



DEDER GENERAL HOSPITAL



PROTOCOL

PREPARED BY: HSQ

JULY 2016 E.C

DEDER, EASTERN ETHIOPIA



PROTOCOL APPROVAL SHEET

NAME OF PROTOCOL: Vital Sign Protocol

PREPARED BY

S/N	NAME	RESPONSIBILITY	SIGN
1	Abdi Tofik (BSc, MPH)	Health Service Quality Director (HSQD)	
2	Abdella Aliyi (BSc MW)	HSQ Officer and Reform f/person	
3	Redwan Sharafuddin (BSc Pharm)	HSQ Officer	

APROVED BY

S/N	NAME	RESPONSIBILITY	SIGN
1	Nureddin Yigezu (BSc, MPH)	Chief Executive Officer (CEO)	
2	Dr. Derese Gosa (MD)	Medical Director	
3	Dr. Isak Abdi (MD, G/Surgeon)	OR Director & SaLTS Team leader	

THIS PROTOCOL IS EFFECTIVE
FROM
JULY 2016 E.C TO JUNE 2018 E.C

Table of Contents

PROTOCOL APPROVAL SHEET	i
1. Introduction.....	1
2. Definition:	1
3. Purpose	1
4. Objectives	1
5. Equipment Required.....	1
4. General Vital Signs to Monitor	2
5. Frequency of Vital Signs Monitoring	3
6. Condition-Specific Vital Sign Monitoring	3
7. Neonatal Intensive Care Unit (NICU) Monitoring	5
9. Pain Scoring and Management	9
1. Pain Assessment	9
2. Pain Documentation	10
3. Pain Management Strategies	10
4. Reassessment and Adjustment	11
5. Multidisciplinary Involvement.....	11
6. Patient and Family Education	11
7. Special Considerations.....	12
8. Policy and Compliance	12
10. Early Warning System (EWS)	12
11. Diabetic ketoacidosis (DKA)	13
Appendix.....	15
Normal Vital Signs	15
Normal Heart Rate	15
Normal Respiratory Rate	16
Normal Blood Pressure	16
Normal Body Temperature	16
APH Follow Up chart.....	17
PROM chart	18
Preeclampsia/ ecclesia monitoring chart	19
PNC follow up chart.....	20
Diabetic ketoacidosis (DKA) AND hyperosmolar hyperglycemic state (HHS) monitoring chart	21
NICU Nurses follow up sheet	22

1. Introduction

This vital sign protocol is designed to ensure that the patient care giver knows how , when and by what the care giver follow his client to screen for a disease , come to the diagnosis and decide the intervention and know the patient condition .

2. Definition:

Taking vital signs are defined as the procedure that takes the sign of basic physiology that includes temperature, pulse, respiration and blood pressure and pain. If any abnormality occurs in the body, vital signs change immediately.

3. Purpose

This protocol establishes a standardized approach to vital sign monitoring at Deder General Hospital for patients with general medical, obstetric, and neonatal conditions. The goal is to detect early signs of deterioration, guide timely interventions, and improve patient outcomes.

4. Objectives

- To assess and monitor the clinical condition of patients.
- To establish baseline values for comparison and detect abnormalities early.
- To guide interventions in managing critical conditions.

5. Equipment Required

- **Thermometer:** Oral, axillary, or rectal.
- **Stethoscope:** For auscultation of heart and lung sounds.
- **Sphygmomanometer:** Manual or automatic with appropriate cuff sizes.
- **Pulse Oximeter:** For SpO2 monitoring.
- **Watch:** With a second hand to time HR and RR.
- **Vital Sign Chart:** Paper or electronic documentation.

4. General Vital Signs to Monitor

Vital signs include:

1. Heart Rate (HR):

- **Measurement:** Palpate radial or carotid artery or use an electronic monitor. Count for 30 seconds and multiply by 2.
 - **Abnormalities:**
 - **Tachycardia (>100 bpm):** Can indicate fever, pain, dehydration, or sepsis.
 - **Bradycardia (<60 bpm):** Can be caused by medications or cardiovascular conditions.
 - **Response:** Reassess, treat underlying cause, and inform physician if needed.

