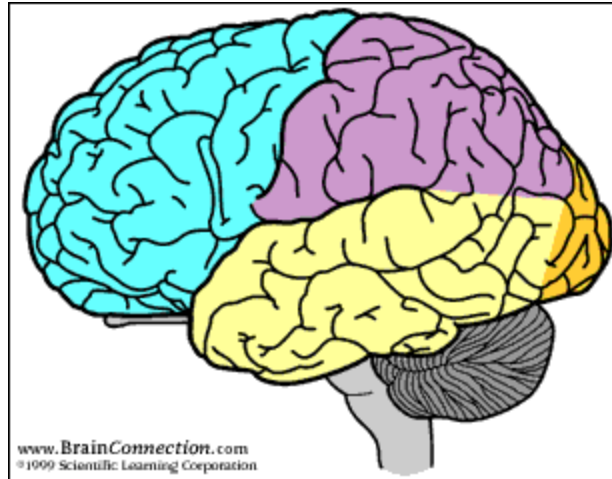
- ___ 1. caused by blood vessel burst.
- ___ 2. impact from outside source.
- ___ 3. skull fractured.
- ___ 4. brain deprived of oxygen.
- ___ 5. impairment localized.
- ___ 6. meninges and mater are compromised.
- ___ 7. coup-contrecoup actions cause damage.
- ___ 8. hemorrhaging may be involved.
- ___ 9. neurons and axons are sheared.
- ___ 10. biochemical cascade may occur.

Post-Quiz – Part 2

For each area, list 3 possible ways an brain injury may impact an individual.

Frontal Lobe:

- 1.
- 2.
- 3.



Parietal Lobe:

- 1.
- 2.
- 3

Temporal Lobe:

- 1.
- 2.
- 3.

Brain Stem:

- 1.
- 2.
- 3.

Cerebellum:

- 1.
- 2.
- 3.

Occipital Lobe:

- 1.
- 2.
- 3

Post-Quiz – Part 3

Answer each of the following questions:

1. Define traumatic brain injury per the State of Vermont.
2. What do the labels “mild,” “moderate,” and “severe” indicate about a TBI?
3. Why is injury to the pre-frontal lobes so significant?
4. Explain why an individual with significant impairment in all areas (cognitive, physical, social-emotional, etc.) may be labeled with a “mild” TBI.
5. Explain the impact of TBI on an individual:
 - Physically::
 - Socially:
 - Cognitively:
 - Emotionally:

Learning Outcomes Checklist

Can you:

☐ Identify:

- ☐ the basic types of brain injuries.
- ☐ the types of insults to the brain's anatomy.
- ☐ the potential effect(s) of the insult(s) to the anatomy of the brain.
- ☐ the labeling systems used to classify the severity of brain injuries.

☐ Define “traumatic brain injury.”

☐ Explain:

- ☐ how “severity” of brain injury is measured.
- ☐ how “severity” and “impairment” do not measure the same impact.
- ☐ typical sequelae based on where the insult(s) to the brain is(are).
- ☐ impact of injury on an individual's life: Physical; Social; Emotional; Cognitive.

Brain Injury 102

The Basics

After completion of this module, the learner will be able to:

- Identify:
 - the basic types of brain injuries.
 - the types of insults to the brain's anatomy.
 - the potential effect(s) of the insult(s) to the anatomy of the brain.
 - the labeling systems used to classify the severity of brain injuries.
- Define “traumatic brain injury.”
- Explain:
 - how “severity” of brain injury is measured.
 - how “severity” and “impairment” do not measure the same impact.
 - typical sequelae based on where the insult(s) to the brain is(are).
 - impact of injury on an individual's life: Physical; Social; Emotional; Cognitive.

Pre-Quiz – Part 1

True or False.

- ☐_F_ 1. All TBI are caused by an external blow to the skull.
definition page 5
- ☐_T_ 2. Risk of a 2nd TBI is 3 times greater than the first.
- ☐_T_ 3. Stroke is a type of brain injury.
- ☐_T_ 4. Open head injury always involves a skull fracture.
- ☐_F_ 5. All secondary injuries to the brain involve bleeding.
ANSWERS PAGE 11
- ☐_F_ 6. “Mild,” “moderate,” and “severe” refer to levels of impairment after brain injury. PAGE 17
- ☐_T_ 7. Effects of TBI can totally change a person’s personality.
- ☐_T_ 8. Some TBIs are localized to one area of the brain.
- ☐_T_ 9. CSF can cause complications, including death.
- ☐_F_ 10. The Rancho Los Amigos and Glasgow Coma Scale can predict levels of impairment. PAGE 14

Identify the type of brain Injury for which each statement is true: open head injury (O), closed head injury (C), or internal (I). May be more than one answer for each statement.

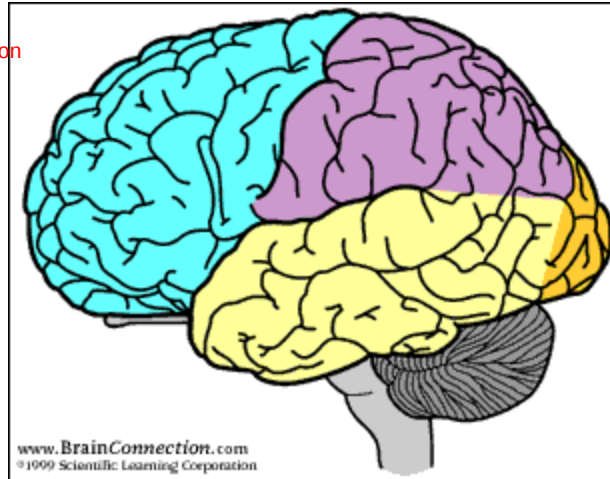
- ☐_I_ 1. caused by blood vessel burst.
- ☐_O,C_ 2. impact from outside source.
- ☐_O_ 3. skull fractured.
- ☐_I_ 4. brain deprived of oxygen.
- ☐_O_ 5. impairment localized.
- ☐_O_ 6. meninges and mater are compromised.
- ☐_C_ 7. coup-contrecoup actions cause damage.
- ☐_I_ 8. hemorrhaging may be involved.
- ☐_C_ 9. neurons and axons are sheared.
- ☐_C_ 10. biochemical cascade may occur.

Pre-Quiz – Part 2

For each area, list 3 possible ways an brain injury may impact an individual.

Frontal Lobe: PG28

1. Loss of spontaneity in response to others and the environ
2. Loss of flexibility in thinking
3. Perseveration
4. Attention deficits
5. Emotional lability
6. Changes in personality
7. Changes in social behavior
8. Difficulty in problem solving
9. Broca's aphasia
10. Disinhibition
11. Loss of self monitoring
12. Impaired working memory



Parietal Lobe: page 26

1. Splitting attention
2. Anomia
3. Agraphia
4. Alexia
5. Dyscalculia
6. Difficulty drawing objects
7. Diff. distinguishing Left frm Right
8. Inability to focus visual attention
9. Diff with eye/hand coordination
10. Apraxia that leads to difficulties in self care

Temporal Lobe:

1. Prosopagnosis
2. Wernicke's aphasia
3. Disturbance with selective attention
4. Short term memory loss
5. Difficulty categorizing
6. Persistant talking
7. Auditory Deficits
8. Difficulty with concentration
9. Seizures
10. Change in sexual interest
11. Difficulty in location objects in the environment

Brain Stem:

1. Decreased vital capacity in breathing
2. Difficulty with organization
3. Difficulty with perception of environment
4. Problems with balance
5. Problems with movement
6. Vertigo
7. Sleeping difficulties

Cerebellum:

1. Loss of ability to coordinate fine movement
2. Loss of ability to walk
3. Inability to reach out and grab objects
4. Inability to make rapid movements
5. Tremors
6. Vertigo
7. Scanning speech

Occipital Lobe:

Page 25

1. Visual field cuts
2. Loss of vision of opposite field
3. Color Agnosia
4. Diff locating objects in environment
5. Productions of hallucinations
6. Visual illusions, inaccurately seeing obj
7. Word blindness/ inability to recognize words
8. Movement agnosia
9. Difficulty reading
10. Difficulty writing
11. Difficulty recognizing drawn objects

Traumatic Brain Injury

Definition:

“Brain Injury is an insult to the brain, not of degenerative or congenital nature, the result of either an external physical force or internal cause, that produces an altered mental status, which results in an impairment of behavioral, cognitive, emotional, and/or physical functioning.”

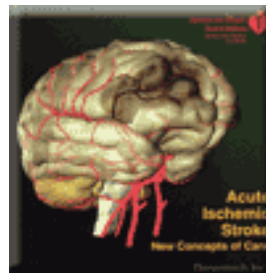
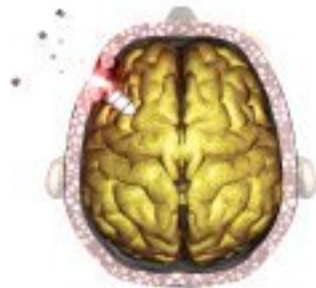
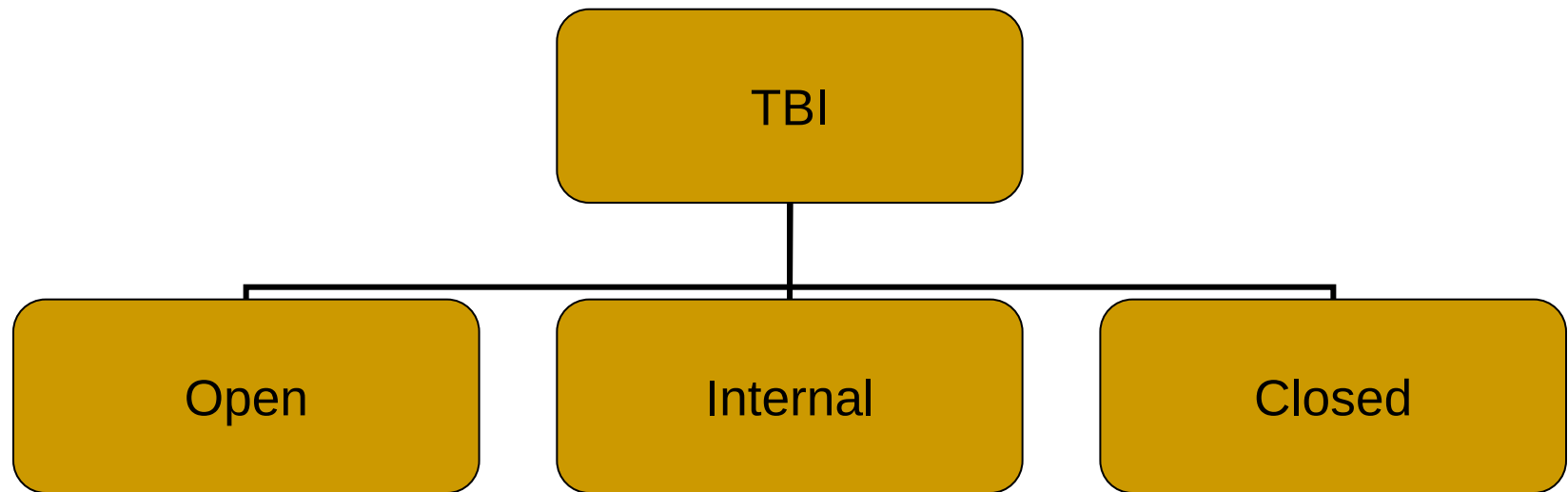
[Vermont Division of Vocational Rehabilitation, 1999]

Statistically:

- A TBI occurs every 21 seconds.
- 1.4 million people sustain a TBI annually in the United States.
- 235,000 people hospitalized annually with TBI.
- After 1st TBI, risk for 2nd is 3 times greater.
- After 2nd TBI, risk for 3rd is 8 times greater.
- TBI injuries cost more than \$48.3 billion annually.

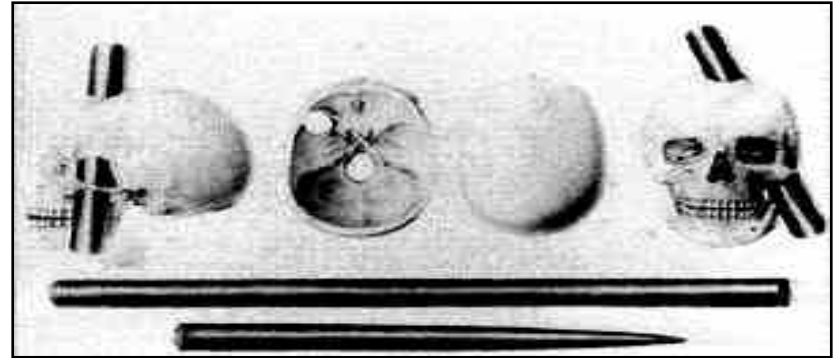
[Center for Disease Control, 2007]

Types of Traumatic Brain Injuries



Open Head Injury

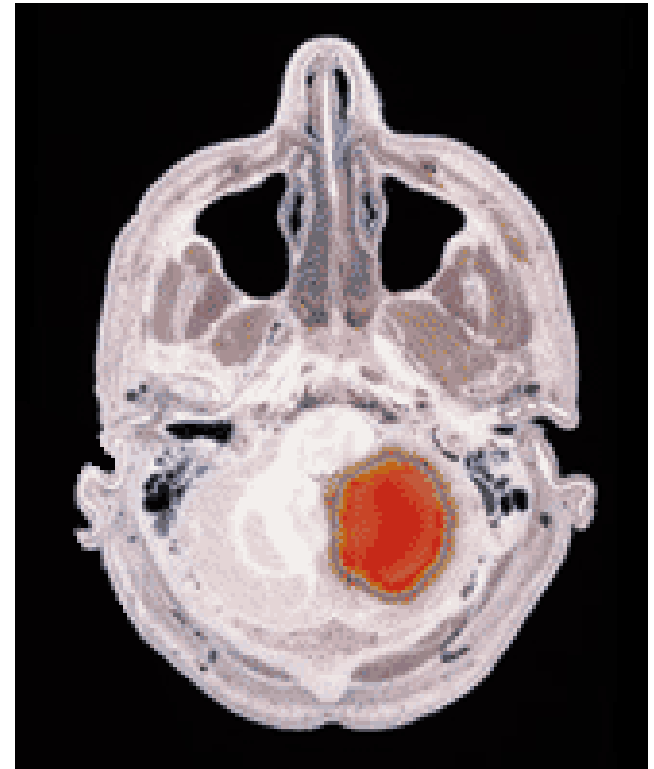
- Head receives an impact from an outside source.
- Skull is fractured or displaced.
- Meninges and mater are penetrated.
- May be bone fragments within brain tissue.
- Entire brain is at risk for more injury and/or infection.
- Impairment may be:
 - localized to area of brain penetrated.
 - Generalized due to ricochet effect of object within skull.



Phineas Gage, of Cavendish, Vermont, is the most celebrated example of an individual with an open head injury. In 1848, a steel tamping rod (13 lbs., 1.25" diameter) exploded through his skull and his left frontal cortex. He remained conscious until he saw the doctor who removed the iron. He developed a fungal infection and was semi-comatose for a couple of weeks. He physically recuperated and returned to work, but everyone found him to have become extraordinarily rude and profane. He died in 1860 following a series of seizures.

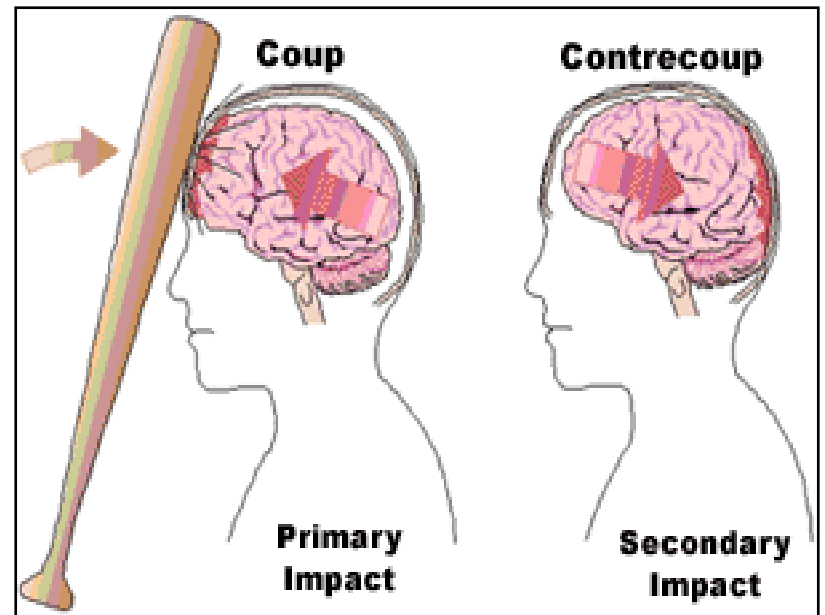
Internal Brain Injury

- Stroke occurs when blood vessels:
 - Burst (hemorrhagic).
 - Clog (ischemic).
- Deprives brain area of:
 - Oxygen.
 - Blood.
- Neurons die from:
 - Lack of oxygen & blood.
 - Pressure from fluid.



