

Policy Number: 16.23

TITLE: ASSESSMENT AND MANAGEMENT OF PAIN

PURPOSE

The purpose of this policy is to provide guidelines for pain management of patients at San Francisco General Hospital Medical Center (SFGHMC).

STATEMENT OF POLICY

- I. It is the policy of SFGHMC that healthcare providers:
 1. assess patients for pain throughout the continuum of care;
 2. manage pain in order to maximize function and improve the quality of life;
 3. respect the patient's report of pain as the most valid contribution to assessment and planning for the management of pain;
 4. consider patient's preference for pain management in planning pain management approaches;
 5. provide a collaborative inter-disciplinary approach to pain control with input from other providers of care and family or surrogate decision-maker, as appropriate; and
 6. provide the patient/family with information about:
 - a. the importance of pain control including benefits and outcomes,
 - b. pain relief options and expectations,
 - c. use of pain scales (Wong-Baker Faces Scale [See Appendix A-1], the Department of Psychiatry-Initial Comprehensive Pain Assessment [See Appendix A-2], the Neonatal Pain, Agitation, & Sedation Scale [N-Pass] [See Nursing P&P Appendix A-3], and the FLACC [faces, legs, activity, cry, and consolability] [See Nursing P&P Appendix A-6]).
 - d. Communicating their level of pain using a pain intensity rating scale.
- II. The Pain Management Committee and Pharmacy and Therapeutics Committee will develop and/or review every three (3) years clinical policies and procedures and guidelines related to pain management.

PROCEDURE

- I. Initial Assessment for Pain
 - A. Throughout the continuum of care, health care providers screen for the presence or absence of pain. If pain is present, a comprehensive assessment is performed and the findings are documented in the patient's medical record including, but not limited to:
 1. History:
 - a. Intensity (0-10)
 - b. Location (s)
 - c. Quality and pattern of pain
 - d. Frequency and duration
 - e. History of pain management strategies and evaluation of effectiveness, and
 - f. History of substance use or abuse
 2. Physical examination, emphasizing the neurologic examination
 3. Psychosocial evaluation
 4. Appropriate diagnostic work-up to determine the cause of pain
 - B. For patients who have indicated that pain is present, health care providers will educate the patient, family, or surrogate decision-maker about the use of pain scales (See Nursing P&P Appendix A-1 through A-6) and encourage the patient to communicate their level of pain using a pain intensity rating scale
 - C. Pain in neonates of various gestational ages and under various conditions presents a unique challenge. Infants must be assessed at regular intervals for physiologic and behavioral characteristics or symptoms of pain (e.g. Quality of Cry, Consolability, Sleep Cycle, Motor Activity {tone}, and Facial Expression). Standard assessment criteria may be useful, however, an inability to respond or being overwhelmed and unable to respond to painful stimuli must be considered when infants are very low birth weight or critically ill. Appropriate pharmacological and non-pharmacological treatment is to be employed for pain management. Round the clock pain and sedation management should be considered for physiologic stability. The Neonatal Pain, Agitation, & Sedation Scale (N-PASS)

is chosen to aid in the assessment of the neonatal population (See Nursing P&P Appendix A-3).

- D. Knowledge of children's development, behavioral cues, subtle signs of distress and verbal and non-verbal responses of pain, coupled with awareness of potential causes of discomfort are crucial to pediatric pain assessment (Acute Pain Management Panel, 1992; Management of Cancer Pain Panel, 1994). As with adults, pediatric pain assessment includes a pain history, a search for diagnostic explanations for the pain, evaluation of location and intensity of pain, and behavioral observation. Physiologic parameters specific for age may be included as an assessment parameter. The influences on culture and pain are explored and strategies, may be needed for children who are developmentally delayed, learning disabled, emotionally disturbed, or non-english speaking. **The observations, insights and input from parents or guardians are a key source of assessment data.** In addition to the hospital wide Wong-Baker Faces Scale (See Nursing P&P Appendix A-1), the Cries (See Appendix A-4), Observational Pain Scale (OPS) (See Nursing P&P Appendix A-6) are 4 tools chosen for pediatric pain assessment.
- E. Interpreter and American Sign Language (ASL) services will be utilized as needed to provide information about:
 - 1. the importance of pain control including benefits and outcomes
 - 2. pain relief options and expectations
 - 3. use of pain scales (See Nursing P&P Appendices A-1 through A-6), and
 - 4. encourage the patient to communicate their level of pain using a pain intensity rating scale.
- F. For diagnostic or therapeutic procedures, adequate disclosure should include a discussion of sedation and pain management as appropriate.

II. Reassessment for Pain

- A. The patient shall be reassessed by the health care providers at regular intervals (e.g. at the time vital signs are taken) for the presence and degree of pain using standard assessment criteria. The pain intensity will be documented in the vital sign record each time pain is assessed. Other relevant information about pain will be documented in the progress/narrative note, including, but not limited to:
 - 1. location(s)

2. quality and pattern of pain and
3. response to therapy

B. Health care providers will reassess pain and document in the patient's medical record:

1. after therapeutic measures are taken to decrease pain and
 - a. before and after treatments, activities and procedures that may worsen the pain.