2. Respiratory Rate (RR):

- **Measurement:** Observe chest rise for one full minute.
- **Abnormalities:**
 - **Tachypnea (>20/min):** May indicate fever, anxiety, or pulmonary issues.
 - **Bradypnea (<12/min):** Could suggest sedation or drug overdose.
- **Response:** Administer oxygen if SpO2 < 95%, notify physician.

3. Blood Pressure (BP):

- **Measurement:** Manual or automatic, check bilaterally if needed.
- **Abnormalities:**
 - **Hypertension (>140/90 mmHg):** Stress, cardiovascular disease, etc.
 - **Hypotension (<90/60 mmHg):** May indicate shock, dehydration, or sepsis.
- **Response:** Fluid resuscitation or medication adjustments, notify physician.

4. Temperature (Temp):

- **Measurement:** Oral, axillary, tympanic (rectal in critical cases).
- **Abnormalities:**
 - **Hyperthermia (>37.5°C):** Infection or inflammation.
 - **Hypothermia (<36°C):** Shock or cold exposure.
- **Response:** Cooling or warming measures, notify physician.

5. Oxygen Saturation (SpO2):

- **Measurement:** Pulse oximeter on finger, ear, or toe.

- **Abnormalities:**
 - **Hypoxemia (SpO2 < 90%):** Indicates respiratory or cardiac distress.
- **Response:** Administer oxygen, escalate to high-flow oxygen or ventilatory support.

6. Level of Consciousness (LOC):

- **Measurement:** Glasgow Coma Scale (GCS) or AVPU (Alert, Verbal, Pain, Unresponsive).
- **Abnormalities:** Changes may indicate neurological deterioration or hypoxia.
- **Response:** Neurological assessment, imaging, notify physician.

5. Frequency of Vital Signs Monitoring

- **Stable patients:** Every 6 hours.
- **Unstable patients:** Every 15-60 minutes or continuously in ICU settings.
- **Post-procedure/trauma:** Every 5-15 minutes until stable.
- **Emergency or change in condition:** Immediately reassess and monitor as needed.

6. Condition-Specific Vital Sign Monitoring

A. Obstetric Conditions

Antepartum Hemorrhage (APH):

- **Definition:** Ante-partum hemorrhage (APH) is vaginal bleeding from the 28th week of gestation till the fetus (last fetus in case of multiple pregnancies) is delivered.
- **Vital Signs:**
 - **Frequency:** Every 15 minutes until stable, then every 2 hours.
 - **BP:** Monitor for hypotension (BP < 90/60 mmHg).
 - **HR:** Monitor for tachycardia (>110 bpm).
 - **RR:** Watch for tachypnea, indicating hypoxia.
 - **SpO2:** Aim for SpO2 > 94%.
- **Intervention Triggers:** BP < 90/60 mmHg, PR > 110 bpm, signs of shock.
- **Vital Sign Chart;** follow by APH chart (*see appendix*)

Preterm Rupture of Membranes (PROM):

- **Definition:** Rupture of fetal membranes before the onset of labor.
- **Vital Signs:**
 - **Frequency:** Every 4 hours if stable; every 2 hours if infection is suspected.
 - **Temp:** Monitor for fever ($>38^{\circ}\text{C}$).
 - **PR:** Monitor for maternal tachycardia (>100 bpm).
- **Intervention Triggers:** Fever $> 38^{\circ}\text{C}$, maternal tachycardia, or foul-smelling amniotic fluid.
- **Vital Sign Chart:** follow by **PROM** chart (*see appendix*)

Pre-eclampsia and Eclampsia:

- **Definition:** Pre-eclampsia is hypertension with proteinuria after 20 weeks of gestation; eclampsia involves seizures.
- **Vital Signs:**
 - **Frequency:** BP every 15 minutes in severe cases.
 - **BP:** Monitor for severe hypertension (BP $>160/110$ mmHg).
 - **SpO2:** Maintain $> 95\%$.
- **Intervention Triggers:** BP $\geq 160/110$ mmHg, severe headache, or visual disturbances.
- **Vital Sign Chart:** follow by Eclampsia/pre-eclampsia chart

Postnatal Care (PNC):

- **Definition:** Post-natal care is care that is provided to a mother and newborn baby after delivery and **within the first 42 days after child birth**
- **Vital Signs:**
 - **Frequency:** Monitor mother every 15 min for the first hour; every 30 min for next 2 hours; and every hour for next 3 hours. then every 4 hrs until discharge.