Closed Head Injury

- Also known as Coup-Contrecoup.
- Occurs when brain is accelerated, decelerated, or rotated rapidly.
- Usually the result of an impact from an outside source.
- Skull does not fracture or displace.
- Damage occurs because of violent movement which can lacerate, tear, shear, and contuse neurons and their connections.

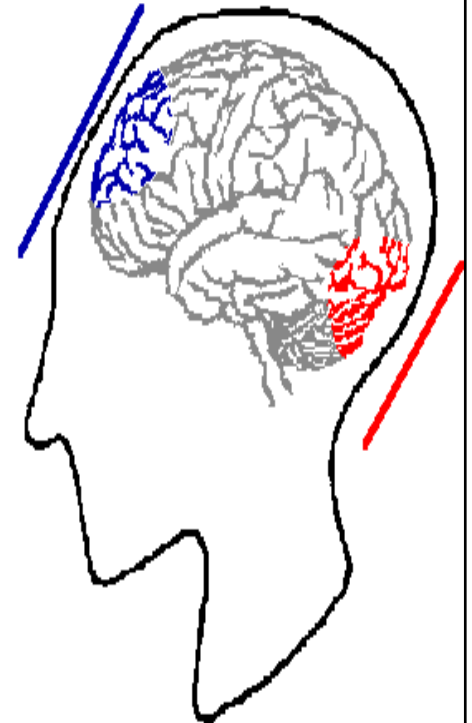


Effects of Coup-Contrecoup

- Bruising at points of impact.
- Tearing and shearing of neurons.
- Destruction of axonal connections & myelin.
- Biochemical cascading.
- Leaking of CSF.
- Hemorrhaging.

The **coup** injury is caused when the head is stopped suddenly and the brain rushes forward. It not only gets injured by hitting in the side of the skull but is also damaged as it rubs against all the inner ridges.

The **contrecoup** injury is caused when the brain bounces off the primary surface and impacts against the opposing side of the skull. Again, additional injury occurs as the brain again rubs against all the inner ridges.



Brain Injuries Secondary to Initial TBI

- **Edema** swelling of individual neurons due to influx of water following biochemical cascade in the brain.
- **Hydrocephalus** enlargement of the ventricles when cerebrospinal fluid (CSF) accumulates in the brain resulting in dilation of the ventricles and intracranial pressure (ICP).
- **Hemorrhaging** blood bleed from aneurysm or embolism of a blood vessel; can cause stroke; death of neurons; and/or increased intracranial pressure.
- **Anoxia** absence of oxygen to the brain; brain cells starve and die; may be caused by extensive bleeding elsewhere in the body, lack of breathing, or other gases replacing oxygen intake (e.g., carbon monoxide, helium).
- **Hypoxia** significant decrease in amount of oxygen getting to the brain; has same causes as anoxia; can trigger biochemical cascade.
- **Blood Clots** blockage elsewhere in body may travel to artery to the brain and cut off blood supply or hemorrhage; clotting within brain itself may cause stroke and hypoxia, triggering a biochemical cascade.
- **Biochemical Cascade** a series of chemical reactions within the brain as a result of all the cells firing at once; neurotransmitters are released which activate the receptors which spill out ions of calcium and potassium until the neurons become overwhelmed and go silent.
- **Seizures** abnormal electro-physiologic phenomena, resulting in abnormal synchronization of electrical neuronal activity; may manifest as an alteration in mental state, tonic or clonic movements, convulsions, and various other psychic symptoms.

Second Impact Syndrome

- a.k.a. as “Recurrent TBI.”
- Occurs when a person sustains a second TBI before the symptoms of the first TBI have healed.
- Risk for second TBI is three times greater.
- Risk for third TBI is eight times greater.

“What happens with multiple head injuries is that in some instances, you lose thousands, if not more, nerve cells. Then you reach a critical limit where you start not to have enough nerve cells to function at the level that you once did. You now pick up permanent rather than transient neurologic impairment. That’s a supply-and-demand way of looking at it.”

[Dr. R.C. Cantu as quoted in *Head Games* (2007)]

Scales to Measure Functioning

Rancho Los Amigos Cognitive Scale - Revised

■ 10-point scale

- Level I No Response: Total Assistance
- Level II Generalized Response: Total Assistance
- Level III Localized Response: Total Assistance
- Level IV Confused/Agitated: Maximal Assistance
- Level V Confused, Inappropriate Non-Agitated: Maximal Assistance
- Level VI Confused, Appropriate: Moderate Assistance
- Level VII Automatic, Appropriate: Minimal Assistance for Daily Living Skills
- Level VIII Purposeful, Appropriate: Stand-By Assistance
- Level IX Purposeful, Appropriate: Stand-By Assistance on Request
- Level X Purposeful, Appropriate: Modified Independent

Scales to Measure Functioning

Rancho Los Amigos Cognitive Scale - Revised

- Used to diagnose symptoms of TBI:
 - Awareness.
 - Cognition.
 - Behavior.
 - Interaction with environment.
- Short-hand communication within medical and rehabilitation field.
- Does **NOT** indicate severity of long-term impairments.

Scales to Measure Functioning

Glasgow Coma Scale

15-point scale:

I. Motor Response

- 6 – Obeys commands fully
- 5 – Localizes to noxious stimuli
- 4 – Withdraws from noxious stimuli
- 3 – Abnormal flexion, i.e. decorticate posturing
- 2 – Extensor response, i.e. decerebrate posturing
- 1 – No response

II. Verbal Response

- 5 – Alert and Oriented
- 4 – Confused, yet coherent, speech
- 3 – Inappropriate words & jumbled phrases consisting of words
- 2 – Incomprehensible sounds
- 1 – No Sounds

III. Eye Opening

- 4 – Spontaneous eye opening
- 3 – Eyes open to speech
- 2 – Eyes open to pain
- 1 – No eye opening

Scales to Measure Functioning

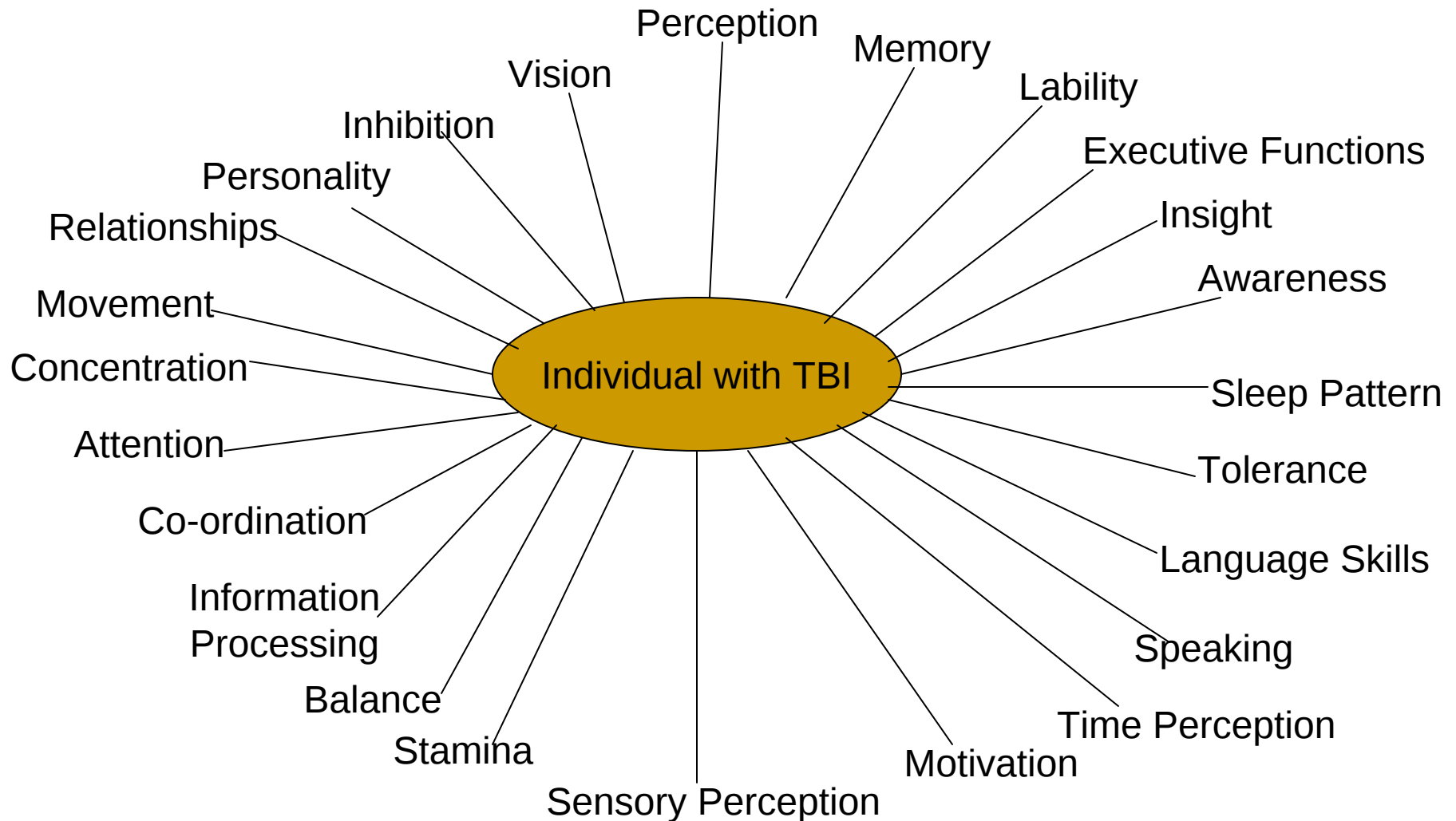
Glasgow Coma Scale

- Used to estimate and categorize outcomes of TBI on basis of overall social capability or dependence on others.
- Final score determined by adding I + II + III.
- Number communicates to medical workers 4 possible levels for survival (15 = best; 0 = worst).
- Levels:
 - Mild (13 - 15)
 - Moderate Disability (9 – 12)
 - Severe Disability (3 – 8)
 - Vegetative State (Less than 3)
 - Persistent Vegetative State
 - Brain Death
- Based on the severity of the coma, this scale does **NOT** indicate severity or sequelae of long-term impairments.

Impact of Brain Injury

- Labeling the level of brain injury (mild, moderate, severe) tends to be based on:
 - Length of loss of consciousness
 - Length of post-traumatic amnesia
 - Score on Glasgow Coma or Rancho Los Amigos scales
 - Number of residual symptoms at discharge
- Labeling does not involve:
 - Severity of long-term impairments
 - Physical, psycho-social, behavioral, or cognitive skills & deficits
 - Impact on daily living skills

Impact of Brain Injury



Impact of Brain Injury

■ Physical:

- Balance
- Movement
- Speech
- Vision
- Hearing
- Tactile
- Smell
- Taste
- Stamina
- Pain

■ Cognitive:

- Memory
- Attention/Concentration
- Processing Speed
- Quality of Thought Process
- Problem Solving
- Reading
- Writing
- Math

Impact of Brain Injury

■ Executive Functions:

- Goal Setting
- Problem Solving
- Reasoning
- Learning from Feedback
- Inhibition
- Self-Control
- Organizing
- Delaying gratification
- Initiation

■ Social:

- Poor Judgment
- Empathy
- Theory of Mind
- Language Pragmatics
- Friendship Maintenance
- Isolation
- Impulsivity
- Conversation Maintenance

Impact of Brain Injury

■ Personality:

- Aggression
- Passivity
- Lability
- Irritability
- Disinhibition
- Amotivation
- Indifference

■ Psychiatric:

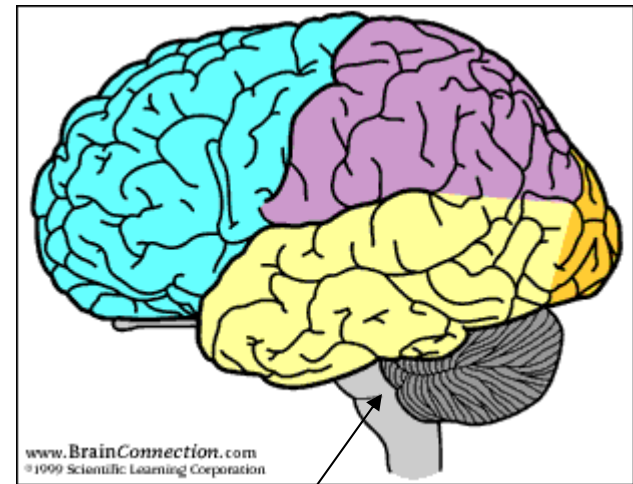
- Depression
- Mania
- Anxiety
- Psychosis
- Substance Abuse
- Rage
- Anger

Impact of Brain Injury

- **The most important things to remember:**
 - A person with a brain injury is a person who deserves dignity and respect.
 - No two brain injuries are exactly the same.
 - The effects of brain injury are complex and vary greatly from person to person.
 - While plateaus happen, recover from brain injury can improve for years after the injury – deficits can be rehabilitated.
 - The effects of a brain injury depend on such factors as severity, cause, and location within the brain.

Brain Stem – Possible Impairments

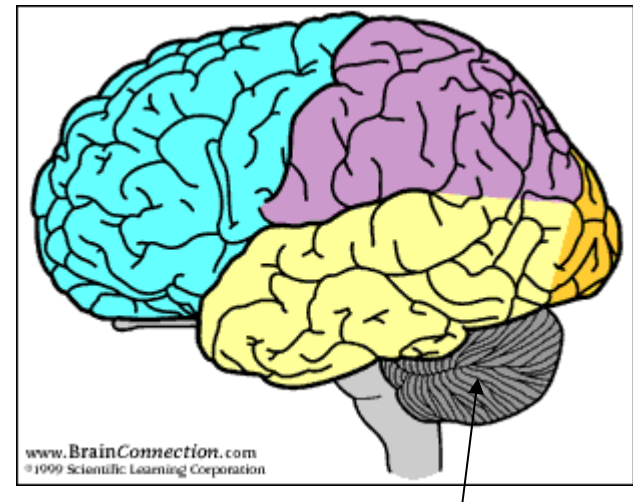
- Problems:
 - Decreased vital capacity in breathing.
 - Difficulty with organization.
 - Difficulty with perception of environment.
 - Problems with balance.
 - Problems with movement.
 - Vertigo.
 - Sleeping difficulties.



Brain Stem

Cerebellum – Possible Impairments

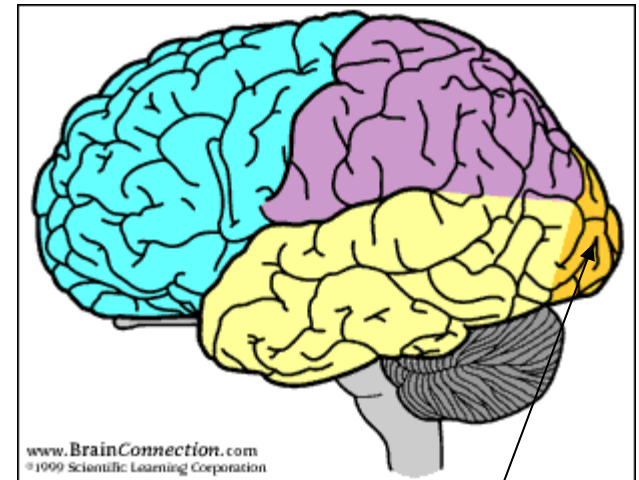
- Problems:
 - Loss of ability to coordinate fine movements.
 - Loss of ability to walk.
 - Inability to reach out and grab objects.
 - Inability to make rapid movements.
 - Tremors.
 - Vertigo.
 - Scanning speech.



