Patient Safety in Chiropractic

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Brief Bio

Dr. Scott Munsterman is an acknowledged expert on the transforming model of health care delivery and compliance with a commitment to the promotion and advancement of the chiropractic profession. Dr. Munsterman is founder and CEO of Best Practices Academy, a clinical improvement organization providing focused leadership to bring practices into compliance with regulatory standards, equip them to improve clinical outcomes, and integrate into the transformed care delivery system. Dr. Scott works with ChiroArmor and eChiroEHR.

Dr. Munsterman is a graduate of Northwestern Health Sciences University, where he has served as Vice-Chair of the Board of Trustees and on the President's Cabinet as Chief of Care Delivery. He was awarded Chiropractor of the Year in South Dakota and the Fellow of the International College of Chiropractors (FICC). He is a professional compliance officer. Dr. Munsterman served two terms as Mayor of the City of Brookings and three consecutive terms in the South Dakota House of Representatives, where he chaired the House Health and Human Services Committee and also chaired the Legislative Planning Committee. He is author of the books "A Vision for South Dakota", "Care Delivery and Chiropractic: An Opportunity Waiting", and "Unfinished Business".

However, he states his greatest accomplishment has been his five daughters and six grandchildren - with more success to come.

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Where does Patient Safety begin?

Evaluation Process

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25% of Medicare patients experience patient harm during their hospital stay.

Patient harm includes adverse events and temporary harm events.

12 percent of patients experienced adverse events, which are events that led to longer hospital stays, permanent harm, life-saving intervention, or death.

13 percent of patients experienced temporary harm events, which required intervention but did not cause lasting harm, prolong hospital stays, or require life-sustaining measures.

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Physician-reviewers determined that 43 percent of the harm events could have been prevented if patients had been provided better care.

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56% of harm events were not preventable and occurred even though providers followed proper procedures…

Terminology

Patient safety: the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the process of health care.

National Patient Safety Foundation. Agenda for research and development in patient safety.
http://www.ihi.org/Topics/PatientSafety/Pages/default.aspx

What is an Adverse Outcome or Event?

An unexpected and undesired incident directly associated with the care or services provided to the patient; an incident that occurs during the process of providing health care and results in patient injury or death; or an adverse outcome for a patient, including an injury or complication.

Preventing Clinical Errors

An act of omission or commission in planning or execution that contributes or could contribute to an unintended result.

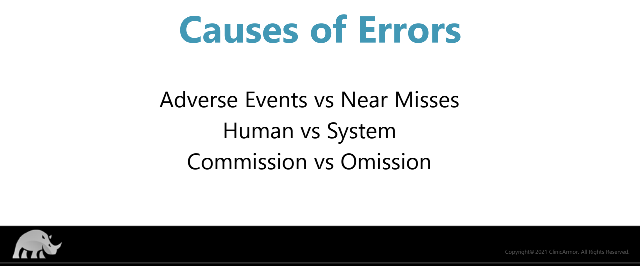
Defining medical error. Ethan D. Grober, John M.A. Bohnen Can J Surg. 2005 Feb; 48(1): 39–44. PMCID: PMC3211566
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3211566/

Preventable Harm

The Institute for Healthcare Improvement defines preventable medical harm as "unintended physical injury resulting from or contributed to by medical care (including the absence of indicated medical treatment), that requires additional monitoring, treatment or hospitalization, or that results in death."

These mistakes, called "preventable harm" or "adverse events" in medical literature, account for up to 1,000 deaths per day.

https://costsofcare.org/tallying-the-high-cost-of-preventable-harm/



Causes of Errors

Adverse Events vs Near Misses
Human vs System
Commission vs Omission

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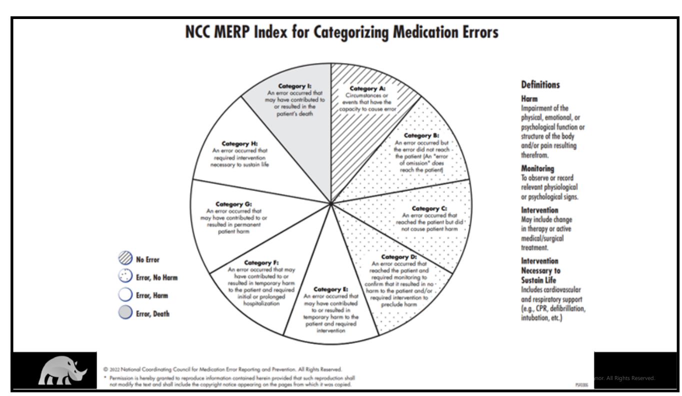

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Most errors are the result of various causes and predisposing conditions.

In other words, there are a variety of factors involved that can lead to or cause a clinical error or adverse event – or a near miss.

Types of Clinical Errors

- Diagnostic
- Treatment
- Preventive
- Other

National Academies of Sciences, Engineering, and Medicine. 2015. *Improving diagnosis in health care*. Washington, DC: The National Academies Press.

Diagnostic Error

"the failure to establish an accurate and timely explanation of the patient's health problem(s) or communicate that explanation to the patient."

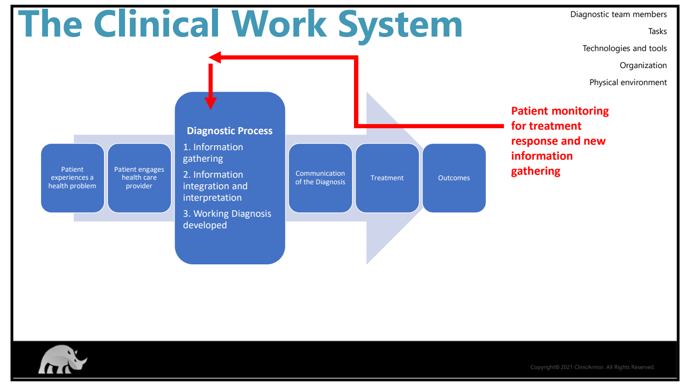
National Academies of Sciences, Engineering, and Medicine. 2015. *Improving diagnosis in health care*. Washington, DC: The National Academies Press.

57% of all diagnostic failures occur in ambulatory care settings.

Diagnostic Process: 7 Stages

1. Access and presentation
2. History taking/collection
3. Physical exam
4. Testing
5. Assessment (differential diagnosis)
6. Care planning/referral
7. Follow-up/Outcome Assessment

The Clinical Work System



History of Present Illness

Past Family Medical Social History

Review of Systems

Chief Complaints

Physical Comorbidities

Past Medical, Family and Social History

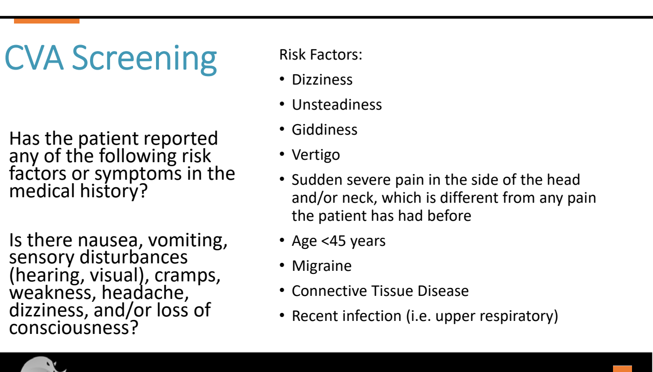
- Prior Major Illnesses and Injuries
- Prior Surgeries
- Prior Hospitalizations
- Current Medications
- Allergies
- Age Appropriate Immunization Status

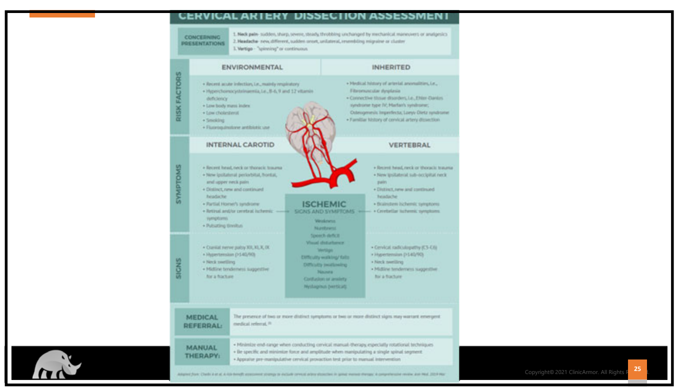
- Age Appropriate Feeding/Dietary Status
- Marital Status
- Current Employment
- Occupational History
- Alcohol and Tobacco Usage
- Level of Education
- Sexual History

- Ask if there are any members of the patient's family who have had illnesses with features similar to the patient's.
- Determine the health or cause of death of the patient's parents and siblings.
- Establish whether there is a history of heart disease, high blood pressure, cancer, tuberculosis, stroke, diabetes, arthritic conditions, thyroid disease, kidney disease, asthma, blood diseases, sexually transmitted diseases, or any familial diseases.