III. Interventions

A. Pain management interventions may include, but are not limited to:

1. Pharmacological Management

- a. Opioids and non-opioid analgesics-Both hospitalized and ambulatory care patients have access to a range of analgesic therapies, including Schedule II opioid analgesics requiring triplicate prescription forms from the State Bureau of Narcotics Enforcement for outpatient prescriptions, including discharge from the hospital. All departments or services providing direct patient care have ready access at all times to providers authorized to prescribe-schedule II opioid analgesics.
- b. The simplest route and dosing schedule, and least invasive modality should be used first.
- c. Non-steroidal anti-inflammatory drugs (NSAIDS) on a fixed schedule may be useful for mild to moderate pain.
- d. Titrate opioids to effect with around the clock dosing of a short acting oral analgesic, then convert to a long acting oral or transdermal agent using standard equianalgesic tables at appropriate fixed intervals.
- e. Make short acting opioids available for prn use to treat breakthrough or incident related pain.
- f. Consider the use of adjuvant analgesics for neuropathic pain or muscle spasm (e.g. tricyclic antidepressants, anticonvulsants, muscle relaxants).
- g. Anticipate and treat side effects of opioid and non-opioid medications, in particular constipation. A prophylactic around the clock schedule of a stool softener and a mild stimulant laxative should be ordered for any patient receiving routine opioids or tricyclic antidepressant medications. Nausea and vomiting may be transient side effects of opioids that should improve in several days. Short term treatment with antiemetics may be useful until tolerance develops.

- h. Avoid mixed agonist-antagonist opioids and meperidine.
2. Non-Pharmacological interventions include, but are not limited to:
- a. Physical modalities, such as application of heat, cold, massage, physical therapy, transcutaneous electrical nerve stimulation and acupuncture may be considered.
 - b. Psychosocial interventions should be introduced early in therapy to allow patients to practice and gain skills in these modalities. These include, but are not limited to:
 - Relaxation and imagery
 - Distraction
 - Patient education
 - Pastoral counseling
 - Peer support groups
 - Psychotherapy and structured support
 - Hypnosis (should only be administered by a trained professional)
 - c. A variety of anesthesia techniques may be offered in certain circumstances for example, intercostals blocks, epidural analgesia.
 - d. Invasive therapies
Invasive therapies such as neurolytic or neurodestructive techniques and spinal drug delivery systems may be helpful in some patients, but should be reserved for patients who have failed on adequate trials of less invasive approaches.
3. Management of chronic pain with opioids
- a. Opioids may be appropriate in the management of chronic pain if other pharmacological or non-pharmacological interventions have not provided adequate pain relief.
 - b. A patient and provider agreement for controlled substances should be considered for all patients receiving chronic opioid therapy, and should be placed in the medical record (See Nursing P&P Appendix B).
 - c. As specified in the agreement, patients should receive opioids from a single provider
 - d. The single provider provision, in addition to the other provisions of the patient and provider agreement, should be followed and compliance with the agreement should be documented in the patients receiving chronic opioid therapy.

- e. Oversight of patients receiving chronic opioid therapy will be reviewed by the SFGHMC Quality Management Department.

B. Special Pain Situations

1. The presence of chemical dependence is not to be considered a contraindication to providing analgesia. Past chronic exposure to opioids may increase tolerance and establish the need for larger doses of opioid analgesics to diminish pain. The patient and provider agreement for controlled substances should be used for patients with known or suspected chemical dependence who are prescribed opioids (See Nursing P&P Appendix B).
2. Withholding and Withdrawing of Medical Treatments
 - Pain and suffering should be prevented or treated during the withholding and withdrawal process, including administration of sedative and analgesic agents given in sufficient doses and appropriate intervals to insure patient comfort. Please refer to SFGHMC Administrative Policy and Procedure # 23.1, Withholding and Withdrawing Medical Treatments when the above is being considered.

C. Pain Management Resources

SFGHMC provides a number of pain management resources to assist the clinician and patient (See Nursing P&P Appendix C). Referrals may be made for acute and chronic pain management, patient education, psychotherapeutic group support, anesthesia, behavioral and physical medicine and rehabilitation intervention. All referrals require clinician approval.

IV. Discharge Planning for the Patient with Pain

- A. The interdisciplinary discharge planning process should begin early in the hospitalization and should include planning for the provision of adequate pain relief at discharge. The patient's lifestyle and home situation should be taken into account when prescribing pharmacological and non-pharmacological treatment for pain at the time of discharge. Patient's should be provided with adequate analgesic until the follow-up appointment.

Appendix A-4

- B. Patients who do not have a primary care provider should be referred directly to a CHN primary care clinic and provider to ensure the continuance of appropriate pain management measures after discharge. Please refer to Administrative Policy and Procedure 18.8 Referral of Unaffiliated Patients for Primary Care.

Signed by: Gene O'Connell, Executive Administrator, SFGHMC; Susan A. Currin, RN, MS, Chief Nursing Officer; J. Renee Navarro, Chief of Medical Staff; Robert V. Brody, MD, Chair, Ethics Committee

Date Adopted: 11/98

Reviewed:

Revised: 03/01, 02/02

TITLE: CEREBRAL SPINAL FLUID DRAINAGE FOR ELEVATED INTRACRANIAL PRESSURE

STATEMENT OF POLICY

Intensive Care Unit Registered Nurse trained in this procedure is responsible for the set-up, maintenance and management of the intracranial pressure drainage system.