Cerebellum

Occipital Lobes – Possible Impairments

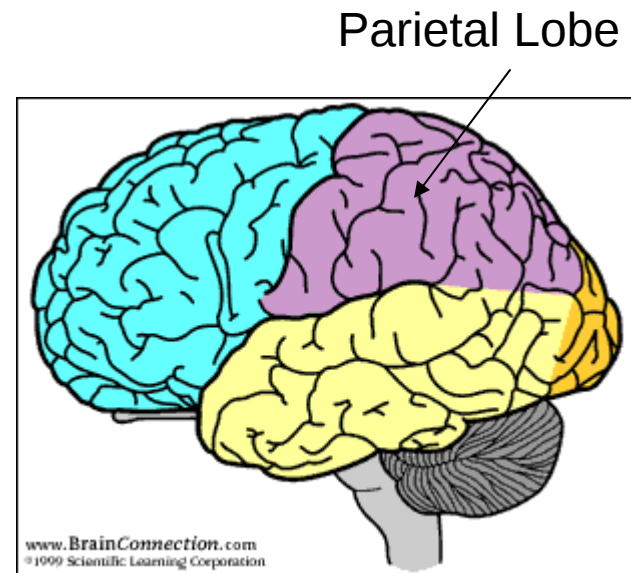
- Problems:
 - Visual field cuts.
 - Loss of vision of opposite field.
 - Color agnosia.
 - Difficulty locating objects in the environment.
 - Productions of hallucinations.
 - Visual illusions – inaccurately seeing objects.
 - Word blindness – inability to recognize words.
 - Movement agnosia.
 - Difficulty in reading.
 - Difficulty in writing.
 - Difficulty recognizing drawn objects.



Occipital Lobe

Parietal Lobes – Possible Impairments

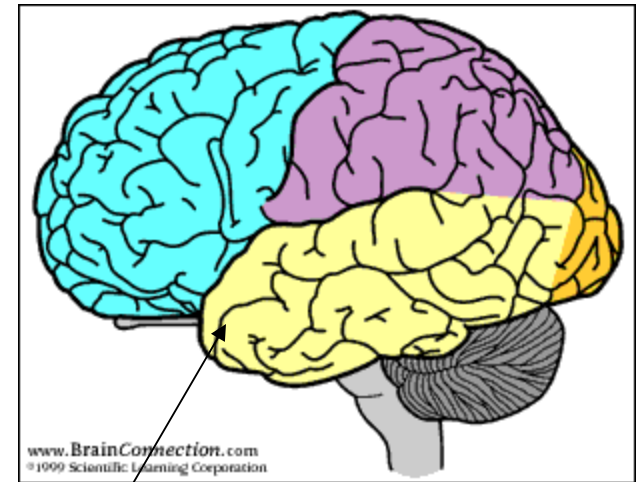
- Problems:
 - Splitting attention.
 - Anomia.
 - Agraphia.
 - Alexia.
 - Dyscalculia.
 - Difficulty drawing objects.
 - Difficulty distinguishing left from right.
 - Apraxia that leads to difficulties in self-care.
 - Inability to focus visual attention.
 - Difficulties with eye-hand coordinaton.



Temporal Lobes – Possible Impairments

■ Problems:

- Prosopagnosia.
- Wernicke's aphasia.
- Disturbance with selective attention.
- Short-term memory loss.
- Difficulty categorizing.
- Persistent talking.
- Auditory Deficits.
- Difficulty with concentration.
- Seizures.
- Change in sexual interest.
- Difficulty in locating objects in the environment.

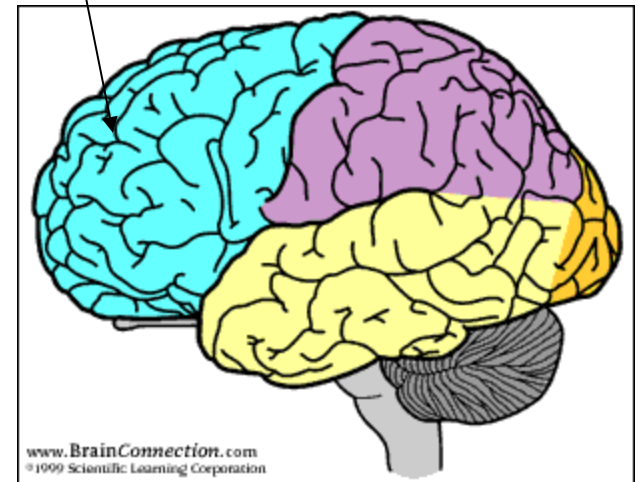


Temporal Lobe

Frontal Lobes – Possible Impairments

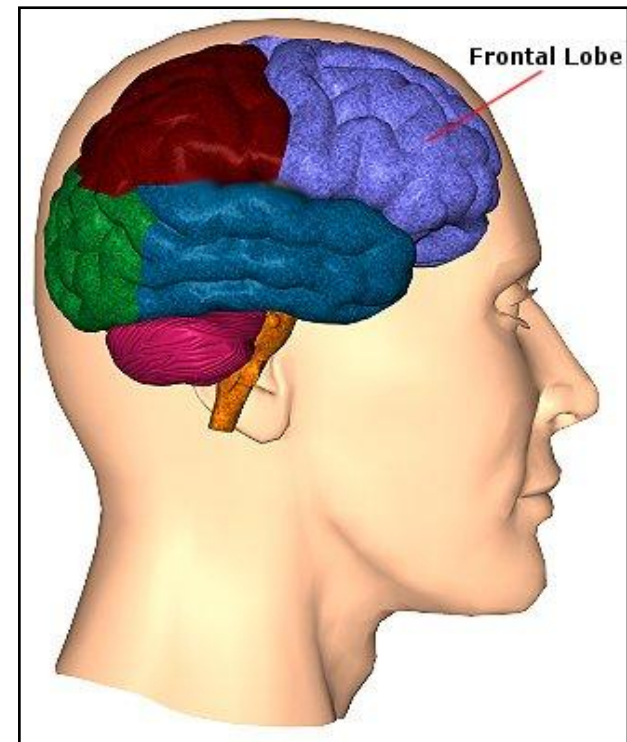
- Problems:
 - Loss of spontaneity in response to others and the environment.
 - Loss of flexibility in thinking.
 - Perseveration.
 - Attention deficits .
 - Emotional lability.
 - Changes in personality.
 - Changes in social behavior.
 - Difficulty in problem solving.
 - Broca's aphasia.
 - Disinhibition.
 - Loss of metacognitive skills.
 - Loss of self-monitoring.
 - Impaired working memory.

Frontal Lobe



Prefrontal Lobes – Uniqueness

- Largest group of individuals sustaining TBI are between the ages of 0 to 4 and 15 to 19.
- Most vulnerable part of brain in accidents – due to location and boney protrusions inside front of skull.
- The prefrontal lobes don't fully development until age 25.
- Almost nothing is done by the brain without prefrontal lobe involvement.



Prefrontal Lobes – Executive Functions

Everyone's Executive Functions fall along a continuum of development.

Mature.....Impaired

Inhibition

Disinhibition

Attention

Inattention

Time Perception

No Concept of Time

Self-Regulation

No Delaying Gratification

Initiation

No Self-Starting

Ability to Judge

Poor Judgment

Goal-Setting

Living in the Moment

Post-Quiz – Part 1

True or False.

- ☐ **F** 1. All TBI are caused by an external blow to the skull.
- ☐ **T** 2. Risk of a 2nd TBI is 3 times greater than the first.
- ☐ **T** 3. Stroke is a type of brain injury.
- ☐ **T** 4. Open head injury always involves a skull fracture.
- ☐ **F** 5. All secondary injuries to the brain involve bleeding. PAGE 11
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- ☐ **T** 9. CSF can cause complications, including death.
- ☐ **F** 10. The Rancho Los Amigos and Glasgow Coma Scale can predict levels of impairment.

Identify the type of brain Injury for which each statement is true: open head injury (O), closed head injury (C), or internal (I). May be more than one answer for each statement.

- ☐ **I** 1. caused by blood vessel burst.
- ☐ **O,C** 2. impact from outside source.
- ☐ **O** 3. skull fractured.
- ☐ **I** 4. brain deprived of oxygen.
- ☐ **O** 5. impairment localized.
- ☐ **O** 6. meninges and mater are compromised.
- ☐ **C** 7. coup-contrecoup actions cause damage.
- ☐ **I** 8. hemorrhaging may be involved.
- ☐ **C** 9. neurons and axons are sheared.
- ☐ **C** 10. biochemical cascade may occur.

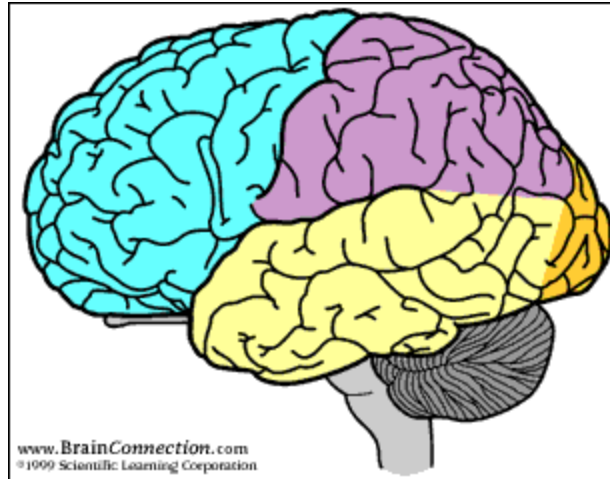
Post-Quiz – Part 2

For each area, list 3 possible ways an brain injury may impact an individual.

Frontal Lobe:

PG28

Loss of spontaneity in response to others and the environment
Loss of flexibility in thinking
Perseveration
Attention deficits
Emotional lability
Changes in personality
Changes in social behavior
Difficulty in problem solving
Broca's aphasia
Disinhibition
Loss of self monitoring
Impaired working memory



Parietal Lobe:

Splitting attention
Anomia
Agraphia
Alexia
Dyscalculia
Difficulty drawing objects
Diff. distinguishing Left from Right
Inability to focus visual attention
Diff. with eye/hand coordination
Apraxia that leads to difficulties in self care

Temporal Lobe:

Prosopagnosia
Wernicke's aphasia
Disturbance with selective attention
Short term memory loss
Difficulty categorizing
Persistent talking
Auditory Deficits
Difficulty with concentration
Seizures
Change in sexual interest
Difficulty in locating objects in the environment

Brain Stem:

Decreased vital capacity in breathing
Difficulty with organization
Difficulty with perception of environment
Problems with balance
Problems with movement
Vertigo
Sleeping difficulties

Cerebellum

Loss of ability to coordinate fine movement
Loss of ability to walk
Inability to reach out and grab objects
Inability to make rapid movements
Tremors
Vertigo
Scanning speech

Occipital Lobe:

Visual field cuts
Loss of vision of opposite field
Color Agnosia
Diff locating objects in environment
Productions of hallucinations
Visual illusions, inaccurately seeing objects
Word blindness/ inability to recognize words
Movement agnosia
Difficulty reading
Difficulty writing
Difficulty recognizing drawn objects

Post-Quiz – Part 3

Answer each of the following questions:

1. Define traumatic brain injury per the State of Vermont. “Brain Injury is an insult to the brain, not of degenerative or congenital nature, the result of either an external physical force or internal cause, that produces an altered mental status, which results in an impairment of behavioral, cognitive, emotional, and/or physical functioning.” page 5
2. What do the labels “mild,” “moderate,” and “severe” indicate about a TBI? Tends to be based on length of LOC and posttraumatic amnesia, glasgow coma scale or Rancho Los Amigos scales, number of residual symptoms at discharge page 17
1. Why is injury to the pre-frontal lobes so significant? It is the most vulnerable part of the brain due to location and boney protrusions inside front front of skull. The prefrontal lobes don't fully develop until 25. ALMOST nothing is done by brain without prefrontal lobe involvement. It is the Executive functions. Page 29
1. Explain why an individual with significant impairment in all areas (cognitive, physical, social-emotional, etc.) may be labeled with a “mild” TBI. The labels do not involve Severity of the impairments, the physical, psychosocial, behavioral, or cognitive skills & deficits or the Impact on daily living skills. Page 17
2. Explain the impact of TBI on an individual:
 - Physically:: balance, movement, speech, vision, hearing, tactile, smell, taste, stamina, pain
 - Socially: poor judgement, empathy, theory of mind, language pragmatics, friendship maintenance, isolation, impulsivity, conversation maintenance
 - Cognitively: memory, attention/concentration, processing speed, quality of thought process, problem solving, reading, writing, math
 - Emotionally: Goal setting, problem solving, reasoning, learning from feedback, inhibition, self-control, organizing, delaying gratification, initiation

Learning Outcomes Checklist

Can you:

☐ Identify:

- ☐ the basic types of brain injuries.
- ☐ the types of insults to the brain's anatomy.
- ☐ the potential effect(s) of the insult(s) to the anatomy of the brain.
- ☐ the labeling systems used to classify the severity of brain injuries.

☐ Define “traumatic brain injury.”

☐ Explain:

- ☐ how “severity” of brain injury is measured.
- ☐ how “severity” and “impairment” do not measure the same impact.
- ☐ typical sequelae based on where the insult(s) to the brain is(are).
- ☐ impact of injury on an individual's life: Physical; Social; Emotional; Cognitive.

Stages of Recovery

From Injury Toward Independence

After completion of this module, the learner will be able to:

- Identify:
 - the basic stages of recovery.
 - the steps in the rehabilitation continuum.
 - major assessment tools used to communicate diagnosis & prognosis.
 - factors which influence recovery.
- Explain:
 - Factors which influence recovery:
 - Plasticity.
 - New Growth.
 - Rerouting.
 - Time.
 - Healthy Living.
 - The Team.
 - The Individual.

Pre-Quiz – Part 1

True or False.

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- ___ 8. Rehabilitation begins in the emergency room and/or intensive care unit.
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- ___ 10. Plasticity only applies to children's brains.

Pre-Quiz – Part 2

Put these levels of care in order beginning with care given immediately following the injury.

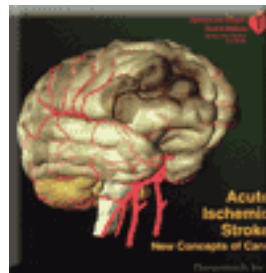
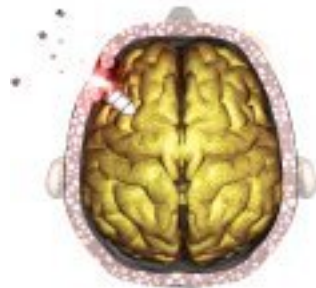
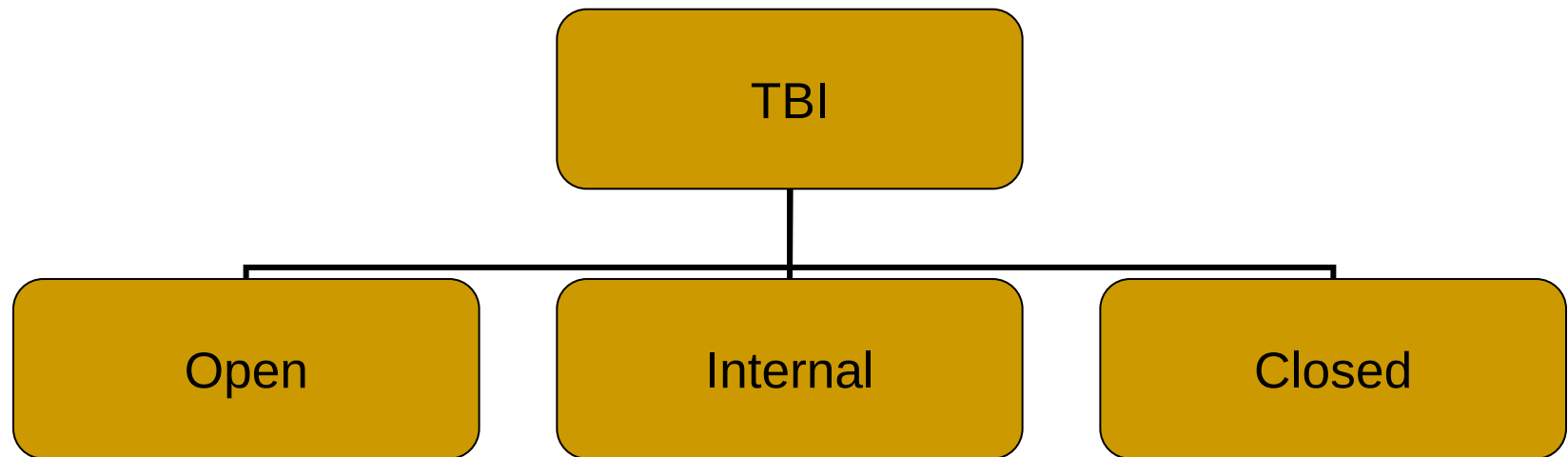
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True or False.