- **BP:** Watch for hypotension (PPH) or hypertension (ongoing pre-eclampsia).
- **PR:** Tachycardia may suggest hemorrhage or infection.
- **Temp:** Fever may indicate infection.
- **Vital Sign Chart:** follow by PNC chart (*see Appendix*)

7. Neonatal Intensive Care Unit (NICU) Monitoring

1. Heart Rate (HR) Monitoring

Purpose: To ensure the neonate maintains an adequate heart rate that supports oxygenation and perfusion.

Monitoring Method:

- Use continuous ECG monitoring or pulse oximetry to track HR in real time.
- Audible alarms should be set to alert if heart rate goes outside the preset limits.

Frequency: Continuous monitoring for all neonates.

Normal Range:

- Preterm neonates: 120-160 bpm.
- Term neonates: 100-160 bpm.

Interventions:

- **Tachycardia** (HR > 180 bpm): Assess for pain, hypovolemia, fever, or infection. Administer fluid bolus if indicated. Provide medication if there's a cardiac issue.
- **Bradycardia** (HR < 100 bpm): Evaluate for hypoxia, acidosis, or infection. Administer oxygen, perform resuscitation (if necessary), and investigate further causes.

Documentation:

- Record baseline HR every shift and note significant changes or interventions.

2. Respiratory Rate (RR) Monitoring

Purpose: To identify respiratory distress, apnea, or abnormal breathing patterns.

Monitoring Method:

Continuous or intermittent monitoring using cardiorespiratory monitors or manual counting for 1 minute.

Frequency: Continuous monitoring in critical neonates; for stable neonates, monitor every 4 hours.

Normal Range:

- **Preterm neonates:** 30-60 breaths per minute.
- **Term neonates:** 40-60 breaths per minute.

Interventions:

- **Tachypnea** (RR > 60 breaths/min): Investigate causes such as respiratory distress syndrome (RDS), infection, or metabolic acidosis. Provide respiratory support or oxygen as needed.
- **Apnea** (no breathing for > 20 seconds): Stimulate the infant (gentle rubbing) or provide positive pressure ventilation (PPV) if severe. Consider medication (e.g., caffeine) if apnea is recurrent.

Documentation: Document RR every 4 hours or more frequently if interventions are required. Include any apnea episodes and interventions performed.

3. Oxygen Saturation (SpO₂) Monitoring

Purpose: To ensure appropriate oxygenation levels, avoiding hypoxia or hyperoxia.

Monitoring Method: Continuous pulse oximetry with alarms set for deviations outside target range.

Frequency: Continuous in preterm neonates or those on supplemental oxygen or mechanical ventilation.

Target Range:

- Preterm neonates: 88-92%.
- Term neonates: 92-97%.

Interventions:

- **Hypoxia** (SpO₂ < target range): Increase oxygen delivery via nasal cannula, CPAP, or mechanical ventilation.
- **Hyperoxia** (SpO₂ > target range): Decrease oxygen concentration to prevent oxygen toxicity and retinopathy of prematurity (ROP).

Documentation: Record baseline SpO2 levels every shift. Document any episodes of desaturation and corrective actions.

5. Temperature Monitoring

Purpose: To maintain thermoregulation, prevent hypothermia or hyperthermia, and ensure an optimal thermal environment for the neonate.

Monitoring Method: Continuous temperature monitoring via skin probes or axillary temperature checks.

Frequency: Every 3-4 hours or more frequently in unstable neonates.

Normal Range:

Axillary Temperature: 36.5-37.5°C (97.7-99.5°F).

Interventions:

- **Hypothermia** (<36.5°C): Use radiant warmers or incubators to increase temperature. Ensure adequate wrapping or kangaroo care for stable neonates.
- **Hyperthermia** (>37.5°C): Check for infection (sepsis). Adjust the environmental temperature in the incubator or radiant warmer.

Documentation: Record temperature every 3-4 hours. Document any interventions if temperature deviates from the normal range.

6. Blood Glucose Monitoring

Purpose: To prevent hypoglycemia or hyperglycemia, which can lead to neurological damage or other complications.

Monitoring Method: Use point-of-care blood glucose meters or lab blood glucose tests.

Frequency: Check within 1-2 hours after birth, then every 6-12 hours based on the neonate's condition and risk factors.