RELEVANT DATA

1. Controlled drainage of cerebrospinal fluid (CSF) is used in the management of intracranial hypertension, cerebrospinal fluid leaks, and as a temporary treatment for hydrocephalus.
2. This policy applies to drainage of CSF from intraventricular intracranial pressure (ICP) catheters and not from subdural ICP catheters. If unsure what type of ICP catheter is in place, check with the neurosurgery resident.
3. A sterile closed collection bag system with a graduated in-line volume chamber (e.g. Volutrol) allows for intermittent or continuous drainage of cerebral spinal fluid from the intraventricular catheter as well as for intermittent measurement of the amount drained.
4. Use the midway point between the edge of the eyebrow and the ear canal to determine the position of the transducer. This represents the zero point within the patient's head. The neurosurgeon should order how far from the zero point he/she wants the drip outlet level to be placed. This is usually a distance of 0-15 centimeters depending upon what maintenance intracranial pressure is desired. Use the CMH₂O scale to set drip chamber height according to the physician's order.
5. The neurosurgeon will order parameters for the drainage of cerebral spinal fluid from the ICP catheter. The orders will include whether to use:
 - a. Intermittent drainage with continuous monitoring
or
 - b. Continuous drainage with intermittent monitoring

In the case of intermittent drainage the order will include at what sustained ICP level (greater than 30-60 seconds) drainage will be instituted. Transient spikes in ICP related to coughing or procedures should not be treated unless sustained. Any ICP spike that results in a deleterious event will be treated immediately with M.D.notification.

6. Notify the neurosurgeon immediately of any suspected contamination of the system.
7. Notify the neurosurgeon to change or secure the intracranial pressure catheter dressing if it is soiled or loose/unstable on the patient's head.
8. Be familiar with the intracranial pressure monitor calibration procedure before implementing intracranial pressure drainage.

EQUIPMENT

External Ventricular drainage set
Level

OBTAINED FROM

CPD Cart
Unit Pharmacy

PROCEDURE

NURSING ACTION

1. Position the patient's head of the bed as ordered , by the physician. If it is not ordered, then position at 30 degrees.
2. Open external drainage kit.
3. Determine the position of the patient's zero point by locating the point midway between the edge of the eyebrow and the ear canal. Transmit this point to the zero Mark of the device supplied to a stable pole at the bedside. (use level to determine correct position)

RATIONAL/PRECAUTIONS

It is important to establish a standard "head of bed" position for drainage of CSF for each Individual patient because any change in level of head will affect the rate at which CSF will drain from the ventricles

Determining the zero point creates a reference point which all caregivers can use to determine the placement of the drip outlet portion of the drainage set. Each primary nurse should determine this point at the beginning of their shift to assure accuracy.

4. WEAR CLEAN GLOVES and remove the 3-way stopcock system that is connected to the intracranial pressure catheter.

The intraventricular catheter is a direct line of possible contamination of the CSF with subsequent development of meningitis. All efforts must be taken to avoid contamination of the external drainage system.

5. Connect the end of the drainage tubing that contains the intermittent injection pot to the port of the 3-way stopcock.

Make sure that all connections are securely tightened to avoid contamination and assure a closed system the intermittent injection port allows for the irrigation of the ICP catheter.

6. Secure the graduated volutrol portion in an upright position on the pole so that the drip outlet level is at the height ordered by the physician or at 20 centimeters above the zero point if not ordered. Change the system if the air vent portion of the volutrol gets wet.

When opened for drainage, the placement of the drip outlet will determine the rate of drainage for the desired ICP. If positioned too high, small amounts of air could potentially be pulled into the ventricles. When the drip outlet is positioned lower than the ventricles, it may drain at too fast a rate and collapse the ventricles. The graduated volutrol is positioned upright to prevent backflow into the ventricles and to prevent contamination of the air vent portion of the graduated volutrol. A wet air vent prevents drainage of CSF.

7. Make sure that the "C" clamp to the graduated volutrol to the drainage bags is in the off position.

The graduated volutrol allows for accumulation of smaller portions of CSF with accurate hourly measurements and subsequent emptying into the larger collection bag.

8. For drainage, turn the 3-way stopcock "open" to the ICP catheter and drainage tubing and "off" to the transducer. Watch the drip outlet and note the speed at which the CSF is draining out. Leave it open for 3-5 seconds. Then "close" the stopcock to the drainage system and "open" it to the transducer to monitor ICP.

Drainage of fluid will decrease the intracranial pressure. Draining CSF for only a few seconds during the first observation will allow the nurse to compare the rate and quantity of drainage with the amount of change in the ICP.
9. Check and record the ICP value before and after drainage to determine the effectiveness of drainage. If the ICP value does not decrease sufficiently after drainage, Then the stopcock should be left in the "open" position for drainage for a slightly longer period of time. Some patients may require leaving the drain open for 1-2 minutes if drainage is exceedingly slow. It may be necessary to alter the level at which the drip outlet is placed in order to obtain adequate drainage.