Indicate whether each of these items is a factor in an individual's recovery.

- ___ 1. quality of insurance coverage
- ___ 2. sense of humor
- ___ 3. communication within the team
- ___ 4. insight into impairment(s)
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- ___ 6. person-centered programming
- ___ 7. knowledge of rehabilitation systems
- ___ 8. pre-injury health
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- ___ 10. blaming

Types of Traumatic Brain Injuries



Traumatic Brain Injury

Definition:

“Brain Injury is an insult to the brain, not of degenerative or congenital nature, the result of either an external physical force or internal cause, that produces an altered mental status, which results in an impairment of behavioral, cognitive, emotional, and/or physical functioning.”

[Vermont Division Disability and Aging Services]

Statistically:

- A TBI occurs every 21 seconds.
- 1.4 million people sustain a TBI annually in the United States.
- 230,000 people hospitalized annually with TBI.
- After 1st TBI, risk for 2nd is 3 times greater.
- After 2nd TBI, risk for 3rd is 8 times greater.
- TBI injuries cost more than \$48.3 billion annually.

[Center for Disease Control, 2007]

Rehabilitation

- “Rehabilitation implies the restoration of the patient to the highest level of physical, psychological, and social adaptation attainable. It includes all measures aimed at reducing the impact of the disability and handicapping conditions. It also aims at enabling disabled people to achieve optimum social integration.”
[World Health Organization, 1986]
- “The process of restoration of skills by a person who has had an illness or injury so as to regain maximum self in a normal or near as normal manner as possible.”
[www.medterms.com]

Facilities and Levels of Care:

- Emergency Room (ER)
- Intensive Care Unit (ICU)
- Acute Rehabilitation
- Subacute Rehabilitation
- Day Treatment
 - (a.k.a. Day Rehab or Day Hospital)
- Outpatient Therapy
- Home Health Services
- Community Re-entry
- Independent Living Programs

Rehabilitation

- **A few points to keep in mind:**
 - Rehabilitation begins almost immediately after injury through:
 - directed sensory stimulation.
 - exercising of muscles and joints.
 - Formal rehabilitation usually has:
 - time limits.
 - outcome requirements.
 - Informal rehabilitation (family, etc.) can go on for a very long time.
 - Progress:
 - greatest visible progress occurs in first 6 months.
 - after 6 months, improvement is more subtle and less obvious.
 - does not stop after an arbitrary period of two years.
 - can continue for the lifetime of the individual.

Stages of Recovery

- This means different things to different people:

- Total recovery
- Coma recovery
- Physical recovery
- Emotional recovery
- Grieving cycle
- Rehabilitation process

- Things to remember:

- No two people recover in the same time frame or manner.
- No matter the severity, all individuals with TBI in recovery go through these stages.
- There are factors which influence an individual's pace and extent of recovery.
- No two professional fields measure stages of recovery with the same scales or levels.

Stages of Recovery – Newest Scale

Disorders of Consciousness Scale (DOCS):

- Northwestern University – first truly reliable measure of neurobehavioral functioning during coma that predicts recover of consciousness up to one year after injury with 86% certainty.
- 8 subscales: social knowledge; taste and swallowing; olfactory; proprioceptive (perception of one's body in space) and vestibular (balance); auditory; visual; tactile; and testing readiness.
- Accurately detected improvements, declines, and plateaus in neurobehavioral functioning of unconscious patients.
- Repeated use improved medical and rehabilitation management during coma recovery.
- Detected previously undetected secondary medical complication, which were successfully treated.

Stages of Recovery - Coma

Glasgow Coma Scale

- 15-point scale:
 - I. Motor Response
 - 6 – Obeys commands fully
 - 5 – Localizes to noxious stimuli
 - 4 – Withdraws from noxious stimuli
 - 3 – Abnormal flexion, i.e. decorticate posturing
 - 2 – Extensor response, i.e. decerebrate posturing
 - 1 – No response
 - II. Verbal Response
 - 5 – Alert and Oriented
 - 4 – Confused, yet coherent, speech
 - 3 – Inappropriate words & jumbled phrases consisting of words
 - 2 – Incomprehensible sounds
 - 1 – No Sounds
 - III. Eye Opening
 - 4 – Spontaneous eye opening
 - 3 – Eyes open to speech
 - 2 – Eyes open to pain
 - 1 – No eye opening

Stages of Recovery - Coma

Glasgow Coma Scale

- Used to estimate and categorized outcomes of TBI on basis of overall social capability or dependence on others.
- Final score determined by adding I + II + III.
- Number communicates to medical workers 4 possible levels for survival (15 = best; 0 = worst).
- Levels:
 - Mild (13 - 15)
 - Moderate Disability (9 – 12)
 - Severe Disability (3 – 8)
 - Vegetative State (Less than 3)
 - Persistent Vegetative State
 - Brain Death
- Based on the severity of the coma, this scale does **NOT** indicate severity or sequelae of long-term impairments

Stages of Recovery – In Hospital

Rancho Los Amigos Cognitive Scale - Revised

- 10-point scale
 - Level I No Response: Total Assistance
 - Level II Generalized Response: Total Assistance
 - Level III Localized Response: Total Assistance
 - Level IV Confused/Agitated: Maximal Assistance
 - Level V Confused, Inappropriate Non-Agitated: Maximal Assistance
 - Level VI Confused, Appropriate: Moderate Assistance
 - Level VII Automatic, Appropriate: Minimal Assistance for Daily Living Skills
 - Level VIII Purposeful, Appropriate: Stand-By Assistance
 - Level IX Purposeful, Appropriate: Stand-By Assistance on Request
 - Level X Purposeful, Appropriate: Modified Independent

Stages of Recovery – In Hospital

Rancho Los Amigos Cognitive Scale - Revised

- Provides feedback to medical staff on effectiveness of rehabilitation involving:
 - Awareness.
 - Cognition.
 - Behavior.
 - Interaction with environment.
- Rehabilitation can be improved if the team responds to changes in the scale over time and therapies.

Stages of Recovery – On-going

National Institute of Neurological Disorders and Stroke lists:

1. **Coma:** totally reliant on medical staff.
2. **Post-Traumatic Amnesia:** severe agitation, restlessness, confusion.
3. **Conscious with Severe Deficits:** attentional, problem-solving, social, and memory deficits; focused on orthopedic or physical injuries.
4. **Awareness:** frustration, irritability, anger, and beginning anxiety and depression due to cognitive deficits; feeling pressure to return to responsibilities; over-estimating abilities and under-estimating problems; emotional lability; lowered tolerance for frustration.
5. **Success When Structured:** experiencing success due to cognitive improvement; complexity exhausts coping skills; increased insightfulness leads to significant depression and anxiety.
6. **Return to Responsibility:** coming to terms emotionally with what has happened and the outcomes; taking on some old responsibilities; experiences failures and fatigue; rebuilding confidence and self-esteem; building new life for self.

Stages of Recovery – On-going

American Speech-Language-Hearing Association lists:

1. **Coma:** unresponsive; eyes closed.
2. **Vegetative State:** no cognitive responses; gross wakefulness; sleep-wake cycles.
3. **Minimally Conscious State:** purposeful wakefulness; responds to some commands.
4. **Confusional State:** recovered speech; amnesic; severe attentional deficits; agitated; hyperaroused; possible labile behavior.
5. **Post-Confusional, Evolving Independence:** resolution of amnesia; cognitive improvement; achieving independence in daily self-care; improving social interaction; developing independence at home.
6. **Social Competence, Community Re-entry:** recovering cognitive abilities; goal-directed behaviors; social skills; personality; developing independence in the community; returning to academic or vocational pursuits.

Stages of Recovery – On-going

Disability Rating Scale for Severe Head Trauma Patients: Coma to Community:

■ Based on scales and subscales measuring:	29-point scale to determine level of disability:
■ Arousability, Awareness, & Responsivity	■ 0 No Disability
■ eye opening ■ communication ability ■ motor response	■ 1 Mild
■ Cognitive Ability to for Self-Care	■ 2 – 3 Partial
■ feeding ■ toileting ■ grooming	■ 4 – 6 Moderate
■ Dependence on Others/ Level of Functioning	■ 7 – 11 Moderately Severe
■ Psychosocial Adaptability/ Employability	■ 12 – 16 Severe
	■ 17 – 21 Extremely Severe
	■ 22 – 24 Vegetative State
	■ 25 – 29 Severe Vegetative State

Stages of Recovery - Emotional

According to the *Traumatic Brain Injury Survival Guide*, there are 6 stages of emotional recovery:

1. **Confusion and Agitation:** just awakening; can be physically aggressive; for 99% the confusion and agitation recede.
2. **Denial:** 2 types: (1) emotional and (2) cognitive processing problem due to injury.
3. **Anger and Depression:** realizes that abilities have changed; blaming self and/or others; anger can be from: (1) frustration or (2) the injury itself.
4. **Testing Phase:** checking out limits; tendency to overdo; experience failure and fatigue; very painful stage.
5. **Uneasy Acceptance:** learn the abilities and deficits and accept the limits; not happy, but accepting.
6. **Coping:** moving on to develop “new self.”

Stages of Recovery – Family Adjustment

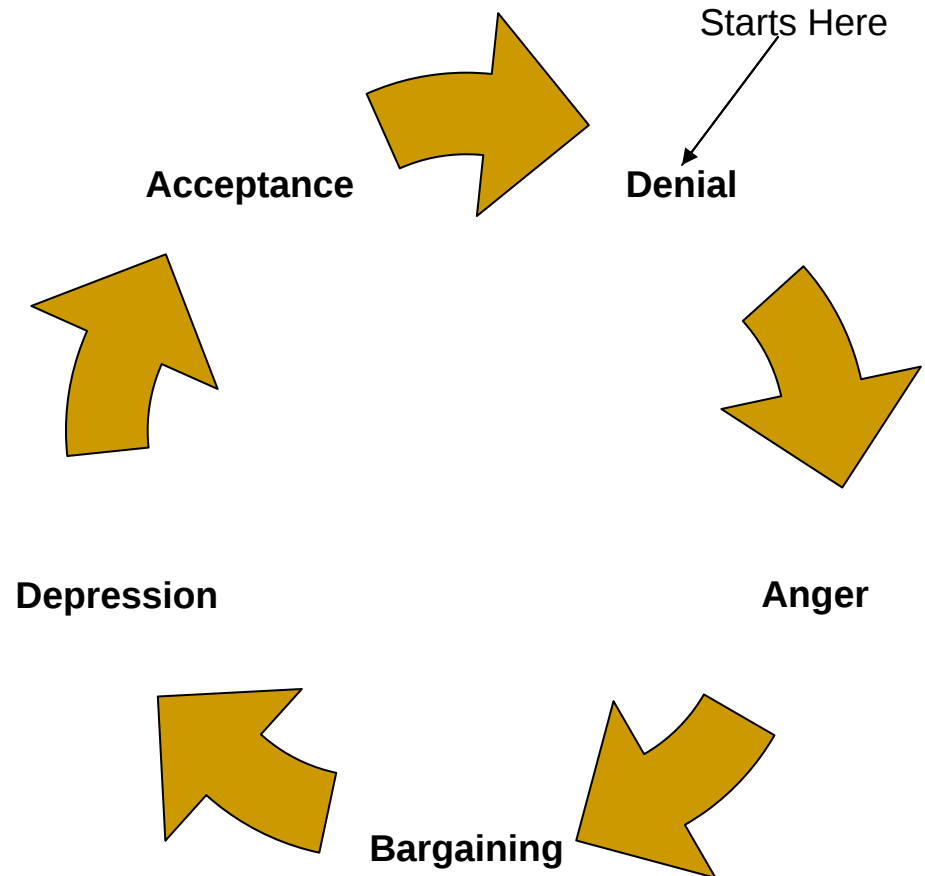
Dr. Debra M. Russell addresses the 6 stages of recovery in family adjustment:

- **Stage 1 (1 - 3 months):** shock; focused on praying for recovery; great hopes for full recovery; develop denial; no TBI experience; repress feelings; avoid discussing severity; transfer negative feelings to others.
- **Stage 2 (3 – 9 months):** begin to recognize the severity; feeling helpless and frustrated; denial turns into anxiety, anger, fear, depression, and loss.
- **Stage 3 (6 – 24 months):** start to get annoyed with the survivor – not trying hard enough; experiencing depression, guilt, and discouragement; starting to recognize the levels of impairment; start seeking information about TBI recovery.
- **Stage 4 (10 – 24 months):** beginning of realism; disability and/or negative behaviors bother family; need additional breaks away to improve tolerance; fear situation is permanent; reduce face-to-face interactions with survivor.
- **Stage 5 (12 – 24 months):** profound sadness; grieving cycle may begin again; mourn loss of way the survivor used to be; beginning to share new future with and for survivor.
- **Stage 6 (2 – 3 years post-injury):** accept that the person may never be the same as before the TBI; accommodate to change family roles; guilt diminishes; creativity in assistance; well versed about TBI; invest time and money on accommodations.

Stages of Recovery - Grief

Dr. Elizabeth Kubler-Ross's Grief Cycle

- Applicable to the loss the survivor and family are experiencing regarding “the old self – pre-TBI.”
- 5 stages:
 - can cycle often
 - don't always go in order



Factors in Recovery

- People:
 - The individual.
 - The family.
 - The team.
- Brain Biology:
 - Plasticity.
 - New growth.
 - Rerouting.
- Time.

Factors in Recovery

Biological factors which can affect the extent and pace of recovery:

- **Plasticity:** ability of the brain to reorganize neural pathways based on new experiences and new learning.
- **New growth:** structural remodeling of neurons and their dendrites over time following death of neighboring neurons.
- **Rerouting:** implantation of wireless brain chip can create artificial connections between different parts of the brain.

Factors in Recovery

Individual factors which can affect the extent and pace of recovery:

- Work ethic.
- Sense of humor.
- Unselfishness.
- Insight.
- Healthy living.
- Co-operation with other members of medical & rehab teams.
- Ability to admit to having a brain injury.
- Use of support groups to talk about frustrations.
- Pre-injury health (physical, mental, and emotional).

Factors in Recovery

- External factors which can affect the extent and pace of recovery:
 - Person-centeredness – Who's it all about?
 - Initial medical response and intervention after the accident.
 - Quality of preventative rehabilitation in ER and ICU.
 - Level of TBI expertise of healthcare professionals.
 - Quality of insurance coverage.
 - Family support, knowledge of systems, and advocacy.
 - Continuum of levels of service and support from hospital to community
 - Communication amongst all members of the team.
- However, two individuals with identical care will not necessarily have the same outcomes, nor recover at the same pace.
- Blaming and finger-pointing do not help the individual's recovery!

Post-Quiz – Part 1

True or False.

- ___ 1. No two people recover from TBI in the same manner.
- ___ 2. Rancho Los Amigos and Glasgow Coma Scale are the only two scales for measuring recovery from TBI.
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Post-Quiz – Part 2

Put these levels of care in order beginning with care given immediately following the injury.

- _____ a. Independent Living Program
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- _____ d. Day treatment
- _____ e. Emergency room
- _____ f. Home health services
- _____ g. Intensive care unit
- _____ h. Community re-entry
- _____ i. Acute rehabilitation

True or False.

Indicate whether each of these items is a factor in an individual's recovery.