Normal Range: Neonates: 40-150 mg/dL.

Interventions:

- **Hypoglycemia** (<40 mg/dL): Immediate administration of glucose (oral or IV dextrose).
- **Hyperglycemia** (>150 mg/dL): Monitor for underlying causes such as stress, infection, or inadequate insulin production. Adjust feeding or consider insulin administration.

Documentation: Record glucose levels with time and action taken if abnormal values are noted.

7. Weight Monitoring

Purpose: To assess growth and fluid balance, especially in preterm or low birth weight neonates.

Monitoring Method: Daily weighing using a digital scale.

Frequency: Daily at the same time, preferably in the morning.

Interventions: Excessive weight loss (>10% of birth weight in the first week): Investigate dehydration or feeding issues. Increase fluid intake or enteral nutrition support.

Documentation: Record daily weight. Note any weight gain/loss trends and related interventions.

8. Fluid and Electrolyte Monitoring

Purpose: To monitor and maintain appropriate fluid and electrolyte balance, which is crucial in neonates.

Monitoring Method: Regular monitoring of urine output, stool output, and serum electrolyte levels.

Frequency: Measure urine output every 6-12 hours and electrolytes daily or as clinically indicated.

Interventions:

- Decreased urine output (<1 mL/kg/hour): Assess for dehydration, kidney function, or fluid overload. Adjust IV fluids accordingly.

Documentation:

- Record intake and output every shift. Document any abnormalities and interventions.

9. Neurological Status Monitoring

Purpose: To detect early signs of neurological issues such as seizures or encephalopathy.

Monitoring Method: Regular clinical examination focusing on reflexes, alertness, and responsiveness.

Frequency: Every shift or more frequently if the neonate is at risk of neurological problems.

Interventions: Seizures or abnormal reflexes: Administer appropriate medications (e.g., phenobarbital) and investigate underlying causes such as hypoxic-ischemic encephalopathy (HIE).

Documentation: Document neurological findings each shift, along with any interventions".

9. Pain Scoring and Management

A **Pain Scoring and Management Protocol** is a structured approach to assess, document, and manage pain in patients. Effective pain management improves patient outcomes and enhances the quality of care. Here's a general outline for a **Pain Scoring and Management Protocol** that you can adapt to your specific setting at Deder General Hospital:

1. Pain Assessment

A. Pain Scoring Systems

1. Numeric Rating Scale (NRS):

- Ask patients to rate their pain on a scale of 0 to 10.
- 0 = No pain, 10 = Worst imaginable pain.

2. Visual Analog Scale (VAS):

- A straight line with endpoints defining extreme limits (e.g., "No pain" and "Worst pain imaginable"). Patients mark their pain intensity on the line.

3. **Faces Pain Scale** (For children or patients with communication difficulties):
 - A series of faces ranging from happy (no pain) to crying (worst pain).
4. **FLACC Scale** (For infants or non-verbal patients):
 - Based on Facial expression, Leg movement, Activity, Cry, and Consolability.
5. **Verbal Descriptor Scale (VDS)**:
 - Patients choose words like "no pain," "mild," "moderate," "severe," etc., to describe their pain.

B. Frequency of Pain Assessment

- On admission.
- At regular intervals (e.g., every 4 hours or during nursing rounds).
- Before and after administering pain medications.
- During any change in clinical condition.
- Post-operatively or following interventions that may cause pain.

2. Pain Documentation

- Pain intensity should be documented at every assessment in the patient's record.
- Include information on pain onset, duration, location, character (e.g., sharp, dull), and factors that alleviate or worsen it.
- Document patient's response to pain management interventions.

3. Pain Management Strategies

A. Pharmacologic Management

1. **Mild Pain (1-3 on NRS)**:
 - **Non-opioid analgesics**: Acetaminophen, NSAIDs (e.g., Ibuprofen).
 - **Adjuvant therapies**: Antidepressants, anticonvulsants for neuropathic pain.
2. **Moderate Pain (4-6 on NRS)**:
 - Weak opioids (e.g., Codeine, Tramadol) with or without non-opioid analgesics.
3. **Severe Pain (7-10 on NRS)**:

- Strong opioids (e.g., Morphine, Fentanyl, Hydromorphone).
- May be combined with adjuvants or non-opioid analgesics.