It is the bedside nurse's judgment to determine how long it is necessary to leave the stopcock in the position in order to obtain adequate drainage. If there is essentially no flow seen in the drip chamber, the actual ICP will not decrease; any apparent fall in ICP without flow through the drip chamber is probably artifactual. The neurosurgeon should be informed that attempted drainage is unsuccessful.
10. Observe and document frequency and volume of CSF is drained every hour.

Accurate documentation of the frequency of CSF drainage that is required to maintain normal ICP is necessary to assess the degree of hydrocephalus.
11. Empty the graduated volutrol into the drainage collection bag at least every shift or as the volutrol fills up. Record the amount as output on the flow sheet. Change the drainage collection bag when it is near full. Dispose according to body substance precautions.

Accurate documentation of the quantity of CSF drainage is necessary to assess the degree of hydrocephalus. Unnecessary manipulation of the system increases the likelihood of combination

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|---|---|
| 12. <u>DO NOT IRRIGATE THE ICP CATHETER.</u> If the catheter fails to drain or monitor, notify the neurosurgery resident. | Irrigation of the ICP catheter may introduce contaminants and should be avoided if possible. Irrigation requires the expertise of Neurosurgery service. |
| 13. Dispose of set-up after removal by physician according to body substance precautions. | Appropriate disposal prevents exposure to potentially infectious material. |

DOCUMENTATION

Document total amount of CSF drained every shift in the output column of the Critical Care flowsheet. Note color of drainage, frequency of drainage, and other pertinent information in the nurse's notes.

Document notification of physician for unexpected complications and nursing actions taken.

CROSS REFERENCE: Nursing Policy 6.5 Notification of Physician for Change in Patient Condition

 Critical Care Nursing Policy 1.0 Transducer Setup And Maintenance for Intracranial Pressure Monitoring

SUPERSEDES: Critical Care Policy "Intracranial Pressure Drainage" (4/92)

DISTRIBUTION: Critical Care Clinical Practice Committee

 Nursing Administration

SFGH Food & Nutrition Services Screening Process for Clinical Nutrition Program

Priority/Source	Dietetic Technician (DT)	Registered Dietitian (RD)
Consult Board	Food preferences Initiate Calorie Count Screen for Diet Education Psychiatry	All other consults
Parenteral Nutrition List	N/A	New Orders
CBORD Reports: • Host Rounds (census) • NPO/Clear Liquids	DIET ORDER: • Diabetic \geq 72 hours LOS • Cardiac \geq 72 hours LOS LENGTH OF STAY: • Acute \geq 7 days • Psychiatry \geq 30 days	DIET ORDER: • Tube Feeding • NPO/Clear Liquid > 3 days • Full Liquid > 4 days \geq 3 DAYS FOR DIET ORDERS BELOW: • Renal, Protein restricted • Blenderized, pureed • Dysphagia, Thick Liquids
Skilled Nursing Facility	Screen within 72 hours of admit	Assessment within 7 days of admission
Referrals	RN referrals for preferences RD referrals for follow up	MD referrals RN-RD Rounds Diet Tech referrals Interdisciplinary referrals (e.g. rehab, social worker)

Process of Information Flow	Dietetic Technician (DT)	Registered Dietitian (RD)
Departmental Forms	Nutrition Screening Form	Adult or Neonatal Nutrition Care Plan
Timeliness	<ul style="list-style-type: none"> Screening Form initiated within 24 hours of identification of criteria. Evaluation completed within 48 hours 	Assessment initiated within 24 hours: <ul style="list-style-type: none"> Of identification of criteria, or Of receipt of referral/consult Assessment completed within 48 hours
Documentation	DEPARTMENTAL: <ul style="list-style-type: none"> Screening, Assessment, and Activity Log (SAA) Screening Form MEDICAL RECORD: <ul style="list-style-type: none"> Progress notes IDPOC 	DEPARTMENTAL: <ul style="list-style-type: none"> Screening, Assessment, and Activity Log (SAA) Nutrition Care Plan MEDICAL RECORD: <ul style="list-style-type: none"> Progress notes IDPOC
Referral, Transfer, Discharge Process <i>Nutritional Care Plans for discharged patients are maintained in Diet Office File for one year.</i>	PATIENT IDENTIFIED AS HIGH RISK or MODERATE RISK: <ul style="list-style-type: none"> Screening Form forwarded to RD by 5pm daily PATIENTS IDENTIFIED AS LOW RISK: <ul style="list-style-type: none"> Screening Form maintained in DT binder, after RD review, until discharged. 	Daily: <ul style="list-style-type: none"> RD reviews, initials/dates all DT screening forms. RD reviews caseloads; Nutrition Care Plans are transferred among RDs per unit coverage by 10am. Nutrition Care Plans for all current High and Moderate risk patients are maintained throughout hospitalization in the RD binders.