Review of Systems

1. Constitutional
2. Eyes
3. Ears, nose, mouth, throat
4. Cardiovascular
5. Respiratory
6. Gastrointestinal
7. Genitourinary
8. Musculoskeletal
9. Integumentary
10. Neurological
11. Psychiatric
12. Endocrine
13. Hematologic/Lymphatic
14. Allergic/Immunologic





What are Vital Signs?

These are measurements of the inner workings of the human body and how vital organs, such as the heart and lungs, are functioning.

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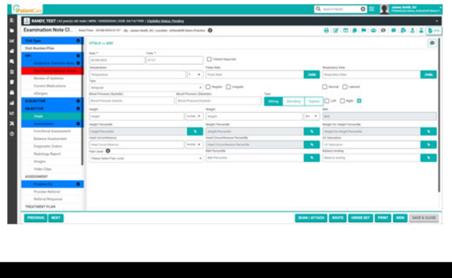
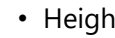
INITIAL/PROGRESS VISIT EXAMS

VITAL SIGNS

- HEIGHT
- WEIGHT
- BMI
- BLOOD PRESSURE
- HEART RATE
- RESPIRATION
- BODY TEMPERATURE





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- Height
- Weight
  - Abnormal weight loss or gain
  - Rapid change in height
- BMI (calculated from height/weight)
- Temperature
  - Signs of systemic infection or inflammation in the presence of a fever (temp > 101.4 F or sustained temp > 100.4 F. COVID-19 >100F).
- Respirations
  - Varies with age, normal reference range is 16-20 breaths/minute.
- Pulse
  - A newborn or infant can have a heart rate of about 130-150 beats per minute.
  - A toddler's heart will beat about 100-120 times per minute,
  - An older child's heartbeat is around 90-110 beats per minute, adolescents around 80-100 beats per minute, and
  - Adults pulse rate is anywhere between 50 and 80 beats per minute.

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- **Normal**

<120 Systolic<80 diastolic medication not needed, lifestyle recommendations

- **Pre-hypertensive**

120-139 systolic 80-89 diastolic, medication not needed, lifestyle modification (90% chance at 65 to develop stage 1 and stage 2, lifestyle changes will decrease risk to almost 0)

- **Stage 1 hypertension**

140-159 systolic or 90-99 diastolic, lifestyle modifications given, medications recommended starting with thiazide-type diuretics (consider others if ineffective)

- **Stage 2 hypertension**

>160 systolic or >100 diastolic, lifestyle modifications given, two-drug combination therapy recommended.

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Notes on Blood Pressure

- Maximum Cuff Pressure - When the baseline blood pressure is already known or hypertension is not suspected, it is acceptable in adults to inflate the cuff to 200 mmHg and go directly to auscultating the blood pressure. Be aware that there could be an **auscultory gap** (a silent interval between the true systolic and diastolic pressures).
- Bell or Diaphragm? - Even though the Korotkoff sounds are low frequency and should be heard better with the bell, it is often difficult to apply the bell properly in the anticubital fold. For this reason, it is common practice to use the diaphragm when taking blood pressure.
- Systolic Pressure - In situations where auscultation is not possible, you can determine systolic blood pressure by palpation alone. Deflate the cuff until you feel the radial or brachial pulse return. The pressure by auscultation would be approximately 10 mmHg higher. Record the pressure indicating it was taken by palpation (60/palp).
- Diastolic Pressure - If there is more than 10 mmHg difference between the muffling and the

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Blood Pressure

- Higher blood pressures are normal during exertion or other stress. Systolic blood pressures below 80 may be a sign of serious illness or shock.
- Blood pressure should be taken in both arms on the first encounter. If there is more than 10 mmHg difference between the two arms, use the arm with the higher reading for subsequent measurements.
- It is frequently helpful to retake the blood pressure near the end of the visit. Earlier pressures may be higher due to the "white coat" effect.
- Always recheck "unexpected" blood pressures yourself.

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Pulse, or Heart rate, is the number of times a heart beats per minute (bpm). Heart rates vary by person, and a normal pulse can range between 60 to 100 beats per minute.

Pulse (Heart Rate)

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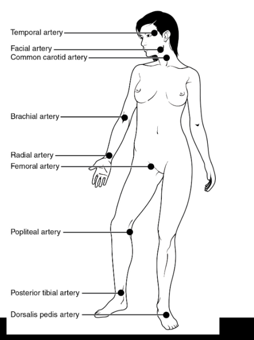
Pulse

Pulse

Pulse indicates heart rate and it is measured clinically to provide clues to a patient's state of health. It is recorded as beats per minute. Both the rate and the strength of the pulse are important clinically. A high or irregular pulse rate can be caused by physical activity or other temporary factors, but it may also indicate a heart condition.

The pulse strength indicates the strength of ventricular contraction and cardiac output. If the pulse is strong, then systolic pressure is high. If it is weak, systolic pressure has fallen, and medical intervention may be warranted.

Pulse can be palpated manually by placing the tips of the fingers across an artery that runs close to the body surface and pressing lightly. While this procedure is normally performed using the radial artery in the wrist or the common carotid artery in the neck, any superficial artery that can be palpated may be used.



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Pulse

- Note whether the pulse is regular or irregular:
  - **Regular** - evenly spaced beats, may vary slightly with respiration
  - **Regularly Irregular** - regular pattern overall with "skipped" beats
  - **Irregularly Irregular** - chaotic, no real pattern, very difficult to measure rate accurately
- Count the pulse for 15 seconds and multiply by 4.
- Count for a full minute if the pulse is irregular.
- Record the rate and rhythm.

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Staff must report any arrythmias, irregularities in the pulse rate and pace to the doctor.

Pulse

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Pulse/Blood Pressure in Children

In children, pulse and blood pressure vary with the age. The following table should serve as a rough guide:

Average Pulse and Blood Pressure in Normal Children Age

	Birth	6mo	1yr	2yr	6yr	8yr	10yr
Pulse	140	130	115	110	103	100	95
Systolic	70	90	90	92	95	100	105

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Respiration rate, sometimes referred to as breathing rate, is the number of breaths taken per minute. This measurement is always taken when the individual is at rest.

A single respiration count is equal to the chest rising (inhalation) and falling (exhalation) once. The normal range for an adult is 12 to 28 respirations per minute.

Respiration Rate

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Respiration

https://youtu.be/wWAqkbD28uI

- Best done immediately after taking the patient's pulse. Do **not** announce that you are measuring respirations.
- Without letting go of the patient's wrist begin to observe the patient's breathing. Is it normal or labored?
- Count breaths for 15 seconds and multiply this number by 4 to yield the breaths per minute.
- In adults, normal resting respiratory rate is between 12-28 breaths/minute. Rapid respiration is called tachypnea.