- ___ 1. quality of insurance coverage
- ___ 2. sense of humor
- ___ 3. communication within the team
- ___ 4. insight into impairment(s)
- ___ 5. ability to admit having a TBI
- ___ 6. person-centered programming
- ___ 7. knowledge of rehabilitation systems
- ___ 8. pre-injury health
- ___ 9. time
- ___ 10. blaming

Post-Quiz – Part 3

Explain:

1. how the following scales aid in measuring TBI recovery:
 - a. Disorders of Consciousness Scale (DOCS):
 - b. Rancho Los Amigos Scale (RLA):
 - c. Glasgow Coma Scale (GSC):
 - d. Disability Rating Scale (DRS):
2. the emotional stages of recovery.
3. the family adjustment stages.
4. biological factors in recovery.
5. individual factors affecting recovery.

Learning Outcomes Checklist

Can you:

☐ Identify:

- ☐ the basic stages of recovery
- ☐ the steps in the rehabilitation continuum
- ☐ major assessment tools used to communicate diagnosis & prognosis
- ☐ factors which influence recovery

☐ Explain

☐ Factors which influence recovery:

- ☐ Plasticity
- ☐ New Growth
- ☐ Rerouting
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Stages of Recovery

From Injury Toward Independence

After completion of this module, the learner will be able to:

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Worksheet 1

1. Describe the magnitude of TBI in the United States.
2. Explain the risk of TBI after the individual has experienced his/her first TBI.
3. What are the major goals of rehabilitation after TBI?
4. Explain the potential length of rehabilitation and recovery after TBI.
5. Discuss the pros and cons that “no 2 professional fields measure stages of recovery with the same scales or levels.”

Worksheet 2

Briefly explain how each of these scales work:

1. Disorders of Consciousness Scale (DOCS):
2. Glasgow Coma Scale (GSC):
3. Rancho Los Amigos Scale (RLA):
4. National Institute of Neurological Disorders and Stroke:
5. American Speech-Language-Hearing Association:

Worksheet 3

Using the Stages of Recovery – Emotional, Family Adjustment, and Grief, explain:

1. the potential for family conflict during an individual's recovery.
2. How individuals and family members being at different points in the emotional stages of recovery can affect rehabilitation and recovery.
3. the impact of loss of the “old self” on the individual and his/her family.
4. the effects of denial – both positive and negative.
5. which may be the more challenging to rehabilitate and recover from – the emotional or physical impact of TBI.

Worksheet 4

Factors in Recovery, explain:

1. the concepts of “pace” and “extent” in recovery and rehabilitation.
2. the difference(s) among plasticity, new growth, and rerouting.
3. what the “ideal” candidate who would maximize TBI rehabilitation would look like.
4. how an individual and family can affect external factors in TBI recovery and rehabilitation.
5. how pre-injury self affects rehabilitation and recovery.

Worksheet 5

Define each of these terms:

1. Olfactory
2. Proprioception
3. Vestibular
4. Auditory
5. Tactile
6. Plateau
7. Persistent vegetative state
8. Sequelae
9. Psycho-social adaptability
10. Plasticity

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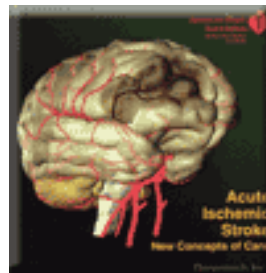
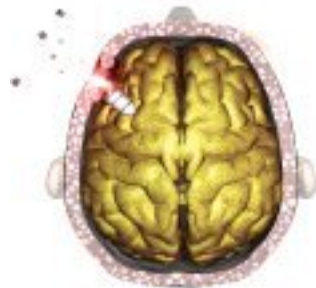
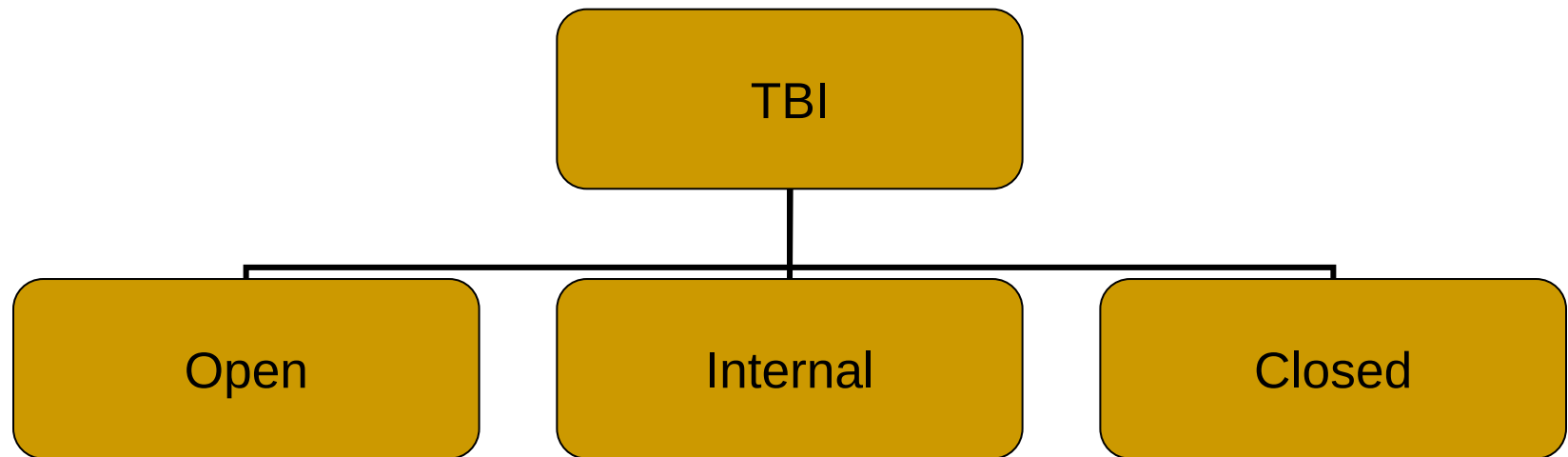
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- Rehabilitation process

- Things to remember:

- No two people recover in the same time frame or manner.
- No matter the severity, all individuals with TBI in recovery go through these stages.
- There are factors which influence an individual's pace and extent of recovery.
- No two professional fields measure stages of recovery with the same scales or levels.

Stages of Recovery – Newest Scale

Disorders of Consciousness Scale (DOCS):

- Northwestern University – first truly reliable measure of neurobehavioral functioning during coma that predicts recover of consciousness up to one year after injury with 86% certainty.
- 8 subscales: social knowledge; taste and swallowing; olfactory; proprioceptive (perception of one's body in space) and vestibular (balance); auditory; visual; tactile; and testing readiness.
- Accurately detected improvements, declines, and plateaus in neurobehavioral functioning of unconscious patients.
- Repeated use improved medical and rehabilitation management during coma recovery.
- Detected previously undetected secondary medical complication, which were successfully treated.

Stages of Recovery - Coma

Glasgow Coma Scale

- 15-point scale:
 - I. Motor Response
 - 6 – Obeys commands fully
 - 5 – Localizes to noxious stimuli
 - 4 – Withdraws from noxious stimuli
 - 3 – Abnormal flexion, i.e. decorticate posturing
 - 2 – Extensor response, i.e. decerebrate posturing
 - 1 – No response
 - II. Verbal Response
 - 5 – Alert and Oriented
 - 4 – Confused, yet coherent, speech
 - 3 – Inappropriate words & jumbled phrases consisting of words
 - 2 – Incomprehensible sounds
 - 1 – No Sounds
 - III. Eye Opening
 - 4 – Spontaneous eye opening
 - 3 – Eyes open to speech
 - 2 – Eyes open to pain
 - 1 – No eye opening

Stages of Recovery - Coma

Glasgow Coma Scale

- Used to estimate and categorize outcomes of TBI on basis of overall social capability or dependence on others.
- Final score determined by adding I + II + III.
- Number communicates to medical workers 4 possible levels for survival (15 = best; 0 = worst).
- Levels:
 - Mild (13 - 15)
 - Moderate Disability (9 – 12)
 - Severe Disability (3 – 8)
 - Vegetative State (Less than 3)
 - Persistent Vegetative State
 - Brain Death
- Based on the severity of the coma, this scale does **NOT** indicate severity or sequelae of long-term impairments

Stages of Recovery – In Hospital

Rancho Los Amigos Cognitive Scale - Revised

- 10-point scale
 - Level I No Response: Total Assistance
 - Level II Generalized Response: Total Assistance
 - Level III Localized Response: Total Assistance
 - Level IV Confused/Agitated: Maximal Assistance
 - Level V Confused, Inappropriate Non-Agitated: Maximal Assistance
 - Level VI Confused, Appropriate: Moderate Assistance
 - Level VII Automatic, Appropriate: Minimal Assistance for Daily Living Skills
 - Level VIII Purposeful, Appropriate: Stand-By Assistance
 - Level IX Purposeful, Appropriate: Stand-By Assistance on Request
 - Level X Purposeful, Appropriate: Modified Independent

Stages of Recovery – In Hospital

Rancho Los Amigos Cognitive Scale - Revised

- Provides feedback to medical staff on effectiveness of rehabilitation involving:
 - Awareness.
 - Cognition.
 - Behavior.
 - Interaction with environment.
- Rehabilitation can be improved if the team responds to changes in the scale over time and therapies.

Stages of Recovery – On-going

National Institute of Neurological Disorders and Stroke lists:

1. **Coma:** totally reliant on medical staff.
2. **Post-Traumatic Amnesia:** severe agitation, restlessness, confusion.
3. **Conscious with Severe Deficits:** attentional, problem-solving, social, and memory deficits; focused on orthopedic or physical injuries.
4. **Awareness:** frustration, irritability, anger, and beginning anxiety and depression due to cognitive deficits; feeling pressure to return to responsibilities; over-estimating abilities and under-estimating problems; emotional lability; lowered tolerance for frustration.
5. **Success When Structured:** experiencing success due to cognitive improvement; complexity exhausts coping skills; increased insightfulness leads to significant depression and anxiety.
6. **Return to Responsibility:** coming to terms emotionally with what has happened and the outcomes; taking on some old responsibilities; experiences failures and fatigue; rebuilding confidence and self-esteem; building new life for self.

Stages of Recovery – On-going

American Speech-Language-Hearing Association lists:

1. **Coma:** unresponsive; eyes closed.
2. **Vegetative State:** no cognitive responses; gross wakefulness; sleep-wake cycles.
3. **Minimally Conscious State:** purposeful wakefulness; responds to some commands.
4. **Confusional State:** recovered speech; amnesic; severe attentional deficits; agitated; hyperaroused; possible labile behavior.
5. **Post-Confusional, Evolving Independence:** resolution of amnesia; cognitive improvement; achieving independence in daily self-care; improving social interaction; developing independence at home.
6. **Social Competence, Community Re-entry:** recovering cognitive abilities; goal-directed behaviors; social skills; personality; developing independence in the community; returning to academic or vocational pursuits.

Stages of Recovery – On-going

Disability Rating Scale for Severe Head Trauma Patients: Coma to Community:

■ Based on scales and subscales measuring:	29-point scale to determine level of disability:
■ Arousability, Awareness, & Responsivity	■ 0 No Disability
■ eye opening ■ communication ability ■ motor response	■ 1 Mild
■ Cognitive Ability to for Self-Care	■ 2 – 3 Partial
■ feeding ■ toileting ■ grooming	■ 4 – 6 Moderate
■ Dependence on Others/ Level of Functioning	■ 7 – 11 Moderately Severe
■ Psychosocial Adaptability/ Employability	■ 12 – 16 Severe
	■ 17 – 21 Extremely Severe
	■ 22 – 24 Vegetative State
	■ 25 – 29 Severe Vegetative State

Stages of Recovery - Emotional

According to the *Traumatic Brain Injury Survival Guide*, there are 6 stages of emotional recovery:

1. **Confusion and Agitation:** just awakening; can be physically aggressive; for 99% the confusion and agitation recede.
2. **Denial:** 2 types: (1) emotional and (2) cognitive processing problem due to injury.
3. **Anger and Depression:** realizes that abilities have changed; blaming self and/or others; anger can be from: (1) frustration or (2) the injury itself.
4. **Testing Phase:** checking out limits; tendency to overdo; experience failure and fatigue; very painful stage.
5. **Uneasy Acceptance:** learn the abilities and deficits and accept the limits; not happy, but accepting.
6. **Coping:** moving on to develop “new self.”

Stages of Recovery – Family Adjustment

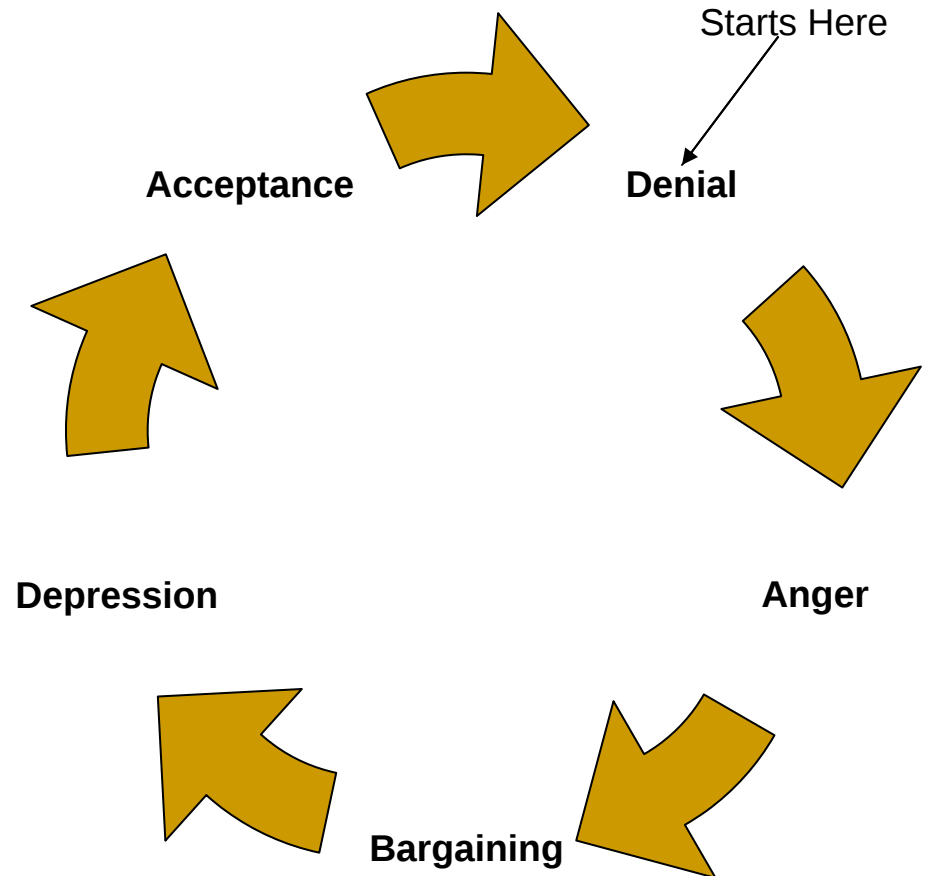
Dr. Debra M. Russell addresses the 6 stages of recovery in family adjustment:

- **Stage 1 (1 - 3 months):** shock; focused on praying for recovery; great hopes for full recovery; develop denial; no TBI experience; repress feelings; avoid discussing severity; transfer negative feelings to others.
- **Stage 2 (3 – 9 months):** begin to recognize the severity; feeling helpless and frustrated; denial turns into anxiety, anger, fear, depression, and loss.
- **Stage 3 (6 – 24 months):** start to get annoyed with the survivor – not trying hard enough; experiencing depression, guilt, and discouragement; starting to recognize the levels of impairment; start seeking information about TBI recovery.
- **Stage 4 (10 – 24 months):** beginning of realism; disability and/or negative behaviors bother family; need additional breaks away to improve tolerance; fear situation is permanent; reduce face-to-face interactions with survivor.
- **Stage 5 (12 – 24 months):** profound sadness; grieving cycle may begin again; mourn loss of way the survivor used to be; beginning to share new future with and for survivor.
- **Stage 6 (2 – 3 years post-injury):** accept that the person may never be the same as before the TBI; accommodate to change family roles; guilt diminishes; creativity in assistance; well versed about TBI; invest time and money on accommodations.

Stages of Recovery - Grief

Dr. Elizabeth Kubler-Ross's Grief Cycle

- Applicable to the loss the survivor and family are experiencing regarding “the old self – pre-TBI.”
- 5 stages:
 - can cycle often
 - don't always go in order



Factors in Recovery

- People:
 - The individual.
 - The family.
 - The team.
- Brain Biology:
 - Plasticity.
 - New growth.
 - Rerouting.
- Time.