**SFGH Food & Nutrition Services
Clinical Nutrition
Priority System**

HIGHEST RISK – Priority A1	
Criteria which meets this classification	
Diagnosis	Burns requiring ICU admission
Diet Prescription	TPN/PPN New TF NPO/Clear Liquid > 3 days Infants receiving non-standard formulas
Other	MD ordered consults
Documentation, Responsibility and Timeliness of Care	
Initial Evaluation	<ol style="list-style-type: none"> 1. Nursing screens for nutritional risk within 24 hours of admission and refers identified patients to RD. 2. RD identifies high risk patients via screening Diet Office reports and pharmacy TPN/PPN list
Assessment	RD completes assessment within 24 hours of identification of Highest Risk criteria.
Reassessment/Follow Up	Every 3 days until stable.
Responsible Party	Registered Dietitian

HIGH RISK – Priority A2	
Criteria which meets this classification	
Diagnosis	<p><u>Med/Surg Conditions:</u> New onset DM, Hepatic Failure with coma or encephalopathy, Burns (not in ICU), Non-healing Wounds, Acute Renal Failure, Failure to Thrive, Malnutrition, Cachexia</p> <p><u>Neurological Conditions:</u> Dysphagia, Aspiration Precautions</p> <p><u>GI Conditions:</u> Esophageal strictures, Upper GI Cancer, Crohn’s Disease, Irritable Bowel, Ulcerative Colitis, Short Gut, High Output Fistula (>500cc/24 hours), Bowel Obstruction, Ileus, Malabsorption, Pancreatitis</p> <p><u>Age Related Conditions:</u> Hyperemesis Gravidarim, Teen Pregnancy, Gestational Diabetes Prematurity <32 weeks gestation</p> <p><u>Psychiatric Conditions:</u> Anorexia Nervosa, Eating Disorders</p>
Diet Prescription	<p>Long term/stable TF Renal, Protein Restriction</p>
Other	<p><u>ICU</u> stay > 72 hours, vent dependent MD ordered Calorie Counts/All Other <u>Consults</u> <u>Weight:</u> > 10% change over 6 months or less, >10# change in one month, < 80% IBW, Birthweight < 2000gm, Infant with >15% weight loss from birth <u>Education Needs:</u> New Diabetic, New Renal, Food Drug (Propofol, Dilantin), Home TF</p>
Documentation, Responsibility and Timeliness of Care	
Initial Evaluation	<ol style="list-style-type: none"> 1. Nursing screens for nutritional risk within 24 hours of admission and refers identified patients to RD. 2. RD reviews DT screening form within 24 hours; DT documents Nutrition Screening in Medical Record Progress Notes 3. RD identifies high risk patients via screening Diet Office reports
Assessment	RD completes assessment within 48 hours of identification of High Risk criteria.
Reassessment/Follow Up	Every 5 days
Responsible Party	Registered Dietitian

MODERATE RISK – Priority B1 and B2	
Criteria which meets this classification	
Diagnosis	Diabetes Mellitus GI Bleed, Colostomy, Ileostomy AIDS, HIV Cancer with Chemotherapy and/or radiation (except Head and Neck Cancer) Dialysis (CAPD or hemodialysis)
Diet Prescription	Diabetic Diet Sodium restricted diet Fat and cholesterol modified diets Altered consistency diets (puree, dysphagia, thick liquids) Full liquid diet > 5days Mechanical soft diet
Other	<u>Subjective data/GI complaints:</u> a) N,V,D > 3 days b) PO intake < 50% of meals > 3 days c) Poor dentition d) Constipation > 3 days <u>Weight History:</u> a) IBW <90%, >130% b) Unintentional weight change > 5# within 1 month, 10# in 6 months <u>Biochemical Data:</u> a) ALB ,2.5 b) Glucose >225 c) Creatinine >2.5 <u>Education:</u> a) Medications (i.e. coumadin) b) Diet review/Diets other than high risk category <u>Age:</u> > 65 or < 18 years old
Documentation, Responsibility and Timeliness of Care	
Initial Evaluation	RD reviews screening data recorded by DT within 24 hours and makes notation on screening form DT documents findings in the Medical Record Progress Notes
Assessment	B1: 4 or more risk factors/criteria; RD completes assessment within 72 hours of identification B2: < 4 risk factors; DT to document as above
Reassessment/Follow Up	B1: Every 7 days by RD B2: Every 7 days by DT
Responsible Party	Registered Dietitian or Diet Technician

LOW RISK – Priority C	
Criteria which meets this classification	
Diet Prescription	Regular or soft diet
Other	Subjective: No GI complaints, appetite good. Biochemical: Selected labs within normal limits Weight History: No significant weight change Weight within IBW Education: No education needed, refuses education, or unable to comprehend education materials Age: 18 – 64 years old
Documentation, Responsibility and Timeliness of Care	
Initial Evaluation	RD reviews screening data recorded by DT within 24 hours and initials screening form. Diet Tech to document in medical record and IDPOC
Assessment	Not necessary by RD. Exception: MD Consult
Reassessment/Follow Up	10 days , or with change in condition
Responsible Party	Diet Technician

WITHDRAW/COMFORT CARE – Priority D	
Criteria which meets this classification	
Other	Patients with documented “comfort care”, no aggressive intervention including nutrition
Documentation, Responsibility and Timeliness of Care	
Initial Evaluation	RD reviews screening data recorded by DT within 24 hours and initials screening form.
Assessment	No full assessment required, but RD to document comfort care and honor any diet orders/patient preferences if appropriate
Reassessment/Follow Up	14 days, or with change in condition
Responsible Party	RD

Appendix C-1

Glasgow Coma Scale (GCS)

Assessment Area	Score
Eye Opening (E)	
Spontaneous	4
To Speech	3
To Pain	2
None	1
Best Motor Response (M)	
Obeys Commands	6
Localizes Pain	5
Normal Flexion (Withdrawal)	4
Abnormal Flexion (Decorticate)	3
Extension (Decerebrate)	2
None (Flaccid)	1
Verbal Response (V)	
Oriented	5
Confused Conversation	4
Inappropriate Words	3
Incomprehensible Sounds	2
None	1

Rancho Los Amigos - Revised

Levels of Cognitive Functioning

Level I - No Response: Total Assistance

- Complete absence of observable change in behavior when presented visual, auditory, tactile, proprioceptive, vestibular or painful stimuli.