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Temperature is considered normal at 98.6 degrees F (37 degrees C), although anything between 97.6 degrees F (36.4 degrees C) to 99.6 degrees F (37.5 degrees C) is acceptable.

A temperature over 100.4 degrees F (38 degrees C) indicates a fever caused by illness or injury. Hypothermia (low temperature) occurs when the body temperature dips below 95 degrees F (35 degrees C).

Body Temperature

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Temperature

Temperature can be measured in several different ways:

- **Oral** with a glass, paper, or electronic thermometer (normal 98.6F/37C)
- **Axillary** with a glass or electronic thermometer (normal 97.6F/36.3C)
- **Rectal** or "core" with a glass or electronic thermometer (normal 99.6F/37.7C)
- **Aural** (the ear) with an electronic thermometer (normal 99.6F/37.7C)

Of these, axillary is the least and rectal is the most accurate.

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Vital Signs Recap
Average Healthy Adults (at rest)

- Blood pressure: 90/60 mm Hg to 120/80 mm Hg
- Respiration: 12 to 18 breaths per minute
- Pulse: 60 to 100 beats per minute
- Temperature: 97.8°F to 99.1°F (36.5°C to 37.3°C)/average 98.6°F (37°C)

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Observation

- Observe the patient as they move thru the office, get in and out of the chair, actions while you are performing their history.
- Document what you see:
  - Walks with a limp
  - Difficulty getting out of chair
  - Appears to be in acute pain
  - Medical emergency

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Examination

- Observation
  - Gait Analysis
  - Postural
  - Function
- Palpation
- Range of Motion
- Orthopedic Tests
- Neurologic Evaluation
- Vascular Evaluation
- Visceral Evaluation
- X-ray/Lab Evaluation
- External Imaging or Specialty Referral

Questions/Comments

Thank you!

Not everything is a nail…

Be aware of patient's at-risk.

Recognize indications and contraindications for common modalities.

Know Red and Yellow Flags, Contraindications, etc.

At-Risk Patient Population

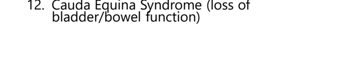
Red Flags, Yellow Flags, CoMorbidities, and Risk Factors

A serious condition that must be recognized through the history and exam process that typically requires referral to another health care provider

Clinical Red Flags

Red Flags
Immediate Referral

1. Fracture/dislocation
   - Significant Trauma
   - Osteoporosis
   - Pathologic Fracture
2. Cancer/tumor
   - Night-time Pain
   - Severe Progressive
   - Unexplained Weight Loss
   - Prior History
3. Infection
   - Elevated Temperature
   - Night Sweats
   - Intravenous Drug Abuse
   - Immunosuppression
4. Vertebrobasilar involvement
5. Instability (including degenerative, surgical or rheumatoid etiologies)
6. Progressive scoliosis
7. Severe osteoporosis
8. Severe hypertension
9. Vertebrobasilar involvement
10. Visceral pathology
11. Inflammatory Arthritides
12. Cauda Equina Syndrome (loss of bladder/bowel function)



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No health care provider can automatically assume that red flags have already been picked up by other providers.

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In addition, stable conditions may become unstable, nonthreatening conditions may become threatening, and new conditions may arise or be present coincidentally.

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General Red Flags

Signs or symptoms that signal dangerous conditions with multiple possible explanations or that can manifest in many different anatomical areas.

Example: headache with a neurological deficit (i.e., due to tumor, bleeding, etc.)

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Common General Red Flags

1. Progressively decreasing mental function at any age (i.e., dementia, etc.) – up to 10% US population over 65 YOA, 85% of those 85 YOA and older.
2. Chronic or repeated dizziness occurring other than when standing up (i.e., cerebral neurohypofunction from decreased blood flow, oxygen, glucose, or toxins, etc. to the brain) – 10-40% of US population over 60 YOA.

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Specific Red Flags

Signal specific illnesses or are present in specific anatomical regions.

Example: injury to a body part (i.e., fracture)

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Common Specific Red Flags

1. Increasing confusion following head trauma (especially elderly person days, weeks, or months after minor head injury).
2. Sudden leg weakness and possible unconsciousness in elderly person when turning head (i.e., "Drop Attack" from vertebral artery insufficiency).

Common Specific Red Flags

The timing of pain as a factor in red flags…

Pain that worsens progressively over weeks to months is a general red flag for ongoing tissue damage.

Pain that steadily increases in severity over weeks-to-months indicates a threat of irreversible tissue damage

Due to cancer, nerve damage, post-traumatic or post-surgical pain syndromes, inadequate blood supply to tissues, etc.)

Progressively worsening pain after surgery is never normal.

Increasingly painful area that turns numb is a red flag for sensory nerve destruction from advancing nerve compression syndromes.

Worsening of any stable chronic recurring pain is also a red flag for new tissue necrosis or injury.

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A persistently inflamed joint is a general red flag – causing permanent joint and soft tissue damage if left untreated.

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An unexplained fracture caused by minimal or unidentified trauma is a red flag for some type of pathological deterioration of bone (i.e., osteoporosis, cancer, etc.)

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Severe immediate pain, numbness, weakness and/or loss of function after trauma is a general red flag for fracture or disruption of a vital structure.

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Fractures

It is a fallacy that a patient can't move an extremity if a fracture is present

Fractures are always painful to careful palpation: Palpation of the disrupted periosteum is always painful and is a reliable sign of fracture

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Severe pain and swelling in a joint immediately after trauma is a general red flag for ruptured arterial arteriolar vessels.

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Intense pain and skin changes persisting many weeks after trauma is a general red flag for complex regional pain syndrome (CRPS, causalgia, reflex sympathetic dystrophy)

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Abdominal pain and rigidity of abdominal muscles is a sign of irritation of the inner lining of the abdominal peritoneum from blood and/or pus.

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Low back pain with progressive leg numbness, tingling, and weakness.

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Back pain with insidious onset and progressive, unintentional weight loss.

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Back pain, Progressive bilateral leg weakness and erectile dysfunction in a man >40 years of age.

Cauda Equina Syndrome

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Cauda Equina Syndrome is a serious condition caused by compression of the nerves in the lower portion of the spinal canal.

Cauda Equina Syndrome

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Cauda Equina Syndrome

McNamee J, Flynn P, O'Leary S, Love M, Kelly B. Imaging in cauda equina syndrome--a pictorial review. *Ulster Med J.* 2013;82(2):100-108. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3756868/

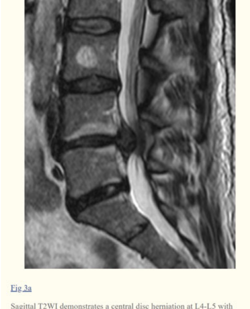

Fig 3a

Sagittal T2WI demonstrates a central disc herniation at L4-L5 with significant compression of the adjacent cauda equina nerve roots. Modic I end plate changes are also present at this level.

Cauda Equina Syndrome

Symptoms of cauda equina syndrome include the following:

- Low back pain
- Unilateral (single leg) or bilateral (both legs) sciatica (pain originating in the buttocks and traveling down the back of the thigh and legs)
- Saddle and perineal hypoesthesia or anesthesia (numbness in the groin or area of contact if sitting on a saddle)
- Bowel and bladder disturbances
- Lower extremity motor weakness and loss of sensations
- Reduced or absent lower extremity reflexes

Severe, localized midline back pain with spinous process tenderness to percussion.

Compression fracture

Sharp chest pain and shortness of breath with unilateral or bilateral ankle swelling.

Pulmonary embolus

Persistent elbow pain and stiffness after a fall on an outstretched hand.

Fracture of radial head of humerus

Elbow swelling and pain with diminished radial pulse and/or hand numbness after a fall.

Supracondylar fracture of humerus

Headache, eye pain, blurry or haloed vision, nausea, vomiting.