Factors in Recovery

Biological factors which can affect the extent and pace of recovery:

- **Plasticity:** ability of the brain to reorganize neural pathways based on new experiences and new learning.
- **New growth:** structural remodeling of neurons and their dendrites over time following death of neighboring neurons.
- **Rerouting:** implantation of wireless brain chip can create artificial connections between different parts of the brain.

Factors in Recovery

Individual factors which can affect the extent and pace of recovery:

- Work ethic.
- Sense of humor.
- Unselfishness.
- Insight.
- Healthy living.
- Co-operation with other members of medical & rehab teams.
- Ability to admit to having a brain injury.
- Use of support groups to talk about frustrations.
- Pre-injury health (physical, mental, and emotional).

Factors in Recovery

- External factors which can affect the extent and pace of recovery:
 - Person-centeredness – Who's it all about?
 - Initial medical response and intervention after the accident.
 - Quality of preventative rehabilitation in ER and ICU.
 - Level of TBI expertise of healthcare professionals.
 - Quality of insurance coverage.
 - Family support, knowledge of systems, and advocacy.
 - Continuum of levels of service and support from hospital to community
 - Communication amongst all members of the team.
- However, two individuals with identical care will not necessarily have the same outcomes, nor recover at the same pace.
- Blaming and finger-pointing do not help the individual's recovery!

Post-Quiz – Part 1

True or False.

- ☒ 1. No two people recover from TBI in the same manner. PG 9
- ☐ 2. Rancho Los Amigos and Glasgow Coma Scale are the only two scales for measuring recovery from TBI.
- ☒ 3. An individual's work ethic can affect his/her recovery. PG 23
- ☐ 4. Recovery is measured by extent and pace.
- ☒ 5. Formal rehabilitation is time-limited regardless of the severity of the injury. PG 8
- ☐ 6. Recovery happens in the six months after the injury.
- ☒ 7. Social integration is a major tenet of rehabilitation.
- ☒ 8. Rehabilitation begins in the emergency room and/or intensive care unit. PG 7
- ☒ 9. An individual with TBI experiences Kubler-Ross's stages of grief in the loss of their "old self." PG 20
- ☐ 10. Plasticity only applies to children's brains.

Post-Quiz – Part 2

Put these levels of care in order beginning with care given immediately following the injury.

- 9 a. Independent Living Program
- 4 b. Sub-acute rehabilitation
- 6 c. Out-patient therapy
- 5 d. Day treatment
- 1 e. Emergency room
- 7 f. Home health services
- 2 g. Intensive care unit
- 8 h. Community re-entry
- 3 i. Acute rehabilitation

True or False.

Indicate whether each of these items is a factor in an individual's recovery.

- T 1. quality of insurance coverage
- T 2. sense of humor
- T 3. communication within the team
- T 4. insight into impairment(s)
- T 5. ability to admit having a TBI
- T 6. person-centered programming
- T 7. knowledge of rehabilitation systems
- T 8. pre-injury health
- T 9. time
- 10. blaming NEGATIVE FACTOR, NEED TO ADJUST QUESTION

Post-Quiz – Part 3

Explain:

1. how the following scales aid in measuring TBI recovery:
 - a. **Disorders of Consciousness Scale (DOCS)** REPEATED USE IMPROVED MEDICAL AND REHAB MANAGEMENT DURING COMA AND RECOVERY. DETECTED PREVIOUSLY UNDETECTED SECONDARY MEDICAL COMPLICATION, WHICH WERE SUCCESSFULLY TREATED. pg10
 - b. **Rancho Los Amigos Scale (RLA):** PROVIDES FEEDBACK TO MEDICAL STAFF ON EFFECTIVENESS OF REHAB. REHAB CAN BE IMPROVED IF THE TEAM RESPONDS TO CHANGES IN THE SCALE OVER TIME AND THERAPIES. Pg 14
 - c. **Glasgow Coma Scale (GSC):** USED TO ESTIMATE AND CATEGORIZE OUTCOMES OF TBI ON BASIS OF OVERALL SOCIAL CAPABILITY OR DEPENDENCE ON OTHERS. # COMMUNICATES TO MEDICAL WORKERS 4 POSSIBLE LEVELS FOR SURVIVAL pg12
 - d. **Disability Rating Scale (DRS):** 29 POINT SCALE TO DETERMINE LEVEL OF DISABILITY - COMA TO COMMUNITY pg17
2. **the emotional stages of recovery.** There are 6 stages of emotional recovery. Confusion & agitation, denial, anger and depression, testing phase, uneasy acceptance, and coping pg 18
3. **the family adjustment stages.** 6 stages- shock, begin to recognize severity, start to get annoyed with the survivor, beginning realism, profound sadness, accept that person may never be the same. Pg 19
4. **biological factors in recovery.** Plasticity, new growth, rerouting pg 22
5. **individual factors affecting recovery.** Work ethic, sense of humor, unselfishness, insight, healthy living, co-operation with other members of medical and rehab team, ability to admit to having a brain injury, use of support groups to talk about frustrations, pre-injury health (physical, mental & emotional) pg 23

Learning Outcomes Checklist

Can you:

☐ Identify:

- ☐ the basic stages of recovery
- ☐ the steps in the rehabilitation continuum
- ☐ major assessment tools used to communicate diagnosis & prognosis
- ☐ factors which influence recovery

☐ Explain

☐ Factors which influence recovery:

- ☐ Plasticity
- ☐ New Growth
- ☐ Rerouting
- ☐ Time
- ☐ Healthy Living
- ☐ The Team
- ☐ The Individual

**State of Vermont
Adult Services Division
TBI Program**

Section IX: REIMBURSEMENT FOR SERVICES

Funding:

The TBI Program is a Medicaid funded service. The Vermont Medicaid Program is a Federal-State program of financial assistance for medical services for eligible recipients. TBI Medicaid providers submit claims to the Department's fiscal agent, Electronic Data Systems (EDS), for covered services provided to eligible Medicaid recipients.

Provider Agency staff will be trained in Medicaid claims processing and documentation requirements in order to submit accurate claims for reimbursement.

The Provider Agency must agree to accept reimbursement limits as stipulated in the consumer's Care Plan.

Service	Provided by	Rate
Case Management • Pre Admission planning	Provider Agency	\$12.50 / unit 1 unit = 15 minutes
Rehabilitation	Life Skills Aide	\$ 5.27/ unit 1 unit = 15 minutes
Community Support	Caregiver	\$77.06 / day
Respite	Caregiver	\$172.80 / day
Environmental & Assistive Technology	Provider Agency	\$4.000 / cap
Crisis Support	Provider Agency	\$513.00 / dav
Psychology Supports	Professional	\$16.70 / unit 1 unit = 15 minutes
Employment Supports	Life Skills Aide	\$5.27 / unit 1 unit = 15 minutes
Daily Rate	Provider Agency	Maximum rate \$303.11 / dav

The goal of the short-term rehabilitation program is to foster independence thereby **decreasing the level of services and supports** culminating with discharge from the program.

Pre-admission planning will be a separate billable item. With documentation the maximum reimbursement is \$50.00/hour.

Travel expenses are not a separate billable item and are incorporated into the hourly rate of service.

**State of Vermont
Adult Services Division
TBI Program**

**SERVICES AND PROCEDURE CODES
SUMMARY**

<u>Service</u>	<u>Procedure Codes</u>
Case Management	T1016 U8, T1016 HI
• Pre-admission Planning	T2024 U8, T2024 HI
Rehabilitation Services	T2017 U8, T2017 HI
Community Supports	T2038 U8, T2038 HI
Respite Services	S9125 U8, S9125 HI
Environmental and Assistive Technology	T2035 U8, T2035 HI
Crisis Support	T2034 U8, T2034 HI
Psychology and Counseling Supports	H0036 U8, H0036 HI
Employment Supports	T2019 U8, T2019 HI
Daily Rate	T1020 U8, T1020 UD

**State of Vermont
Adult Services Division
TBI Program**

PROCEDURE CODES

Rehabilitation and Long Term Services

<u>Code</u>	<u>Description</u>	<u>Charges</u>
T1016 U8	TBI Case Management Services: Case managers will be responsible for securing and coordinating appropriate services for consumers. These services include scheduling care conference meetings, completion of necessary documentation, and development of the TBI Service Plan. One unit equals 15 minutes.	\$12.50 / unit 1 unit = 15 minutes
T2017 U8	TBI Rehabilitation Services: Service is delivered by life skills aide working with the consumer on a one-on-one basis, providing training in specific activities of daily living in all necessary settings. One unit equals one hour and must be billed in whole hour increments.	\$5.27 / unit 1 unit = 15 minutes
T2038 U8	TBI Community Support Services: Service consists of 24-hour care and supervision and may be provided in a family setting, group home, supervised apartment, or in the consumer's own home. One unit equals one day and must be billed in whole day increments.	\$77.06 / day
S9125 U8	TBI Respite for Caregivers: Caregivers must provide 24-hour care and supervision. One unit equals one day and must be billed in whole day increments.	\$172.80 / day
T2025 U8	TBI Environmental and Assistive Technology: Non-medically covered equipment or devices denied for reimbursement by other insurance (including Medicaid). Prior authorization is required from the TBI Program Supervisor before items are ordered or purchased.	\$4000 / Lifetime on program
T2034 U8	TBI Crisis Support: Crisis Supports are a short-term array of services and supports that assist a consumer to resolve a behavioral or emotional crisis safely in their community. This system includes 24-hour professional one on one-support staffing and case management services. One unit equals one day [24 hr] and must be billed in whole day increments. Prior Authorization is required from the TBI Program Supervisor.	\$513 / day
H0036 U8	TBI Psychology & Counseling Supports: Service provides intensive one on one counseling, evaluation, monitoring, support, and medication review & instruction. This is provided by individuals licensed as a psychiatrist, psychologist, and/or with a masters in psychotherapy or counseling. All service providers must have experience and an expertise in traumatic brain injury. One unit equals one hour and must be billed in whole hour increments. Prior authorization is required from the TBI Program Supervisor.	\$16.70 / unit 1 unit = 15 minutes

T2019 U8	TBI Employment Supports: Services that assist a consumer to obtain and maintain individual employment in regular work settings. Employment Supports include activities needed to access employment including assessment, job development, supervision and training. Supports also include activities to sustain paid work by the consumer, including job coaching, off-site support and consultation with employers. One unit equals one hour and must be billed in whole hour increments. Prior authorization is required from the TBI Program Supervisor.	\$5.27 / unit 1 unit = 15 minutes
T1020 U8	TBI Daily Rate TBI 24-hour daily rate is an all-inclusive rate that combines all of the standard TBI services. Services include: • Case management • Rehabilitation • Community Support • Respite • Environmental & Assistive Technology • Psychology Supports • Employment Supports The daily rate does NOT include crisis supports. This does NOT affect Room & Board, personal spending allowances or additional transportation expenses.	Maximum rate \$303.11 / day

UNIQUE CODE

<u>Code</u>	<u>Description</u>	<u>Charges</u>
T2024 U8	TBI Pre Admission Planning: Coordination of comprehensive services prior to a consumer's discharge from a facility or admission to the program. One unit equals one hour and must be billed in whole hour increments.	\$12.50 / unit 1 unit = 15 minutes

LONG TERM TBI SERVICES MENTAL HEALTH FUNDED

<u>Code</u>	<u>Description</u>	<u>Charges</u>
T1016 HI	TBI-MH Funded Long-term Case Management Services: Case managers will be responsible for securing and coordinating appropriate services for consumers. Services include scheduling care conference meetings, completion of necessary documentation, and development of the TBI Service Plan. One unit equals 15 minutes.	\$12.50 / unit 1 unit = 15 minutes
T2017 HI	TBI-MH Funded Long-term Rehabilitation Services: Service is delivered by life skills aide working with the consumer on a one-on-one basis, providing training in specific activities of daily living in all necessary settings. One unit equals one hour and must be billed in whole hour increments.	\$5.27 / unit 1 unit = 15 minutes

T2038 HI	TBI-MH Funded Long-term Community Services: Service consists of 24-hour care and supervision and may be provided in a family setting, group home, supervised apartment, or in the consumer's own home. One unit equals one day and must be billed in whole day increments.	\$77.06 / day
S9125 HI	TBI-MH Funded Long-term Respite for Caregivers: Caregivers must provide 24-hour care and supervision. One unit equals one day and must be billed in whole day increments.	\$172.80 / day
T2025 HI	TBI-MH Funded Long-term Environmental and Assistive Technology: Non-medically covered equipment or devices denied for reimbursement by other insurance (including Medicaid). Prior authorization is required from the TBI Program Supervisor before items are ordered or purchased.	\$4000 / Lifetime on Program
T2034 HI	TBI-MH Funded Long-term Crisis Support: Crisis Supports are a short-term array of services and supports that assist a consumer to resolve a behavioral or emotional crisis safely in their community. This system includes 24-hour professional one-on-one support staffing and case management services. One unit equals one day [24 hr] and must be billed in whole day increments. Prior authorization is required from the TBI Program Supervisor.	\$513 / day
H0036 HI	TBI-MH Funded Long-term Psychology & Counseling Supports: Service provides intensive one-on-one counseling, evaluation, monitoring, support, and medication review & instruction. This is provided by individuals licensed as a psychiatrist, psychologist, and/or with a masters in psychotherapy or counseling. All service providers must have experience and an expertise in traumatic brain injury. One unit equals one hour and must be billed in whole hour increments. Prior authorization is required from the TBI Program Supervisor.	\$16.70 / unit 1 unit = 15 minutes
T2019 HI	TBI-MH Funded Long-term Employment Supports: Services that assist a consumer to obtain and maintain individual employment in regular work settings. Employment Supports include activities needed to access employment including assessment, job development, supervision and training. Work supports also include activities to sustain paid work by the consumer, including job coaching, off-site support and consultation with employers. One unit equals one hour and must be billed in whole hour increments. Prior authorization is required from the TBI Program Supervisor.	\$5.27 / unit 1 unit = 15 minutes

Revision Date: 06/24/2016

T1020 UD	TBI Daily Rate	Maximum rate
	TBI 24-hour daily rate is an all-inclusive rate that combines all of the standard TBI services. Services include: • Case management • Rehabilitation • Community Support • Respite • Environmental & Assistive Technology • Psychology Supports • Employment Supports The daily rate does NOT include crisis supports. This does NOT affect Room & Board, personal spending allowances or additional transportation expenses.	\$303.11 / day

UNIQUE CODE

<u>Code</u>	<u>Description</u>	<u>Charges</u>
T2024 HI	TBI-MH Funded Long-term Pre Admission Planning: Coordination of comprehensive services prior to an individual's discharge from a facility or admission to the program. One unit equals one hour and must be billed in whole hour increments.	\$12.50 / unit 1 unit = 15 minutes

**State of Vermont
Adult Services Division
TBI Program**

QUALITY REVIEW / BILLING PROCEDURES

The Adult Services Division (ASD) may conduct an audit review of each Provider Agency's billing and documentation records for the TBI Program for consumers. Billing/audit surveys will be done at the discretion of ASD.

The billing/audit team may review financial, billing records, cost of service plans and individual services program. Licensure documents and/or certifications may also be reviewed. Discrepancies will be noted and shared with the Provider Agency and a written report will be provided. Any billing error, overcharges/undercharges will be corrected through the established billing adjustment process within the State.

Clinical record documentation will be reviewed in accordance with the TBI Quality Review Plan (located in Section X).

Payments can only be authorized for the approved Care Plan for:

- Recipients who have been properly reviewed and found eligible for the TBI Program
- The authorized level of reimbursement, based on the projected Care Plan and approved services
- That reimbursements are only made for dates of service, for the period approved and the recipient is Medicaid eligible for the dates services are provided

**State of Vermont
Adult Services Division
TBI Program**

HP Enterprise Services Communications

Telephone Inquiries:

Vermont	(800) 925-1706
Out of State	(802) 878-7871
Local	(802) 878-7871
Hours	Monday through Friday 8:00 AM – 5:00 PM

Written Inquiries:

HP Enterprise Services
P.O. Box 888
Williston, VT 05495-0888
Attention: Communications

Enrollment and Communications:

HP Enterprise Services
P.O. Box 888
Williston, VT 05495-0888
Attention: Provider Enrollment

Please refer to the above listed address and telephone numbers when making inquiries to the following departments:

- PROVIDER SERVICES
- ELECTRONIC CLAIMS SUBMISSION
- ADVISORY ARTICLES
- MANUALS

Appendix A

TBI Program

COUNSELORS & AGENCIES WITH BRAIN INJURY EXPERIENCE

Please contact the Brain Injury Association of Vermont for current Information, Referrals, and Assistance at 1-877-856-1772 or the Traumatic Brain Injury Program at 802-786-2516.