B. Non-Pharmacologic Management

1. Cognitive-behavioral techniques:

- Relaxation exercises, guided imagery, mindfulness, or biofeedback.

2. Physical interventions:

- Heat or cold therapy, massage, acupuncture, or transcutaneous electrical nerve stimulation (TENS).

3. Environmental and psychological approaches:

- Creating a calm and soothing environment, providing emotional support, involving family members.

4. Reassessment and Adjustment

- Reassess pain after intervention (within 30–60 minutes after oral medications, 15 minutes after intravenous medications).
- Adjust treatment if pain relief is inadequate.
- Continuous evaluation of the effectiveness of the pain management plan and patient satisfaction.

5. Multidisciplinary Involvement

- Collaborate with physicians, nurses, pharmacists, and physical therapists for comprehensive pain management.
- Involve palliative care teams or specialists for chronic or complex pain cases.

6. Patient and Family Education

- Educate patients and families about pain management options.
- Inform them about the potential side effects of medications and non-pharmacologic strategies they can try at home.

7. Special Considerations

- **Elderly patients:** Start with lower doses due to increased sensitivity and risk of adverse drug reactions.
- **Pediatric patients:** Use appropriate scales and dosing based on weight.
- **Non-verbal or cognitively impaired patients:** Rely on behavioral scales (e.g., FLACC) and input from caregivers.

8. Policy and Compliance

- Ensure that pain management protocols adhere to national and hospital-specific guidelines.
- Regular audits to assess compliance with pain management documentation and practices.

10. Early Warning System (EWS)

Triage Early Warning Score (TEWS)								
ADULT TRIAGE SCORE								
	3	2	1	0	1	2	3	
Mobility				Walking	With Help	Stretcher/Immobile		Mobility
RR		Less than 9		9-14	15-20	21-29	more than 29	RR
HR		Less than 41	41-50	51-100	101-110	111-129	more than 129	HR
SBP	Less than 71	71-80	81-100	101-199		more than 199		SBP
Temp		Less than 35		35-38.4		38.5 or more		Temp
AVPU				<u>A</u> lert	Reacts to <u>V</u> oice	Reacts to <u>P</u> ain	<u>U</u> nresponsive	AVPU
Trauma				No	Yes			Trauma
Pain				No pain	1—3/10	4—7/10	≥ 7/10	Pain

11. Diabetic ketoacidosis (DKA)

For diabetic ketoacidosis (DKA), close monitoring of vital signs is crucial as part of comprehensive management. Here's a guideline on how vital signs should be monitored during DKA treatment:

1. Initial Assessment (Upon Admission)

- **Heart Rate (HR):** Tachycardia is often present due to dehydration and acidosis.
- **Blood Pressure (BP):** Hypotension may occur from volume depletion.
- **Respiratory Rate (RR):** Kussmaul breathing (deep, labored breathing) may indicate metabolic acidosis.
- **Temperature (T):** Normal or slightly elevated; fever might indicate an infection, a common precipitant.
- **Oxygen Saturation (SpO2):** Check for hypoxia if severe acidosis or other complications arise.

2. Ongoing Monitoring (Hourly)

- **HR, BP, RR, and T** should be checked hourly at the start of treatment, then more frequently if the patient's condition is unstable.
- **Fluid Resuscitation Impact:** Watch for improvements in BP and HR as volume status is corrected.
- **Respiratory Effort:** Monitor for any changes in respiratory rate and pattern, as hyperventilation (Kussmaul breathing) should normalize as acidosis resolves.

Frequency of Monitoring

- Random blood sugar: Every 1 hours initially.
- Electrolytes Every 6hours.
- Ketone: every 2hrs
- Vital Signs: Every 1 hour initially, then taper as the patient stabilizes.

References

1. American College of Emergency Physicians. ER 101: Vital Signs. American College of Emergency Physicians. Available at <https://www.emergencycareforyou.org/VitalCareMagazine/ER101/Default.aspx?id=500>. Accessed: December 11, 2014.
2. Vital Signs. U.S. National Library of Medicine. Available at <https://medlineplus.gov/ency/article/002341.htm>. Reviewed February 2, 2023; Accessed: February 16, 2024.
3. Pediatric Vital Signs Normal Ranges. University of Iowa Health Care. Available at <https://medicine.uiowa.edu/iowaprotocols/pediatric-vital-signs-normal-ranges>. 2/12/2024; Accessed: 2/16/2024.
4. Cleveland Clinic. What You Need to Know About Infant and Children's Vital Signs. Cleveland

Appendix

Normal Vital Signs

In most medical settings, the four standard primary vital signs are as follows

- Heart rate (pulse)
- Respiratory rate
- Blood pressure
- Body temperature

Normal values for each of these vital signs vary by age and, in some cases, by sex. They also may vary based on weight, exercise capability, and overall health.