Level II - Generalized Response: Total Assistance

- Demonstrates generalized reflex response to painful stimuli.
- Responds to repeated auditory stimuli with increased or decreased activity.
- Responds to external stimuli with physiological changes generalized, gross body movement and/or not purposeful vocalization.
- Responses noted above may be same regardless of type and location of stimulation.
- Responses may be significantly delayed.

Level III - Localized Response: Total Assistance

- Demonstrates withdrawal or vocalization to painful stimuli.
- Turns toward or away from auditory stimuli.
- Blinks when strong light crosses visual field.
- Follows moving object passed within visual field.
- Responds to discomfort by pulling tubes or restraints.
- Responds inconsistently to simple commands.
- Responses directly related to type of stimulus.
- May respond to some persons (especially family and friends) but not to others.

Level IV - Confused/Agitated: Maximal Assistance

- Alert and in heightened state of activity.
- Purposeful attempts to remove restraints or tubes or crawl out of bed.
- May perform motor activities such as sitting, reaching and walking but without any apparent purpose or upon another's request.
- Very brief and usually non-purposeful moments of sustained alternatives and divided attention.
- Absent short-term memory.
- May cry out or scream out of proportion to stimulus even after its removal.
- May exhibit aggressive or flight behavior.
- Mood may swing from euphoric to hostile with no apparent relationship to environmental events.
- Unable to cooperate with treatment efforts.
- Verbalizations are frequently incoherent and/or inappropriate to activity or environment.
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Level V - Confused, Inappropriate Non-Agitated: Maximal Assistance

- Alert, not agitated but may wander randomly or with a vague intention of going home.
- May become agitated in response to external stimulation, and/or lack of environmental structure.
- Not oriented to person, place or time.
- Frequent brief periods, non-purposeful sustained attention.
- Severely impaired recent memory, with confusion of past and present in reaction to ongoing activity.
- Absent goal directed, problem solving, self-monitoring behavior.
- Often demonstrates inappropriate use of objects without external direction.
- May be able to perform previously learned tasks when structured and cues provided.
- Unable to learn new information.
- Able to respond appropriately to simple commands fairly consistently with external structures and cues.
- Responses to simple commands without external structure are random and non-purposeful in relation to command.
- Able to converse on a social, automatic level for brief periods of time when provided external structure and cues.
- Verbalizations about present events become inappropriate and confabulatory when external structure and cues are not provided.

Level VI - Confused, Appropriate: Moderate Assistance

- Inconsistently oriented to person, time and place.
- Able to attend to highly familiar tasks in non-distracting environment for 30 minutes with moderate redirection.
- Remote memory has more depth and detail than recent memory.
- Vague recognition of some staff.
- Able to use assistive memory aide with maximum assistance.
- Emerging awareness of appropriate response to self, family and basic needs.
- Moderate assist to problem solve barriers to task completion.
- Supervised for old learning (e.g. self care).
- Shows carry over for relearned familiar tasks (e.g. self care).
- Maximum assistance for new learning with little or no carry over.
- Unaware of impairments, disabilities and safety risks.
- Consistently follows simple directions.
- Verbal expressions are appropriate in highly familiar and structured situations.

Appendix C-2

Level VII - Automatic, Appropriate: Minimal Assistance for Daily Living Skills

- Consistently oriented to person and place, within highly familiar environments. Moderate assistance for orientation to time.
- Able to attend to highly familiar tasks in a non-distraction environment for at least 30 minutes with minimal assist to complete tasks.
- Minimal supervision for new learning.
- Demonstrates carry over of new learning.
- Initiates and carries out steps to complete familiar personal and household routine but has shallow recall of what he/she has been doing.
- Able to monitor accuracy and completeness of each step in routine personal and household ADLs and modify plan with minimal assistance.
- Superficial awareness of his/her condition but unaware of specific impairments and disabilities and the limits they place on his/her ability to safely, accurately and completely carry out his/her household, community, work and leisure ADLs.
- Minimal supervision for safety in routine home and community activities.
- Unrealistic planning for the future.
- Unable to think about consequences of a decision or action.
- Overestimates abilities.
- Unaware of others' needs and feelings.
- Oppositional/uncooperative.
- Unable to recognize inappropriate social interaction behavior.