Appendix B TBI Program

BACKGROUND CHECK POLICY

Department of Disabilities, Aging and Independent Living (DAIL)

Effective: August 21, 2014

I. Introduction

Performing background checks on individuals who may work with vulnerable people is a component of preventing abuse, neglect and exploitation. This policy provides a consistent framework for background checks and describes when a background check is required, the elements of a background check, and what is done if a background check reveals a potential problem.

Background checks supplement but do not replace reference checks. Background checks should never be relied upon as a substitute for personal contact with former employers or others who are in a position to have personal knowledge about the prospective worker's or volunteer's qualifications to work with vulnerable people.

II. Definitions

A. **"Agency"** means an organization that operates programs/services administered by DAIL¹ for any "person who receives services."

¹ This definition also means an organization that operates programs/services for the Vermont Department of Health's Children's Personal Care Services.

B. **"Background check"** includes all of the following:

1. **Child abuse registry** check: database maintained by the **Department for Children and Families** ("DCF") to provide information about people who have been substantiated for abuse, neglect and/or exploitation of children.

2. **Adult abuse registry** check: database maintained by the **Department of Disabilities, Aging and Independent Living** ("DAIL") to provide information about people who have been substantiated for the abuse, neglect and/or exploitation of a vulnerable adult(s).

3. **Criminal background** check: databases, which include the sex offender registry, maintained by **Vermont Crime Information Center** ("VCIC");

4. **Federal Exclusions Databases** check: databases maintained by the federal government to DAIL Background Check Policy: Update 2014 Page 2 of 7 , or the **Department of Vermont Health Access**. DAIL Background Check Policy: Update 2014 Page 3 of 7

III. Background Check Requirements

A. Long-term care facilities are **required** to conduct background checks as set forth in the regulations that govern each facility, found at <http://www.dlp.vermont.gov/regs>, and are not subject to the DAIL Background Check Policy.

B. Background checks are **required** for all prospective workers who are paid with funds administered by DAIL.

C. Background checks are **required** for all prospective volunteers.

D. Motor vehicle driver background checks are **required** for prospective workers and volunteers who would be expected to transport persons who receive services as part of the regular job duties. It is at the discretion of the employer of record to determine whether to hire a worker, or engage a contractor or volunteer with a record of motor vehicle violations.

E. Background checks are **required** for respite workers hired by families through Flexible Family Funding, the Dementia Respite Program, the National Family Caregiver Support Program (NFCSP) or Flex Funds.

F. Background checks are **required** for all adults who reside³ in a home, such as a developmental home or shared living home, when that home receives DAIL funding to provide residential support to a person who receives services.

³“Reside” means intend to remain in the home permanently or for an extended period of time.

⁴When the “individual employer” changes for a worker who already provides, and is expected to continue to provide,

G. The agency/ or F/EA shall:

- provide a copy of this background check policy to all prospective workers and volunteers before a background check is conducted; and
- conduct background checks required by this policy.

H. The agency or individual employer shall pay for background checks required by this policy; an F/EA is not responsible for paying these costs. A prospective worker or volunteer shall not be charged for the costs of background checks required by this policy.

IV. Offer/Start Date of Employment/Contract/Volunteer Opportunity

A. An offer of employment, contract or volunteer opportunity may be made contingent upon satisfactory background checks.

B. No prospective worker or volunteer shall begin work until notified by the employer that the background checks are completed and found to be satisfactory.

C. Medicaid funds shall not be used to pay for services provided before the background check is completed or when the background check is found to be unsatisfactory.⁴

DAIL Background Check Policy: Update 2014 Page 4 of 7

services to the same “person who receives services,” a new background check is required. Under those circumstances, the worker will not be paid with funds administered by DAIL while another background check is completed, but will be paid retroactively if the background check is satisfactory.

⁵ The Equal Employment Opportunity Commission (“EEOC”) defines “job-related” and “business necessity.” See www.eeoc.gov/laws/guidance/arrest_conviction.cfm. Based on the job requirements and functions, the criminal conviction(s) must present an unacceptable level of risk for the vulnerable person or employer.

V. Exclusions

Funds administered by DAIL **shall not be used**, to employ or contract with a worker who has:

- A. A substantiated record of abuse, neglect, or exploitation of a child as determined by DCF;
- B. A substantiated record of abuse, neglect, or exploitation of a vulnerable adult as determined by DAIL;
- C. Been excluded from participation in Medicaid or Medicare services or programs, or from facilities, as reflected in exclusion databases referenced in II B. 4 above.;
- D. A criminal conviction, unless a variance has been granted as set forth in Section VI below, which meets the criteria, “job-related” and “business necessity”⁵ including the following:

- abuse, neglect or exploitation of a child or vulnerable adult
- lewd and lascivious conduct
- assaults
- unlawful restraint
- recklessly endangering another
- frauds, including forgery
- larceny, including thefts and robbery
- burglary
- embezzlement
- extortion
- homicide, including murder or manslaughter
- stalking
- cruelty to children or animals
- kidnapping
- possession of child pornography
- arson
- drug-related
- DUI

If a prospective worker or volunteer has a criminal conviction(s), which could result in exclusion from employment, he/she must be informed that he/she may apply for a variance as explained below in Section VI. Decisions regarding exclusions from employment or requests for a variance shall be made on a case-by-case basis.

. DAIL Background Check Policy: Update 2014 Page 5 of 7

VI. Variances

A. Variances for starting work before a background check is completed will not be considered.

B. The determination whether to grant a variance must be based on a review and consideration of all of the following factors:

- nature of the position
- nature and seriousness of the offense(s)
- time elapsed since the offense(s)
- number or repeated offenses
- age at the time of the offense(s)
- involvement, since the date of the criminal offense, with the criminal justice system and/or child or adult protective services
- disclosure of the criminal conviction(s) by the prospective worker or volunteer to the person receiving services, the surrogate, and the legal guardian, if any
- prospective worker's unique caregiving relationship with the person receiving services
- unavailability of other workers or volunteers who could reasonably be expected to perform the care required

C. Process for requesting a variance

1. Agency-Managed

- a. When a prospective worker requests a variance, the agency is responsible for the decision to grant or deny a variance under this policy. For exclusions see section V above.
- b. The agency shall issue the decision regarding the variance within 15 business days of receipt of the request for a variance.
- c. The agency shall follow the standards set forth in this policy when granting or denying variances.
- d. The agency shall maintain written documentation of the decision to grant or deny a variance, including the rationale, listing any conditions. A copy of the written documentation shall be kept by the agency and made available to quality reviewers from the State.

2. Individual Employers

- a. A contracted home provider (e.g., developmental home, shared living, adult foster care), surrogate, family member or, person who receives services, who employs a worker with the use of an F/EA, must submit a variance request in writing. ***In addition to the information provided pursuant to Section VI above***, the request must include the following:
 - i. A variance request letter from the employer, explaining the circumstances and the reason why it is important that the prospective worker be a paid caregiver for the person who receives services.
 - ii. A letter from the prospective worker explaining the conviction(s) and why he/she should be allowed to be the paid caregiver for the person

DAIL Background Check Policy: Update 2014 Page 6 of 7

who receives services.

b. With the consent of the prospective employee, the request may include a letter from the case manager of the person receiving services, explaining why he/she does or does not support the variance.

c. Variance requests submitted by individual employers for Choices for Care or the Attendant Services Program must be submitted to:

Department of Disabilities, Aging and Independent Living Adult Services Division
280 State Drive HC-2 South
Waterbury, VT 05671-2070

Variance requests submitted by individual employers for Developmental Disabilities Services and Traumatic Brain Injury (TBI) Services must be submitted to:

Department of Disabilities, Aging and Independent Living Adult Services Division
280 State Drive HC-2 South
Waterbury, VT 05671-2070

Variance requests submitted by individual employers for Children's Personal Care Services must be submitted to:

Vermont Department of Health Children with Special Health Needs Unit
Children's Personal Care Services
108 Cherry Street, Box 70
Burlington, VT 05401

d. The Department shall follow the standards set forth in this policy.

e. The Department retains the right to request additional information to assist in making a decision regarding a requested variance.

f. The Department shall provide a written decision, within 15 business days of receipt of the variance request, to the individual employer that includes the rationale for granting or denying a variance request, any conditions associated with granting or denying the variance, and appeal rights, if applicable. The Department shall notify the F/EA, for purposes of accepting timesheets for processing, only that a variance request has been granted or denied.

g. A copy of the decision regarding the variance request and any supporting documentation (including the factors considered) shall be kept in the Department's records.

D. Appeals

If the employer disagrees with the variance decision, he or she may appeal to the Commissioner of the Department or to the Human Services Board. DAIL Background Check Policy: Update 2014 Page 7 of 7

To appeal to the Commissioner of the Department of Disabilities, Aging and Independent Living, if applicable, the employer must contact DAIL within 30 days of receipt of the decision by calling 802-241-2401 or by writing:

Commissioner's Office

Department of Disabilities, Aging and Independent Living

280 State Drive HC-2 South

Waterbury, VT 05671-2020

To appeal to the Commissioner of the Vermont Department of Health, if applicable, the employer must contact VDH within 30 days of receipt of the decision by calling 802-865-1395 or by writing:

Children's Personal Care Services Administrator

Commissioner's Office

Vermont Department of Health

108 Cherry Street, Box 70

Burlington VT 05401

To appeal to the Human Services Board, the employer must submit his or her request for a hearing within 90 days of receipt of the original decision or 30 days from the receipt of the Commissioner's decision, if the employer appealed the decision to the Commissioner, whichever is longer. To appeal to the Human Services Board, the employer must contact:

Human Services Board

14-16 Baldwin Street

2nd Floor

Montpelier, VT 05633-4302.

Authorizing Signature: Date:

August 21, 2014

Susan Wehry, M.D.

Commissioner

Appendix C TBI Program

HOUSING SAFETY AND ACCESSIBILITY REVIEW PROCESS

January 2010

Housing safety and accessibility reviews are conducted by the Division of Disability and Aging Services (DDAS) to assess the safety and accessibility of 24 hour residential support homes. Residential reviews should occur prior to the person moving into the home. In addition, Developmental Services agency community support sites attended by four or more people are required to be reviewed.

Review schedule

A safety review and accessibility review (if applicable) is required by the Division of Disability and Aging Services of 24 hour residential support homes not required to be licensed by the Division of Licensing and Protection, Vermont Department of Labor, Vermont State Housing Authority or Section 8, a local housing authority, and for community support sites of designated developmental services agencies.

When possible, prior to the person moving into the home or the agency opening a community support site, the agency requests a safety and accessibility review. The provider and agency agree to maintain all the items on the review checklist.

Additional inspections may occur if there are going to be significant alterations to the community support site or home that would impact on the safety of the consumer(s). It is the responsibility of the agency to notify the Division of Disability and Aging Services of any home or developmental disabilities community support site that is in need of a safety and accessibility review, which include "drop in sites", that are funded by the Division.

Division Report

At the time of the actual review, the agency representative and home provider are given a copy of the Housing/Safety and/or Accessibility Report, which details the deficiencies, if any, and the standard for the correction(s) necessary. The report also specifies that all corrections noted on housing/safety reviews and need to be completed within thirty (30) days from the date of the inspection. The identifying data and date of review are entered into the Division's database. If the completed report is returned to the Division within the thirty (30) days, then the information is recorded and a hard copy of the corrections is kept on file. The accessibility review findings must be resolved within ninety (90) days of the initial review. See Attachment A for the complete accessibility review process.

Agency Response

Agencies are required to insure and verify the completion of all corrections through a follow-up housing inspection from the Division's housing/safety specialist. Some agencies have been approved to conduct the re-inspection of the housing/safety review themselves and must forward verification of the completion of the checklist to the Division.

Housing Inspections: If the agency has not verified that the corrections have been made within the above timeframes (30 days), a written notice will be sent to the agency. If after a minimum of fifteen (15) days from the date of the written notice the completed report has not been completed and returned, a second written notice will be sent to the agency, notifying the agency they have an additional fifteen (15) days to complete and return the form. If after a minimum of sixty (60) calendar days from the date of the initial inspection the completed report has not been returned, and the agency has received two (2) notices, the funding paid to the agency for that home may be suspended until such time that the corrections have been completed. If the funding is suspended, the agency will receive a suspension letter.

Accessibility Inspections: If the agency has not verified that the corrections have been made within the above timeframes (90 days), a written notice will be sent to the agency. If after a minimum of fifteen (15) days from the date of the written notice the completed report has not been completed and returned, a second written notice will be sent to the agency, notifying the agency they have an additional fifteen (15) days to complete and return the form. If after a minimum of one-hundred-twenty (120) calendar days from the date of the initial inspection the completed report has not been returned, and the agency has received two (2) notices, the funding paid to the agency for that home may be suspended until such time that the corrections have been completed. If the funding is suspended, the agency will receive a suspension letter.

Appeal Process

An agency may submit to the Division a detailed written request for a variance if they disagree with any of the findings on the checklist. All items on the checklist that have not met the standards and are not being appealed **must be** corrected and the completed checklist submitted to the Division within the prescribed timeframes before an appeal will be considered.

If an agency disagrees with a decision made by the Division's Housing/Safety supervisor in regard to the appeal, then the agency may submit a written appeal with supporting documentation to the Director of the Division. The decision of the Director of the Division shall be final.

ACCESSIBILITY REVIEW PROCEDURES

Guiding Principles

All individuals have a right to utilize all appropriate spaces in order to maximize their independence in the home they own, rent, or share with another individual/family. Accessibility standards are designed to maximize *all* individuals' independence and level of safety and are designed to provide workable and safe environments for caregivers as well.

In some programs there may be funding available to assist with accessibility renovations. Generally, accessibility renovations utilize the Americans with Disabilities Act (ADA) standards. With that in mind, accessibility will be reviewed taking the person's individual needs into consideration. Homes will not have to meet all ADA Standards, but must accommodate individual needs.

The following procedures apply to:

- **Individuals who receive Community Supports funding through the Traumatic Brain Injury Program**
- **Individuals who receive 24 hour residential funding**
- **Developmental service agency community support sites**

Procedures

1. Whenever a person who uses a wheelchair, walker, or has other mobility impairments receives 24 hour home supports funded by DDAS, an accessibility review must be completed. It is the responsibility of the services coordinator to notify the Housing Safety and Accessibility Consultant that the individual may require physical environmental modifications and to also notify other relevant individuals (e.g., individual with a disability, developmental home/shared living provider, etc.) that an accessibility review will be completed. The complete accessibility review is typically done at the same time as the housing safety review and the combined visits require approximately one and one-half (1½) hours.
2. The individual receiving services is required to be present during the review unless a previous assessment of the individual's accessibility needs has been completed by an occupational or physical therapist. All areas of accessibility are evaluated, including doorway widths, bathroom(s), and entrance and egress from the home.

3. The services coordinator is responsible for providing an accessibility rehabilitation plan within thirty (30) days of the date of review. This plan should respond to all areas of the accessibility review. All accessibility renovations are completed within ninety (90) days of the initial review, unless a waiver of specific renovations is requested.
4. A written request for a waiver of specific renovations may be submitted with a specific rationale for the request (e.g., “the basement doorway does not need to be widened because the basement is only used for storage...”).
5. Requests to modify or waive accessibility requirements will be reviewed by the housing safety supervisor. After consultation with the housing safety consultant, a written decision will be forwarded to the requesting service coordinator within twenty (20) days of the request.
6. Disputes concerning accessibility requirements or needs that are not resolved at the above level may be appealed to the Deputy Commissioner of the Department of Disability, Aging and Independent Living (or a designee) in writing for resolution. The appeal needs to be submitted within thirty (30) days of receiving written notification of the decision in No. 5, above. The Deputy Commissioner’s decision will be forwarded to the service coordinator within fifteen (15) days of receipt of the appeal and is final.