In healthy adults at rest, normal values are as follows [\[2\]](#):

- Heart rate (pulse): 60-100 bpm
- Respiratory rate: 12-18 breaths per minute
- Blood pressure: between 90/60 mmHg and 120/80 mmHg
- Temperature: 97.8°F (36.5°C) to 99.1°F (37.3°C); average 98.6°F (37°C)

Normal Heart Rate

Table 1: Normal Heart Rate by Age

Approximate Age Range	Heart Rate
Newborn	100-160
0-3 months	70-170
6-12 months	80-140
1-3 years	80-130
3-5 years	80-120
6-10 years	70-110
11-14 years	60-105
15 years or older	60-100

Normal Respiratory Rate

Table 2: Normal Respiratory Rate by Age

Approximate Age Range	Respiratory Rate
0-3 months	30-60
3-11 months	25-60
1-3 years	20-40
3-6 years	20-40
6-12 years	14-30
13 years and older	12-20

Normal Blood Pressure

The normal blood pressure in adults is 120 (systolic)/80 (diastolic). Normal blood pressure in children and adolescents varies by age.

Table 3: Normal Blood Pressure by Age in Children and Adolescents.

Approximate Age Range	Systolic Range	Diastolic Range
0 to 3 months	65-104	37-65
3 to 11 months	70-105	41-65
1 to 3 years	86-107	41-78
3 to 6 years	90-110	47-75
6 to 12 years	90-121	59-80
13 years and older	102-124	64-80

Normal Body Temperature

The average normal core temperature is generally considered to be between 97.8°F and 99.1°F (36.5°C to 37.3°C); the average is 98.6°F (37°C).

Dader General Hospital

APH Follow Up chart

Patient Name _____ Age _____ Sex _____ MRN _____ Ward _____ Bed No _____

Date	Time	BP	PR	RR	To	Pain		Vaginal bleeding	Uterine contr	FHB	HCT	BPP	Provider & Signature
						Score A. Severe: 7-10 B. Moderate: 4-6 C. Mild: 1-3	Management A. Morphine/Pethid B. Tramadol C. Diclofenac						

PROM chart

Patient Name _____ Age _____ Sex _____ MRN _____ Ward _____ Bed No _____

[illegible]

Preeclampsia/ ecclesia monitoring chart

Date	Time	Magnesium sulphate		Vital Sign				Severity sign & symptom						Progress of labor					Name of given
		Loading Dose	Maintenace dose	BP	PR	RR	TO	Headache	Blurring of vision	Epigiric pain	Urine out put	Convulsion	Deep tendon reflex	FHB	Uterine contraction	Cervix	In put	Out put	

PNC follow up chart

Name _____ Age _____ Sex _____ MRN _____ Ward _____

[illegible]

DEDER GENERAL HOSPITAL

Diabetic ketoacidosis (DKA) AND hyperosmolar hyperglycemic state (HHS) monitoring chart

Name ----- **Age**----- **Sex**----- **MRN**-----

[illegible]

NICU Nurses follow up sheet

PATIENT ID: _____ PATIENT NAME: _____

Date:																												
Time:																												
Heart Rate = 220																												
Put 210																												
200																												
190																												
180																												
170																												
160																												
150																												
140																												
130																												
120																												
110																												
100																												
90																												
80																												
70																												
60																												
50																												
Respiratory rate =																												
40																												
Put X 30																												
20																												

Ax. Temperature (C)																			
Blood pressure																			
Saturation																			
Resp support type																			
Suction (y/n)																			
RBS (g/dL)																			
IV intake (mL)																			
IV intact/patent (y/n)																			
Oral intake (mL or minutes on breast)																			
OG/NG in place (y/n)																			
Urine output (mL)																			
Stool (y/n)																			
Emesis or gastric drainage (mL)																			
Phototherapy (y/n)																			
Seizures (y/n)																			