Acute closed-angle glaucoma

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Sudden, cataclysmic headache in a middle-aged hypertensive patient.

Nontraumatic subarachnoid hemorrhage

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Atraumatic, progressive, intermittent hip pain on movement and decreased hip range of motion.

Avascular necrosis of the hip

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Hip, knee, groin pain with limp in obese adolescent with or without trauma with decreased hip range of motion on exam.

Slipped capital femoral epiphysis

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Late teen to early adult with focal, persistent shin pain after increasing running distance.

Stress fracture of the tibia

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Neck pain and progressive sensory changes and weakness in both arms and legs.

Spinal cord injury – Chiari malformation

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Shoulder pain and progressive inability to abduct the arm due to shoulder stiffness.

Adhesive capsulitis of the shoulder

Pain on urination (dysuria) with high fever, chills, frequent urination, pain in the back and malaise.

Kidney infection

Chronic tenderness in anatomic snuff box; pain of wrist after fall on outstretched hand.

Occult fracture of the scaphoid

Resting heart rate >100/minute, hypervigilance, warm skin.

Hyperthyroidism

Irregularly irregular pulse with rate >100/minute.

Atrial fibrillation

15 minute episode of unilateral tingling/numbness that resolves completely.

Transient ischemic attack

Slow onset of patchy numbness and weakness of more than one body part.

Multiple sclerosis

Unilateral, painless lymph node swelling in the neck, arm or groin.

Lymphoma

One-sided ankle/distal calf swelling or asymptomatic bilateral swelling (>3 cm difference).

Blood clot in a deep vein of the calf

Bilateral, pitting ankle swelling with shortness of breath.

Congestive heart failure

Swelling of one arm with shoulder and/or armpit (axillary) pain.

Subclavian vein deep venous thrombosis

Sleeper Presentations

Represent far less drama than other red flags – common symptoms like constipation, low back pain which typically have non-serious causes and therefore the provider maybe “lulled” into a false sense of security.

Example: Low back pain: abdominal aortic aneurysm. Constipation: colon cancer.

911 Situations:
How to Handle Emergencies

1. Call for help and dial/have someone dial 911 to activate emergency services system.
2. Provide CPR, basic life support, and first aid if needed until emergency service personal arrive.
3. Maintain communication with the 911 operator and ensure that the patient and the office are prepared for emergency services personnel.
4. You will be asked some basic questions about the patient's situation by the medical response team that comes to your office. These concerns will be forwarded to the ER staff.
5. You should meet the patient at the ED if your treatment caused harm.

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Patients without Red Flag Indicators

- Patients will be evaluated with a focused history and examination
- Patients will be evaluated with a thorough spinal examination
- Patients will complete the appropriate outcome measure and the patient will be monitored during the treatment plan with the outcome measure.

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A condition that must be recognized thru the history and exam process which requires the DC to be cautious when providing physical medicine to the patient and may require co-management with another health care provider

Cautious Considerations

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1. Osteoporosis
2. Congenitally blocked vertebrae
3. Rheumatoid arthritis
4. Seronegative arthropathies
5. Spinal stenosis
6. Spinal instability (i.e. listhesis)
7. A diagnosis of disc herniation or sequestration
8. Previous surgery
9. Use of corticosteroids or Cushing's disease
10. Use of anticoagulant medication
11. Positives on vertebrobasilar testing (if used) other than neurological responses

(e.g. alternate position for adjustment if position induces a dizziness response)

12. Previous adverse reaction to a specific therapy or therapeutic trial

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"Yellow flags" are risk factors associated with chronic pain or disability.

Psychological Yellow Flags

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Yellow Flag Behaviors

Two or more could suggest substance use disorder

- Deterioration in functioning at work or socially
- Illegal activities—selling medications, forging prescriptions, or buying medications from nonmedical sources
- Using medications in ways other than prescribed (e.g., injecting or snorting medication)
- Multiple reports of lost or stolen prescriptions
- Resistance to change in medications despite adverse effects
- Refusal to comply with random drug screens, call backs, or pill counts
- Concurrent abuse of alcohol or drugs Use of multiple physicians and pharmacies

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Behavioral Comorbidities

- **Depression**
- History of Trauma/Abuse
- Personality Disorders
- Substance Abuse, Dependence, Addiction
- Opioid Use Disorder
- Anxiety Disorder
- Post Traumatic Stress Disorder
- Coping Skills/Catastrophizing
- Fear Avoidance

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Risk Factors with Strong Predictive Ability for developing chronic pain and disability

- Fear avoidance beliefs
- Catastrophizing
- Somatization
- Depressed mood
- Distress and anxiety
- Early disability or decreased function
- High initial pain levels
- Increased age
- Poor general health status
- Non-organic signs
- Secondary gain (occupational, social, family, financial)

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Vulnerable Populations

Diagnosis or treatment is significantly limited by social determinants of health

(i.e., economic and social conditions that influence access to care, etc.)

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Differential Diagnosis

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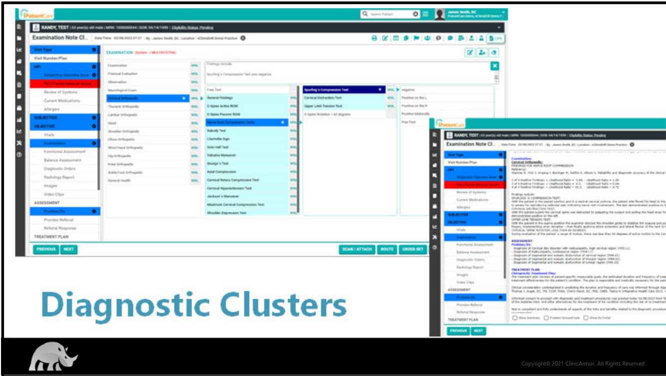

Diagnostic Clusters

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Radiographic Indications

When is it clinically indicated to perform radiographs or other imaging?

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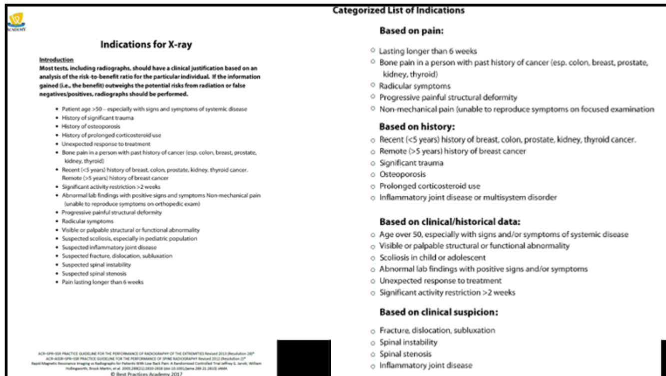

Indications for X-ray

Introduction

Most tests, including radiographs, should have a clinical justification based on an analysis of the risk-to-benefit ratio for the particular individual. If the information gained (i.e., the benefit) outweighs the potential risks from radiation or false negatives/positives, radiographs should be performed.