Appendix D

TBI QUALITY ASSURANCE QUALITY IMPROVEMENT & REVIEW PROCESS

PLEASE NOTE: the term “individual” refers to recipients of services, families, guardians, and legal representatives where applicable.

Purpose of the Traumatic Brain Injury Program Quality Management Plan

The Traumatic Brain Injury (TBI) Program Quality Management process guides the activities of the Adult Services Division staff and establishes the standards for assessing the quality of TBI services throughout Vermont.

This quality management process reflects the collaborative work of TBI Providers, Individuals with TBI, their family members, guardians and TBI program staff.

Quality management is a systematic approach for assuring that quality assurance and quality improvement activities are integrated and working as intended to achieve desired results. The purpose of the TBI Quality Management Process is to provide:

1. Process for gathering information, providing feedback, improving agency services and activities and sharing promising practices with other TBI service providers around Vermont.
2. A set of shared Outcomes, Indicators and Standards from which performance is measured; and
3. A cohesive and focused work plan that directs time, effort, and resources

Desired Outcomes of Services

Outcomes (1-8) describe the way people want to live their lives. **Indicators** describe specific components of the outcome, the desired results of services and the manner in which people receive their services. Eight outcomes of program services were developed, reviewed and agreed to by individuals receiving services, family members/guardians, service providers, and TBI program staff. Service providers will be measured by the extent to which they incorporate these Outcomes and their associated indicators into their daily service practices.

1. **Respect: Individuals are treated with dignity and respect.**
 - Rights are promoted and individuals are treated age appropriately
 - Providers offers choice
 - Provider uses positive behavioral supports/restraints are only used as a last resort
 - Provider agency respects people's lifestyles, diversity, beliefs, and culture
2. **Self-Determination: Individuals direct their own lives**
 - Provider ensures options of services are given
 - People are allowed to take risks, are given choice of daily activities, and allowed to make decisions pertaining to them
 - People are included in team meetings and allowed access to reports about him/her
 - Provider encourages individuals to control their own lives
 - Providers are able to recognize and work with and under the direction of Guardian
3. **Person-Centered Practices: Services and supports are individualized to meet people's needs and honor their strengths and preferences**
 - Individuals establish their goals/offered a choice of goals
 - Learning and strategies are based on people's strengths/learning styles
 - Agency is organized to benefit the people they serve
4. **Independent Living: Services support independent living.**
 - The TBI provider collaborates with other organizations such as transit, therapies, vocation

- to help individuals manage their lives
 - TBI Provider encourages people to move to independence by: assisting them to learn the skills necessary to live; work/volunteer; by utilizing community based resources and offering a variety of service options
5. **Relationships: Individuals receive support to foster and maintain relationships**
 - TBI Providers support/promote family relations and friendships if so desired by the people they serve
 - TBI Providers support intimate relationships
 - TBI Providers educate individuals on sexuality if so desired by the individual
 6. **Participation: Individuals participate in their local communities.**
 - Individuals have transportation when they want to go somewhere; agency coordinates transportation to/from community destinations
 - Providers inform/promote local events such as: town meetings, select board meetings, community dinners, dances etc.
 7. **Well-being: Individuals services and supports promote health and well-being.**
 - TBI Providers access services which optimize personal health
 - TBI Providers promote medical well-being, nutritional well-being, spiritual well-being, diet and exercise
 - TBI providers promote skills and educate individuals on good health and hygiene
 - TBI Providers offices are accessible, have established fire safety plans and coordinate home safety inspections with community support (home) providers
 8. **Communication: Individuals communicate effectively with others.**
 - Providers explore/support individuals' efforts to improve communication by encouraging access to every aspect of communication to include but not limited to assistive technology
 - People have access to someone who understands them
 - TBI Providers teach skills to improve individuals' communication and cognition
 - Staff present in a way the people they serve understand

On-going Review of this Quality Management Plan

This TBI Quality Management Process should be regarded as a living document. On-going changes in service delivery, funding, individual needs, staffing, policies, etc. will necessitate changes in quality management activities. The TBI Steering Committee, a workgroup of the Statewide TBI Advisory Board, will have an ongoing responsibility to periodically revisit the plan and recommend changes.

The Quality Services Review Process

The Centers for Medicare and Medicaid Services (CMS) established that States have the responsibility for the health and safety of the individuals that receive services within Vermont. The core of the TBI Quality Management Process is the oversight of service provision through quality services reviews of agencies that provide direct service within an 18-month cycle. The TBI quality review process includes information gathering and identifying both promising practices and addressing areas for improvement. This quality services review process consists of direct feedback from individuals who receive services, record reviews, observations and discussions with agency staff. Agencies are reviewed using the TBI Program Standards and outcomes and Indicators as the "lens" through which the quality of services will be determined.

Agencies will receive feedback from TBI review staff throughout the process. TBI Review Reports summarize the performance of the agency over the course of the review and will address promising practices as well as areas for improvement and identify any potential technical assistance needs. In the instances where improvement is needed in a particular area, agencies will be required to complete

a follow up plan which identifies solutions to the area needing improvement, timeframes to make the improvement, and any technical assistance needs from the Adult Services Division (ASD) staff.

Statewide Reporting for Systems Change

Long term statewide trends reveal opportunities for systems change related to funding, training and programmatic structure. The Adult Services Division will periodically report on statewide trends related to the Quality Service Standards. These reports will be available to stakeholders such as the Vermont Legislature, TBI Advisory Board, service providers, local advocacy organizations, and the general public. Periodically, the Adult Services Division will host public forums to discuss these reports and potential systems change.

Technical Assistance (TA)

TBI Program and other state staff will be available for on-going technical assistance. Other TA forums such as: Case Manager and Life Skills Aide trainings, TBI Conferences and trainings by request will also be available throughout the year.

Other TBI Quality Management Activities: Program Standards and References. The TBI Quality Review is not meant to replace program standards, but rather to supplement them and describe a method to ensure program standards are met.

Agencies are held accountable for following program manuals, standards, policies, and other guidelines as applicable to the agency caseload.

1. Provider Agreements

The TBI program staff oversees the review process for the annual Provider Agreements of TBI agencies. The Division of Licensing and Protection reviews licensing requirements for all licensed facilities including Therapeutic Care Residences (TCR) with applicable State and Federal regulations.

2. Protective Services

All TBI Providers must adhere to the Vermont Mandated Reporter Protocols for suspected abuse, neglect, and exploitation of consumers located in the TBI Program Manual

3. Background Check Policy

All TBI service providers are required to comply with the Department of Disabilities, Aging, and Independent Living Background Check Policy. This policy describes what background checks are required and what needs to be done if a background check reveals a potential problem. Subsequent to the initial background check, an agency or provider shall have a policy for conducting periodic random checks of workers and volunteers covered above.

4. Critical Incident Reporting Policy and Procedures

Currently a critical incident reporting process is being developed for Department of Disabilities, Aging, and Independent Living providers. It is expected that a web-based reporting system will be developed. Critical incident reports for each agency received will be examined prior to the quality services review to identify trends.

5. Appeals and Grievances

The Global Commitment Medicaid Waiver, which the TBI Program is a part of, has its own appeals and grievances process. The Disability Law Project is available to assist individuals in the appeals and grievances processes. It is expected that each TBI Provider will develop its own local process for resolving consumer complaints and grievances for their agency e.g., Consumer is not satisfied with their Life Skills Aide.

The TBI Review Process

Introduction

The TBI Quality Review process, developed by TBI Service providers, individuals with TBI, their families, guardians and State TBI program staff, was designed to work collaboratively with service providers to assure and improve the quality of services based on a set of Quality Service Standards. These standards are used by TBI Program reviewers to monitor and review the quality of services. As part of the review process, Adult Services Division (TBI program staff) and various stakeholders provide the review team their perspective on the quality of the agency's services. The TBI reviewers also collect information through existing sources such as monthly service reports and/or other service reviews in ASD in order to reduce redundancy.

Every TBI Provider will participate in a quality services review. The review process will take place within an 18-month cycle.

On-Site Reviews

On-Site Reviews will take place over the course of one - two days and will determine the extent to which providers are in compliance with established TBI Program Standards. In some cases, information may be gathered through a separate quality review process e.g. developmental services review.

1. Notification and Scheduling

Written notice of the review dates is sent to the Agency's Executive Director at least 30 calendar days in advance of the quality services review. The Quality Management Reviewer will coordinate with the agency to schedule the specific review activities for the **On-Site Review**. Agencies can expect to discuss coordination of record reviews, general availability of staff and key management staff during the course of the review, discussions regarding the consumer sample, schedules of team meetings and the review of agency documentation. The Agency's Executive Director may choose an agency contact person to serve as liaison for the coordination of the review process.

The agency contact person is expected to facilitate, schedule, coordinate, and generally be available during review activities.

2. Sample Selection

A sample of individuals receiving TBI services is chosen to gain input from consumers and examine a variety of services in order to obtain a "picture" of the agency as a whole. Once notified of the agency's review, a sample of individuals receiving services will be identified and services will be reviewed on the day of the on-site review. The TBI Reviewer coordinates the sample of people being reviewed with the TBI Service Provider and TBI Program staff. A sample of no less than 10% of the providers' caseload will be reviewed. Once the sample has been selected, the TBI Reviewer confirms the feasibility of the sample and other logistics (e.g., does the individual have a guardian? Is the consumer still being served? Are there any reasons the sample should or should not include certain individuals?).

Following sample selection, the TBI provider agency will notify selected individuals and their guardians (where applicable) that a TBI Program Quality Reviewer will be reviewing their services. Agencies will support individuals to understand the purpose and intent of the review.

Agencies will also inform the TBI Reviewer of any unique circumstances that may be relevant (e.g., individual observes specific cultural/religious practices; individual needs an interpreter, etc.). Please note, if a provider services a client for a brief period of time but the client transfers to another provider or leaves the TBI program the provider will be reviewed based on the time frames that services were provided.

3. TBI On-Site Review

The TBI On-Site Review is a one to two-day review, and is aimed at determining the extent to which a TBI Provider agency is compliant with standards set forth by the Department of Disabilities, Aging, and Independent Living, Adult Services Division, and the TBI Program. The TBI On-Site review will examine the following areas:

- DAIL Background Check Policy
- Training and supervision
- Provision of community supports
- Service Contracts
- Community Collaboration
- Community Access
- TBI Program Documentation

Process

As this review will primarily examine documentation, access to consumer files and some corporate information will be necessary. The reviewer will also have discussions with agency management and staff to determine the agency's practices around supervision and training. **Some provider agencies offer a variety of services such as developmental and aging services which may be subject to a separate review process.**

During the review process, the TBI Quality Reviewer will provide ongoing feedback to the agency. This presents an opportunity to seek clarification, acknowledge what is working well, and describe any areas that need improvement. After all information gathering is complete, the reviewer will meet with the agency director and other key agency staff to provide a summary of feedback before the On Site Review Report is completed. This feedback discussion provides the opportunity to describe agency strengths, attain clarity on issues raised, and identify technical assistance needs. The TBI Reviewer will identify and clarify any issues that need to be addressed and will discuss with the agency a plan to improve noted areas/items, identify technical assistance needs and determine relevant timeframes for completing corrections. The TBI reviewer will then follow-up periodically and provide technical assistance until the improvements are complete. Finally, the agency will be asked to provide feedback on the quality services review process.

Please note, in the event the reviewer observes a life threatening situation for a consumer during the review, the agency will be asked to take immediate steps to correct the situation.

Appendix E

TBI Program Resource Contact List

TBI Advisory Committee Members

Marsha Bancroft (Chair)** Disability Rights Vermont/Family Member 141 Main Street, Suite 7 Montpelier, VT 05602 800-834-7890, ext. 106 (802) 229-1359 (Fax) marsha@vtpa.org	Emmie Burke Head Injury Stroke Ind. Proj./Family Member P.O. Box 1837A Rutland, VT 05701 (802) 446-2302 (802) 446-2302 eburke7773@aol.com
Clayton Clark (Secretary) Vermont Office of Veterans Affairs 118 State Street Montpelier, VT 05620-4401 (802) 828-3379 (802) 828-5932 (Fax) Clayton.Clark@state.vt.us	Bryan Dague UVM Supported Employment 208 Colchester Ave., Mann Hall Burlington, VT 05405 (802) 656-1345 (802) 656-1357 (Fax) bryan.dague@uvm.edu
Anna King (Vice Chair) Individual with a TBI 176 Main Street Montpelier, VT 05602 (802) 338-8704 socket@myfairpoint.net	Carole McCay Visiting Nurses Association, Chittenden & Grand Isle Counties 1101 Prim Road Colchester, VT 05446 (802) 860-4474 McCay@vnacares.org
Maureen Mayo** VT Center for Independent Living Individual with a TBI 60 Noridge Drive Northfield, VT 05663 (802) 229-0501 (802) 229-0503 (Fax) moekel@vcil.org	Barbara Prine Disability Law Project 57 North Main Street Rutland, VT 05701 (802) 775-0021, ext. 429 (802) 775-0022 (Fax) bprine@vtlegalaid.org
Sarah Shirley Sterling Area Services 109 Professional Drive Morrisville, VT 05661 (802) 888-7602 (802) 888-1182 (Fax) sarahs@sterlingarea.org	Trevor Squirrell** Executive Director, BIA-VT 92 South Main St. PO Box 482 Waterbury, VT 05676 (802) 244-6850 (802) 244-6850 (Fax) tsquirre@sover.net
James Vyhnak Individual with a TBI 8 Mountain Stree, Bristol VT 05443 (802) 453-6411 vyhnak@sover.net	Barbara Winters Brain Injury Association of Vermont 92 South Main St. PO Box 482 Waterbury, VT 05676 (802) 244-6850 (802) 244-6850 (Fax) Braininfo1@biavt.org
<i>*Denotes member of Steering Committee</i>	

State of Vermont Contacts

Andre R Courcelle TBI Program Manager 280 State Drive HC-2 South Waterbury, VT 05671-2070 802 786-2516 802 786-5055 Andre.courcelle@vermont.gov	Colleen Forkas Administrative Services Coordinator 280 State Drive HC-2 South Waterbury, VT 05671-2070 802 241-0294 802 241-0385 Colleen.forkas@vermont.gov
Megan Tierney-Ward Adult Services Division Director 280 State Drive HC-2 South Waterbury, VT 05671-2070 (802) 241-0294 (802) 241-0385 Megan.Tierney-Ward@vermont.gov	Department of Disabilities, Aging & Independent (DAIL) Main Phone Line: 802 241-2401

Consultants

Caroline Dawson VT Department of Health/Health PO Box 70, 108 Cherry St Burlington, VT 05402 (802) 865-7783 (802) 865-7701 cdawson@vdh.state.vt.us	Robert DeGeus Individual with TBI, Forest, Parks & Recreation 103 S. Main St. 10 South Waterbury, VT 05671 (802) 241-3671 Robert.degeus@state.vt.us
Michael Ferguson VT Department of Education 654 Granger Road Berlin, VT 05602 (802) 828-5110 (802) 828-0573 mferguson@doe.state.vt.us	William F. Frey, PhD Psychologist 64 Allen St. Rutland, VT 05701 (802) 773-3965 (802) 773-3965 william.frey@castleton.edu
Denise Lamoureux Refugee Resettlement Coordinator 103 South Main Street Waterbury, VT 05671-2303 (802) 241-2229 denisel@ahs.state.vt.us	Susan Patch-Crandall Individual with a TBI 353 Clay Hill Rd. Hartland, VT 05048 (802) 295-5025 susanpcall@earthlink.net
Kay Shangraw Prevent Child Abuse Vermont PO Box 829 Montpelier, VT 05601 (802) 229-5724 (802) 223-5567 kshangraw@pcavt.org	Rebecca Shea VT Network Against Domestic and Sexual Violence PO Box 405 Montpelier, VT 05601 (802) 223-1302 (802) 223-6942 rebecca@vtnetwork.org
Thomas Simpatico, M.D. Director of Public Psychiatry, University of Vermont 103 South Main Street Waterbury, VT 05671 (802) 656-3246 thomas.simpatico@uvm.edu	E. Lanier Summerall, M.D. Director TBI Clinic VA Medical Center 215 North Main Street White River Junction, VT 05009 (802) 295-9363 Lanier.summerall@va.gov