Level VIII - Purposeful, Appropriate: Stand-By Assistance

- Consistently oriented to person, place and time.
- Independently attends to and completes familiar tasks for 1 hour in distracting environments.
- Able to recall and integrate past and recent events.
- Uses assistive memory devices to recall daily schedule, "to do" lists and record critical information for later use with stand-by assistance.
- Initiates and carries out steps to complete familiar personal, household, community, work and leisure routines with stand-by assistance and can modify the plan when needed with minimal assistance.
- Requires no assistance once new tasks/activities are learned.
- Aware of and acknowledges impairments and disabilities when they interfere with task completion but requires stand-by assistance to take appropriate corrective action.
- Thinks about consequences of a decision or action with minimal assistance.
- Overestimates or underestimates abilities.
- Acknowledges others' needs and feelings and responds appropriately with minimal assistance.
- Depressed.
- Irritable.
- Low frustration tolerance/easily angered.
- Argumentative.
- Self-centered.
- Uncharacteristically dependent/independent.
- Able to recognize and acknowledge inappropriate social interaction behavior while it is occurring and takes corrective action with minimal assistance.

Appendix C-2

Level IX - Purposeful, Appropriate: Stand-By Assistance on Request

- Independently shifts back and forth between tasks and completes them accurately for at least two consecutive hours.
- Uses assistive memory devices to recall daily schedule, "to do" lists and record critical information for later use with assistance when requested.
- Initiates and carries out steps to complete familiar personal, household, work and leisure tasks independently and unfamiliar personal, household, work and leisure tasks with assistance when requested.
- Aware of and acknowledges impairments and disabilities when they interfere with task completion and takes appropriate corrective action but requires stand-by assist to anticipate a problem before it occurs and take action to avoid it.
- Able to think about consequences of decisions or actions with assistance when requested.
- Accurately estimates abilities but requires stand-by assistance to adjust to task demands.
- Acknowledges others' needs and feelings and responds appropriately with stand-by assistance.
- Depression may continue.
- May be easily irritable.
- May have low frustration tolerance.
- Able to self monitor appropriateness of social interaction with stand-by assistance.

Level X - Purposeful, Appropriate: Modified Independent

- Able to handle multiple tasks simultaneously in all environments but may require periodic breaks.
- Able to independently procure, create and maintain own assistive memory devices.
- Independently initiates and carries out steps to complete familiar and unfamiliar personal, household, community, work and leisure tasks but may require more than usual amount of time and/or compensatory strategies to complete them.
- Anticipates impact of impairments and disabilities on ability to complete daily living tasks and takes action to avoid problems before they occur but may require more than usual amount of time and/or compensatory strategies.
- Able to independently think about consequences of decisions or actions but may require more than usual amount of time and/or compensatory strategies to select the appropriate decision or action.
- Accurately estimates abilities and independently adjusts to task demands.
- Able to recognize the needs and feelings of others and automatically respond in appropriate manner.
- Periodic periods of depression may occur.
- Irritability and low frustration tolerance when sick, fatigued and/or under emotional stress.
- Social interaction behavior is consistently appropriate.

Original Scale co-authored by Chris Hagen, Ph.D., Danese Malkmus, M.A., Patricia Durham, M.A. Communication Disorders Service, Rancho Los Amigos Hospital, 1972. Revised 11/15/74 by Danese Malkmus, M.A., and Kathryn Stenderup, O.T.R.

Glasgow Coma Scale . Disability Rating Scale (DRS)

San Francisco General Hospital Medical Center

Sensory Stimulation Program

1. Description:

Sensory Stimulation is for patients who have sustained a traumatic brain injury and are functioning at Rancho Cognitive Levels I-III. The program uses various stimuli to increase the patient's response to the environment.

2. Rationale and Goals:

- a. May affect the reticular activating system (RAS) and increase arousal and attention to the level necessary to perceive incoming stimuli
- b. May prevent environmental (sensory) deprivation, which has been shown to retard recovery and the development of central nervous function and further depress impaired brain functioning
- c. Allows for frequent monitoring of patient's responsiveness
- d. May improve the quantity and quality of responses toward purposeful activity
- e. May provide opportunities for the patient to respond to the environment in an adaptive way
- f. May heighten the patient's responses to sensory stimuli and eventually channel them into meaningful activity

3. Guidelines of Sensory Stimulation:

- a. When determined appropriate, sensory stimulation is usually done by the family and members of the IDT in coordination with the Speech Pathologist.
- b. The patient should be seen frequently, 3-4 times daily.
- c. Do no harm. Before starting any stimulation, check resting vital signs (heart rate, blood pressure and respiratory rate).
- d. Avoid or minimize stimulation programs with a comatose patients who have a ventriculostomy when increased intracranial pressure (ICP) and/or cerebral perfusion pressure (CPP) are still issues. Monitor ICP and CPP during and after treatment if necessary.
- e. Control the environment to eliminate as many distractions as possible. The environment should be simple and uncluttered, with a limited number of people around the patient; the television should be off and the door closed.
- f. Make sure the patient is as comfortable as possible before starting: tubes, restraints, etc. may interfere with stimulation.
- g. Organize the stimuli; present them in an orderly manner. Present only 1 or 2 modalities of senses at a time.