- Patient age >50 – especially with signs and symptoms of systemic disease
- History of significant trauma
- History of osteoporosis
- History of prolonged corticosteroid use
- Unexpected response to treatment
- Bone pain in a person with past history of cancer (esp. colon, breast, prostate, kidney, thyroid)
- Recent (<5 years) history of breast, colon, prostate, kidney, thyroid cancer. Remote (>5 years) history of breast cancer
- Significant activity restriction >2 weeks
- Abnormal lab findings with positive signs and symptoms Non-mechanical pain (unable to reproduce symptoms on orthopedic exam)
- Progressive painful structural deformity
- Radicular symptoms
- Visible or palpable structural or functional abnormality
- Suspected scoliosis, especially in pediatric population
- Suspected inflammatory joint disease
- Suspected fracture, dislocation, subluxation
- Suspected spinal instability
- Suspected spinal stenosis
- Pain lasting longer than 6 weeks

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Categorized List of Indications

Based on pain:

- Lasting longer than 6 weeks
- Bone pain in a person with past history of cancer (esp. colon, breast, prostate, kidney, thyroid)
- Radicular symptoms
- Progressive painful structural deformity
- Non-mechanical pain (unable to reproduce symptoms on focused examination

Based on history:

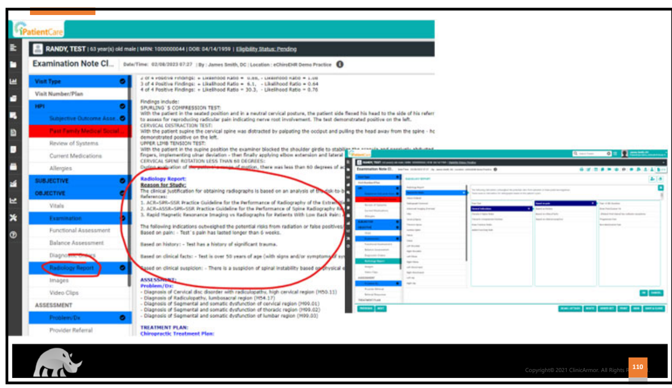
- Recent (<5 years) history of breast, colon, prostate, kidney, thyroid cancer.
- Remote (>5 years) history of breast cancer
- Significant trauma
- Osteoporosis
- Prolonged corticosteroid use
- Inflammatory joint disease or multisystem disorder

Based on clinical/historical data:

- Age over 50, especially with signs and/or symptoms of systemic disease
- Visible or palpable structural or functional abnormality
- Scoliosis in child or adolescent
- Abnormal lab findings with positive signs and/or symptoms
- Unexpected response to treatment
- Significant activity restriction >2 weeks

Based on clinical suspicion:

- Fracture, dislocation, subluxation
- Spinal instability
- Spinal stenosis
- Inflammatory joint disease

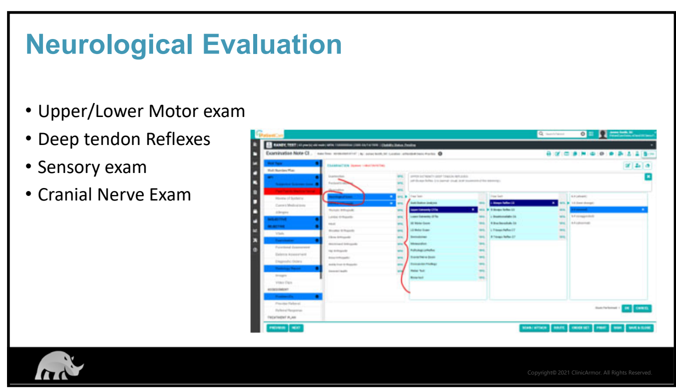


X-ray
Lab
Special Imaging (MRI, CT, DEXA, US)
Electrodiagnostic studies

Advanced Studies

Neurological Evaluation

- Upper/Lower Motor exam
- Deep tendon Reflexes
- Sensory exam
- Cranial Nerve Exam



Informed Consent

Consent by a person to undergo a medical procedure, participate in a clinical trial, or be counseled by a professional such as a social worker or lawyer, after receiving all material information regarding risks, benefits, and alternatives.

informed consent. (n.d.) *The American Heritage® Medical Dictionary*. (2007). Retrieved May 26 2020 from https://medical-dictionary.thefreedictionary.com/informed+consent

Patient Safety
Informed Consent

Informed Consent Process

Informing patients properly depends upon the sequence and information provided to disclose material risk.

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Discussion between the Clinician and the Patient

Obtain the patient's informed consent to the procedures **after** they have been provided material information **and** discussion with the doctor about all of the alternatives or risks of care.

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Informed Consent **must be obtained annually** and with new patients as part of the intake procedure and/or upon **re-admit, new diagnosis, new evidence, or new treatment**.

Informed Consent Process

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Informed Consent Process

PROCEDURE:

1. Upon patient's check-in, staff provides the unsigned Informed Consent form to the patient following taking the patient's history.
2. Informed Consent is reviewed and discussed with the patient **BY THE CLINICIAN**, at the time of visit, immediately after health history and exam and **prior to treatment and diagnostic procedures**. Any questions the patient may have are answered, always by the clinician.
3. Patient signs and dates form; clinician signs and dates form;
4. Completed form gets turned in to the front desk and gets scanned into patient record – or is signed within the EHR system records directly.

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When do we use Informed Consent?

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Every new patient and those patients who are re-admitted for care due to a new injury or condition, etc.

New Patient/Re-Admit

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New Diagnosis

A new diagnosis for the patient represents a material change for the patient.

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New evidence regarding treatment and/or procedures may represent a material change for the patient for consideration of alternative treatment or procedures. New risks for specific treatments/procedures should be updated in the informed consent form as well.

New Evidence

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A change in the use of a procedure in the care of the patient regardless of a change in the diagnosis.

New Treatment Procedure

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Six Key Elements of Informed Consent

For the patient's consent to be valid, the following elements need to be reviewed with the patient:

1. The patient's diagnosis/condition and the proposed treatment, modality or procedures for correction.
2. The relevant risks and benefits of the proposed treatment, modality or procedures
3. Alternative treatment or procedures that are available to the patient and the relative risk, benefits, and uncertainties related to each alternative;
4. The risk and benefits of not receiving or undergoing any treatment procedure
5. The assessment of the patients understanding of the information provided (decision making capacity)
6. The acceptance by the patient to undergo the recommended treatment, modality or procedure.

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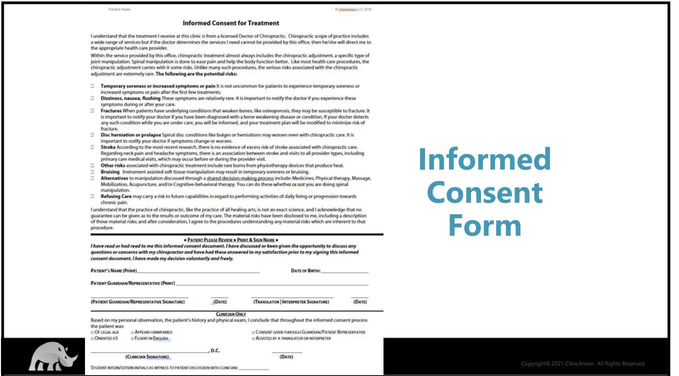

Practice Name

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Informed Consent for Treatment

I understand that the treatment I receive at this clinic is from a licensed Doctor of Chiropractic. Chiropractic scope of practice includes a wide range of services but if the doctor determines the services I need cannot be provided by this office, then he/she will direct me to the appropriate health care provider.

Within the service provided by this office, chiropractic treatment almost always includes the chiropractic adjustment, a specific type of joint manipulation. Spinal manipulation is done to ease pain and help the body function better. Like most health care procedures, the chiropractic adjustment carries with it some risks. Unlike many such procedures, the serious risks associated with the chiropractic adjustment are extremely rare. **The following are the potential risks:**

- ☐ **Temporary soreness or increased symptoms or pain** It is not uncommon for patients to experience temporary soreness or increased symptoms or pain after the first few treatments.
- ☐ **Dizziness, nausea, flushing** These symptoms are relatively rare. It is important to notify the doctor if you experience these symptoms during or after your care.
- ☐ **Fractures** When patients have underlying conditions that weaken bones, like osteoporosis, they may be susceptible to fracture. It is important to notify your doctor if you have been diagnosed with a bone weakening disease or condition. If your doctor detects any such condition while you are under care, you will be informed, and your treatment plan will be modified to minimize risk of fracture.
- ☐ **Disc herniation or prolapse** Spinal disc conditions like bulges or herniations may worsen even with chiropractic care. It is important to notify your doctor if symptoms change or worsen.
- ☐ **Stroke** According to the most recent research, there is no evidence of excess risk of stroke associated with chiropractic care. Regarding neck pain and headache symptoms, there is an association between stroke and visits to all provider-types, including primary care medical visits, which may occur before or during the provider visit.
- ☐ **Other risks** associated with chiropractic treatment include rare burns from physiotherapy devices that produce heat.
- ☐ **Bruising** Instrument assisted soft tissue manipulation may result in temporary soreness or bruising.
- ☐ **Alternatives** to manipulation discussed through a shared decision-making process include: Medicines, Physical therapy, Massage, Mobilization, Acupuncture, and/or Cognitive-behavioral therapy. You can do these whether or not you are doing spinal manipulation.
- ☐ **Refusing Care** may carry a risk to future capabilities in regard to performing activities of daily living or progression towards chronic pain.

I understand that the practice of chiropractic, like the practice of all healing arts, is not an exact science, and I acknowledge that no guarantee can be given as to the results or outcome of my care. The material risks have been disclosed to me, including a description of those material risks; and after consideration, I agree to the procedures understanding any material risks which are inherent to that procedure.

• PATIENT PLEASE REVIEW • PRINT & SIGN NAME •

I have read or had read to me this informed consent document. I have discussed or been given the opportunity to discuss any questions or concerns with my chiropractor and have had these answered to my satisfaction prior to my signing this informed consent document. I have made my decision voluntarily and freely.

PATIENT'S NAME (PRINT) ____________ DATE OF BIRTH: ____________

PATIENT GUARDIAN/REPRESENTATIVE (PRINT) ____________

(PATIENT GUARDIAN/REPRESENTATIVE SIGNATURE) (DATE) (TRANSLATOR | INTERPRETER SIGNATURE) (DATE)

CLINICIAN ONLY

Based on my personal observation, the patient's history and physical exam, I conclude that throughout the informed consent process the patient was:

☐ OF LEGAL AGE ☐ APPEARS UNIMPAIRED ☐ CONSENT GIVEN THROUGH GUARDIAN/PATIENT REPRESENTATIVE
☐ ORIENTED x3 ☐ FLUENT IN ENGLISH ☐ ASSISTED BY A TRANSLATOR OR INTERPRETER

____________, D.C. ____________
(CLINICIAN SIGNATURE) (DATE)

STUDENT INTERN/EXTERN INITIALS AS WITNESS TO PATIENT DISCUSSION WITH CLINICIAN: ____________

Informed Consent Form

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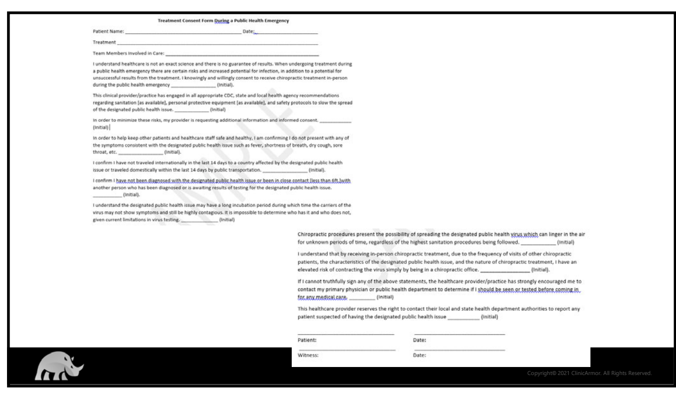

Treatment Consent Form During a Public Health Emergency

Patient Name: ____________ Date: ____________

Treatment ____________

Team Members Involved in Care: ____________

I understand healthcare is not an exact science and there is no guarantee of results. When undergoing treatment during a public health emergency there are certain risks and increased potential for infection, in addition to a potential for unsuccessful results from the treatment. I knowingly and willingly consent to receive chiropractic treatment in-person during the public health emergency ____________ (Initial).

This clinical provider/practice has engaged in all appropriate CDC, state and local health agency recommendations regarding sanitation [as available], personal protective equipment [as available], and safety protocols to slow the spread of the designated public health issue. ____________ (Initial)

In order to minimize these risks, my provider is requesting additional information and informed consent. ____________ (Initial)

In order to help keep other patients and healthcare staff safe and healthy, I am confirming I do not present with any of the symptoms consistent with the designated public health issue such as fever, shortness of breath, dry cough, sore throat, etc. ____________ (Initial).

I confirm I have not traveled internationally in the last 14 days to a country affected by the designated public health issue or traveled domestically within the last 14 days by public transportation. ____________ (Initial).

I confirm I have not been diagnosed with the designated public health issue or been in close contact [less than 6ft.]with another person who has been diagnosed or is awaiting results of testing for the designated public health issue. ____________ (Initial).

I understand the designated public health issue may have a long incubation period during which time the carriers of the virus may not show symptoms and still be highly contagious. It is impossible to determine who has it and who does not, given current limitations in virus testing. ____________ (Initial)

Chiropractic procedures present the possibility of spreading the designated public health virus which can linger in the air for unknown periods of time, regardless of the highest sanitation procedures being followed. ____________ (Initial)

I understand that by receiving in-person chiropractic treatment, due to the frequency of visits of other chiropractic patients, the characteristics of the designated public health issue, and the nature of chiropractic treatment, I have an elevated risk of contracting the virus simply by being in a chiropractic office. ____________ (Initial).

If I cannot truthfully sign any of the above statements, the healthcare provider/practice has strongly encouraged me to contact my primary physician or public health department to determine if I should be seen or tested before coming in for any medical care. ____________ (Initial)

This healthcare provider reserves the right to contact their local and state health department authorities to report any patient suspected of having the designated public health issue ____________ (Initial)

Patient: ____________ Date: ____________

Witness: ____________ Date: ____________

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Six Exceptions of Informed Consent

(1) Detailed technical information that in all probability a patient would not understand.

(2) Risks apparent or known to the patient.

(3) **Extremely remote possibilities that might falsely or detrimentally alarm the patient.**

(4) Information in emergencies where failure to provide treatment would be more harmful to the patient than treatment.

(5) Information in cases where the patient is incapable of consenting.

(6) Information about alternate modes of treatment for any condition the chiropractor has not included in his or her diagnosis at the time the chiropractor informs the patient.

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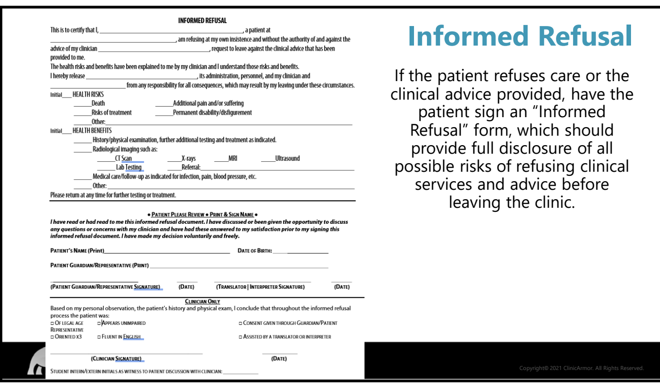

INFORMED REFUSAL

This is to certify that I, ______________________, a patient at ______________________, am refusing at my own insistence and without the authority of and against the advice of my clinician ______________________, request to leave against the clinical advice that has been provided to me.

The health risks and benefits have been explained to me by my clinician and I understand those risks and benefits.

I hereby release ______________________, its administration, personnel, and my clinician and ______________ from any responsibility for all consequences, which may result by my leaving under these circumstances.

Initial___ HEALTH RISKS

- ______Death
- ______Additional pain and/or suffering
- ______Risks of treatment
- ______Permanent disability/disfigurement
- ______Other: ______________________

Initial___ HEALTH BENEFITS

- ______ History/physical examination, further additional testing and treatment as indicated.
- ______ Radiological imaging such as:
  - ______CT Scan ______X-rays ______MRI ______Ultrasound
  - ______ Lab Testing ______Referral: ______________________
- ______ Medical care/follow-up as indicated for infection, pain, blood pressure, etc.
- ______ Other: ______________________

Please return at any time for further testing or treatment.