Appendix C-3

- h. Describe the purpose and procedure of each activity in a clear, concise manner.
- i. Orient the patient to person, time, place and reason for being in the hospital frequently throughout session.
- j. Allow patient extra time to respond (because of slow informational processing). 1 or 2 minutes between the administration of different stimuli are useful as an initial guide until response time has been established.
- k. Keep sessions relatively brief- patients can usually only tolerate 15-30 minutes.
- l. Conduct sessions frequently, 3-4 times daily. Alternate periods of stimulation with periods of rest.
- m. Select meaningful stimuli, such as the voice of family or friends, favorite music etc. Stimuli that have emotional significance to the patient are usually more likely to elicit responses.
- n. Attempt to stimulate all of the senses, and vary the stimuli in nature and intensity to maximize the possibility of increasing arousal.
- o. Direct treatment toward increasing the frequency and rate of response, the period of time that the patient can maintain alertness, the variety of responses and the quality of attention to the environment.
- p. Avoid overstimulation by alternating brief periods of stimulation and rest.
- q. Note: all nursing activities are forms of multi-sensory stimulation. It is important to explain all tasks at hand and request the patient's participation. (I.e. "I am going to raise you up in bed. Can you bend your knees to help me?")

4. Examples of Responses to Stimulation:

- a. Reflexive Responses:
 - Increased eye blinking/eye opening
 - Increased or decreased breathing rate
 - Increased or decreased blood pressure
 - Change in skin color
 - Increased or decreased muscle tone (flexion or extension changes)
 - Total body movement or tremor
 - Grimacing, grinding teeth, chewing-like movement
 - Startle to loud noise

b. Localized Responses:

- Turning head or eyes away or towards tactile or auditory stimuli on or near the face
- Attempting to move extremity touched by the tactile stimuli
- Attempting to make movement upon request (i.e. Squeeze my hand or close your eyes)
- Vocalization

5. List Of Suggested Stimuli:

a. Auditory:

Auditory stimuli should be provided without the presence of background noise. Verbal stimuli should be presented with a normal but firm voice. Note where the stimuli are presented (on the right, left or in midline). Avoid stimulation that evokes a startled response. This type of stimulation is counterproductive.

The following are examples of auditory stimuli:

- Calling name
- Voice (normal tone)
- Social conversational speech
- Tapes of family members, familiar music or voices
- One step commands
- Yes/no questions
- Pen on bedrail
- Cough
- Keys
- Door closing
- Music at scheduled intervals
- Xylophone
- Squeaky toy
- Rattle
- Bell
- Tambourine

b. Visual:

The patient should be positioned upright if possible (in the bed or wheelchair). Attempt visual tracking after focusing is established, i.e. getting a patient to follow a stimulus with his/her eyes as it moves. Tracking usually begins in the center or midline. Examples of visual stimuli are:

- Faces
- Family pictures
- Changes in position and location
- Mobile at bedside
- Posters
- Flashlight
- Shiny objects
- Bright colored objects
- Familiar objects within the environment (clock, bed etc.)
- Mirror

c. Touch/Tactile:

This includes rubbing the skin with various textures or temperatures, applying vibration, and using a firm or moving touch. Bath time can be an ideal time for tactile stimulation. Care should be taken with vibration as it can increase flexor or extensor tone. The face, especially the lips and mouth, are the most sensitive areas. The following are examples of specific stimuli:

- Textures (cotton, nerf ball, fur, sandpaper, velcro, brush, terry cloth, soap, lotion, shaving cream)
- Temperature (ice, water bottle, metal utensils, warm or cold face cloth)
- Varying degrees of pressure (feather, tickling, fan, deep rubbing, vibrator)
- Noxious (pin prick, rub sternum with knuckle)

d. Smell/Olfactory:

Olfactory stimuli can be presented by holding a saturated cotton ball next to the patient's nose for 2-5 seconds. Irritants such as ammonia and strong perfumes should be avoided. Olfactory stimuli may be less effective if the olfactory nerve has been damaged, or if there is a tracheostomy tube which may reduce the patient's sense of smell. Examples of stimuli are:

- Extracts (lemon, strawberry)
- Perfume
- Scratch n' sniff items
- Spices
- Alcohol
- Listerine
- Foods (lemons, onions, coffee grinds, chocolate, peanut butter etc)
- Shampoo

e. Movement/Positioning/Proprioceptive- Kinesthetic:

Heart rate, ICP and blood pressure should be monitored during stimulation. Examples of this are:

- Various positions (check level of responsiveness in each)
- Range of motion
- Sitting
- Elevate head or foot of bed
- Elevate arms or legs on pillows
- Uncomfortable positions
- Hoyer lift and all transfers
- Rolling in a sheet in bed

f. Taste/Gustatory:

Oral Stimulation should be provided during routine oral care, unless the patient demonstrates a bite reflex.

- Use a sponge tipped or lemon glycerin swab or a soft toothbrush to diminish hypersensitivity and abnormal oral/facial reflexes
- Use a flavored cleansing agent, such as mint or lemon, to increase oral stimulation during oral care
- Provide stimulation to the lips and area around the mouth
- Do not attempt to feed patients in a coma

e. Vestibular:

Vestibular stimuli are contraindicated in patients with tracheostomy, elevated ICP or seizure. This stimulus is provided by changing body position while monitoring heart rate, ICP and blood pressure. Position changes that are meaningful and familiar should be used. The following are examples:

- Rolling
- Swinging
- Tilting the bed
- Moving the patient in bed or on the mat
- Rocking slowly

Revised 2002 by Jeanne Roder, MS SLP CCC
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