• Patient Please Review • Print & Sign Name •

I have read or had read to me this informed refusal document. I have discussed or been given the opportunity to discuss any questions or concerns with my clinician and have had these answered to my satisfaction prior to my signing this informed refusal document. I have made my decision voluntarily and freely.

Patient's Name (Print)______________________ **Date of Birth:** ______________

Patient Guardian/Representative (Print) ______________________

(Patient Guardian/Representative Signature) **(Date)** **(Translator | Interpreter Signature)** **(Date)**

Clinician Only

Based on my personal observation, the patient's history and physical exam, I conclude that throughout the informed refusal process the patient was:

☐ Of legal age ☐ Appears unimpaired ☐ Consent given through Guardian/Patient Representative

☐ Oriented x3 ☐ Fluent in English ☐ Assisted by a translator or interpreter

(Clinician Signature) **(Date)**

Student intern/extern initials as witness to patient discussion with clinician: ______________

Informed Refusal

If the patient refuses care or the clinical advice provided, have the patient sign an "Informed Refusal" form, which should provide full disclosure of all possible risks of refusing clinical services and advice before leaving the clinic.

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Co-Management, Consult, and Referrals

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1. Single Visit Consultation
2. Co-Management with Shared Care
3. Co-Management with Principal Care
4. Transition of Care for whole-person care
5. Communication of results to patient/family/caregiver

INTAKE
PCP referral/approval
Comprehensive Intake Evaluation by Interdisciplinary Team
PCP consult
PCP patient outreach
Care Management PCP Consultations (optional)
Group: CBT skills training & yoga based practice
Individual phone coaching
POST-PROGRAM
PCP consult
PCP patient outreach

Fig. 2. PPACT intervention description.

https://www.contemporaryclinicaltrials.com/article/S1551-7144(17)30578-5/pdf

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1. Know who you need to work with on the care team.

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2. Determine what services you want the consult/referral provider to perform.

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3. Organize your clinical data logically in a consult/referral letter.

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4. Document your referral in the patient's chart

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5. Track the referral to close the loop.

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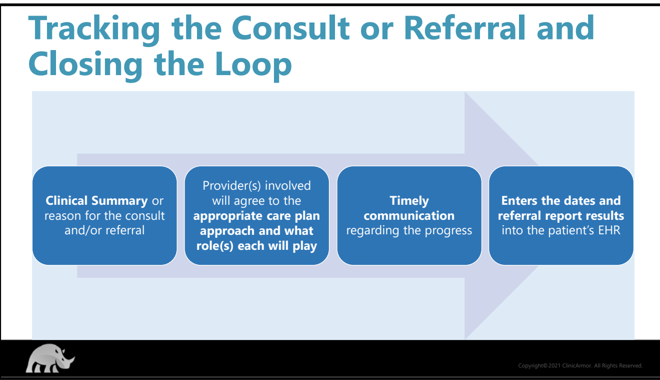
Tracking the Consult or Referral and Closing the Loop



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Treatment

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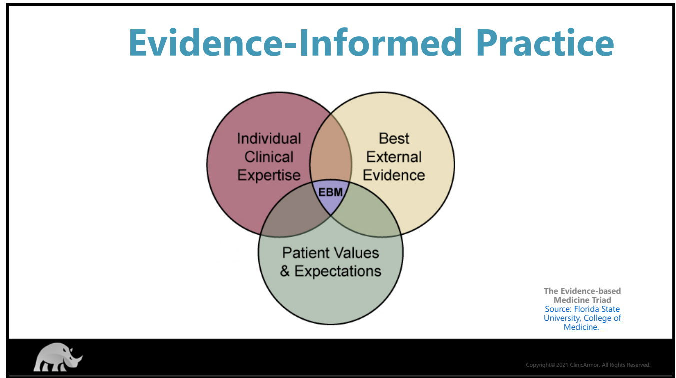

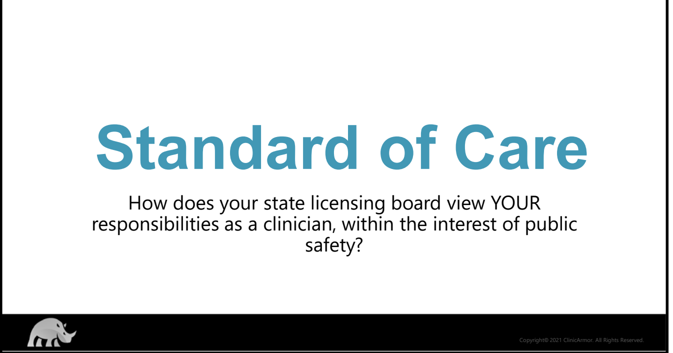

Clinical Competencies

Efficacious Treatment Approaches

Competency of Doctor and Staff in delivery of services

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Are you and your staff attending regular clinical education training?

Do you provide hands-on training for staff?

Are you using FDA approved devices?

Does your treatment follow guidelines?

Are you monitoring and documenting the progress of your patients?

Questions to Ask

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Treatment Visit Screening

Treatment Visit Patient Safety Checklist

Use this checklist to gather essential information regarding the Treatment Visit of a patient to determine if the patient is at risk for an adverse event and there is a need for the monitoring of key patient safety activities.

TREATMENT VISITS

- ☐ Patient is showing unsteadiness in movements
- ☐ Patient recently had a hospitalization or surgery
- ☐ Change in last visit discussed/communicated
- ☐ Significant event identified requiring evaluation
- ☐ Patient has a change in medication or allergy
- ☐ Patient has fallen within the last 6 months
- ☐ Patient's mental status is not normal
- ☐ Document subjective and objective findings
- ☐ Assess procedures and patient response
- ☐ Assess progress of the patient
- ☐ Assess diagnostic certainty
- ☐ Patient monitoring after treatment
- ☐ Potential Clinical Red Flags communicated:

POST-EVAL/TREATMENT EHR DOCUMENTATION

- ☐ Patient findings/new information documented
- ☐ Patient progress assessed and documented
- ☐ Procedures performed correctly without incident
- ☐ Patient response monitored and tolerated
- ☐ Therapeutic activities/modalities tolerated
- ☐ Coding and charges completed w follow-up

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Misinformed Treatment Plans

Communicating to patients regarding the treatment plan and expectations of care process.

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Care Management Considerations

Transitional Care (Hand-off)
Environment/Falls
Medication Errors/Reconciliation
Team/Communication

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Dry Needling/Acupuncture Adverse Effects

The act of puncturing the skin comes with a number of predictable adverse events (bruising or bleeding, pain during or following treatment) which commonly occur and are mild in nature.

This may be considered normal side effects of treatment. However, from the patient's perspective they may be considered adverse particularly if the patient has not been educated about the risks associated with their dry needling/acupuncture technique.

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Manipulation/Manual Therapy

Potential Risks

- ✓ Temporary soreness or increased symptoms or pain It is not uncommon for patients to experience temporary soreness or increased symptoms or pain after the first few treatments.
- ✓ Dizziness, nausea, flushing These symptoms are relatively rare. It is important to notify the doctor if you experience these symptoms during or after your care.
- ✓ Fractures When patients have underlying conditions that weaken bones, like osteoporosis, they may be susceptible to fracture. It is important to notify your doctor if you have been diagnosed with a bone weakening disease or condition. If your doctor detects any such condition while you are under care, you will be informed, and your treatment plan will be modified to minimize risk of fracture.
- ✓ Disc herniation or prolapse Spinal disc conditions like bulges or herniations may worsen even with chiropractic care. It is important to notify your doctor if symptoms change or worsen.
- ✓ Stroke According to the most recent research, there is no evidence of excess risk of stroke associated with chiropractic care. Regarding neck pain and headache symptoms, there is an association between stroke and visits to all provider-types, including primary care medical visits, which may occur before or during the provider visit.
- ✓ Other risks associated with chiropractic treatment include rare burns from physiotherapy devices that produce heat.
- ✓ Bruising Instrument assisted soft tissue manipulation may result in temporary soreness or bruising.

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Chiropractic Clinical Assistant Competency

- Formal training completion with testing
- Understand supervision rules for your state
- Patient response
- Doctor communication - orders

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Recognizing and Preventing Safety Hazards

1. Therapy Modalities
2. Hydraulic/Spring-loaded adjusting tables
3. Sharps (i.e. needles) and Sharps Containers
4. Theraband/Exercise Stations

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Therapeutic Modalities and Table Equipment

- Are all therapeutic modalities and equipment (both, company and employee-owned) used by staff, providers and workforce members at their workplace in good condition?
- Are all of the operating manuals and instructions available to staff, providers and workforce members for all therapeutic modalities and equipment?
- Are staff, providers and workforce members made aware of the hazards caused by faulty or improperly used modalities and equipment?
- Are all cord-connected, electrically operated modalities and equipment effectively grounded or of the approved double insulated type?
- Are children monitored at all times and parent/guardian warned of crush risk or safety issue around modalties?

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Therapeutic Modalities and Table Equipment

- Are all therapeutic modalities and equipment turned off after use and remain off prior to patient use?
- Do patients know what to expect prior to the application of the modality?
- Do patients know what to expect as potential temporary symptoms or reactions to the application of the therapy?

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Theraband Exercise Station

Eye Protection

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Falls Action Plan

1. Evaluate the person after the fall
   - Vitals, check for injury, call 911
2. Investigate fall circumstances
   - Factors, witnesses, etc.
3. Record circumstances and outcome
   - Date, time, detail, etc.
4. Alert person's primary care provider
   - falls assessment should be performed and a plan of care developed.
5. Implement immediate interventions within 24 hours
   - Awareness of high-risk people or situations and monitor compliance

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OSHA Safety Considerations

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Key Concepts to Understand

Hazard refers to the inherent properties of a chemical, work practice, equipment, etc. that make it capable of causing harm to a person or the environment.

Exposure describes both the amount of, and the frequency with which, a hazard comes into contact with a person, group of people or the environment.

Risk is the possibility of a harm arising from a particular exposure to a hazard, under specific conditions.

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Emergency Disaster Policy

The policy is to protect the patients, staff and clinicians in the event of an action or an occurrence that poses a threat to life or property. Procedures will be adopted to address as much as possible events that would threaten the lives and health of patients, staff and clinicians.

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Emergency Disaster Policy & Procedure

- Immediate Actions Following an Emergency
- Bomb Threat
- Loss of Critical Utilities
- Emergency Assistance
- Business Data Backup
- Cardiac/Respiratory Arrest Protocol
- Tornado/Severe Weather Plan
- Terrorist Chemical/Biological Threat Exposure
- Security
- Emergency Action Plan

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Emergency Action Plan

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Emergency Action Plan

- Alerts
- Policy on Evacuation
- Routes
- Extinguishers
- Operations shutdown
- Duties assigned
- Assembly after an evacuation
- Accounting

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OSHA's New COVID-19 Standard Update

Managing Risk for Staff and Doctors

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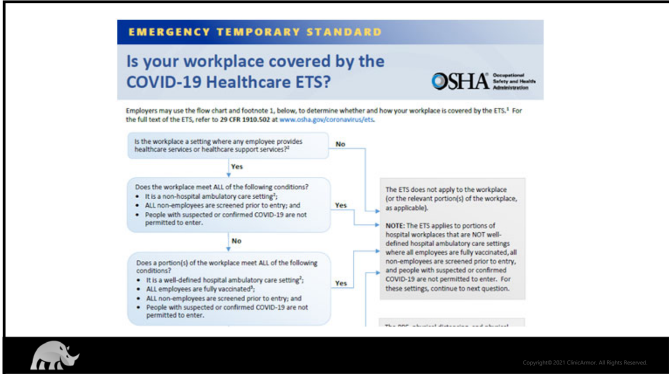

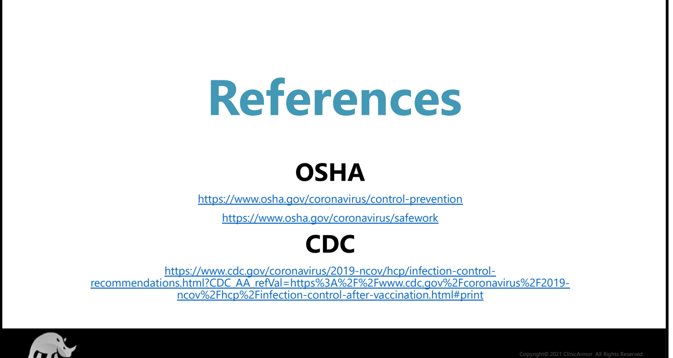

Preventing Blood-borne Pathogens

Bloodborne Pathogen Standard Policy
Sharps/Needle sticks

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Preventing Air-borne Pathogens

Exposure Control Plan

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Mitigating the Exposure Risk

COVID-19 Screening (patients/workers)
Assess Community Spread
Implement Multiple Layers of Controls

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COVID-19 Screening

1. Are you COVID–19 positive or been told by a licensed healthcare provider that you are suspected to have COVID–19?
2. Are you experiencing recent loss of taste and/or smell with no other explanation?
3. Are you experiencing both fever (≥100.4 °F) and new unexplained cough associated with shortness of breath?

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Non-worker Screening

Patients and Visitors

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Worker Screening

Self-Screening Program
On-site Screening Program

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Medical Records

Note that 29 CFR 1910.1020 may apply to temperature records if you are providing on-site worker screening…

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Should workers in settings not covered by the Healthcare ETS wear cloth face coverings while at work?

OSHA's guidance is consistent with the Centers for Disease Control and Prevention (CDC. In addition to unvaccinated and otherwise at-risk workers, CDC recommends that even fully vaccinated people wear masks in public indoor settings in areas of substantial or high transmission and notes that fully vaccinated people may appropriately choose to wear a mask in public indoor settings regardless of level of transmission, particularly for people who are at-risk or have someone in their household who is at-risk or not fully vaccinated. Unless otherwise provided by federal, state, or local requirements, workers who are outdoors may opt not to wear face coverings unless they are at risk, for example, if they are immunocompromised. Regardless, all workers should be supported in continuing to wear a face covering if they choose, especially in order to safely work closely with other people.

Note that cloth face coverings are not considered personal protective equipment (PPE) and cannot be used in place of respirators when respirators are otherwise required.

Learn more about cloth face coverings on the CDC website.

Employers may need to provide reasonable accommodation for any workers who are unable to wear or have difficulty wearing certain types of face coverings due to a disability or who need a religious accommodation. In workplaces with employees who are deaf or have hearing deficits, employers should consider acquiring masks with clear coverings over the mouth to facilitate lip-reading.

For information about masking requirements for public transportation conveyances and transportation hubs check with the CDC.

Do we still need to use facemasks?

https://www.osha.gov/coronavirus/faqs#cloth-face-coverings

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The agency now says that facilities in areas without high transmission can decide for themselves whether to require everyone — doctors, patients, and visitors — to wear masks.

Community transmission "is the metric currently recommended to guide select practices in healthcare settings to allow for earlier intervention, before there is strain on the healthcare system and to better protect the individuals seeking care in these settings," the CDC said.
https://www.medscape.com/viewarticle/981629?src=WNL_dne1_220930_MSCPEDIT&uac=395626EV&impID=4698875&faf=1

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"substantial or high transmission"

The key is "substantial or high transmission" which needs to be evaluated here:
https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=Risk

You can see where your county is at in transmission rates, and then make the face mask decision accordingly.

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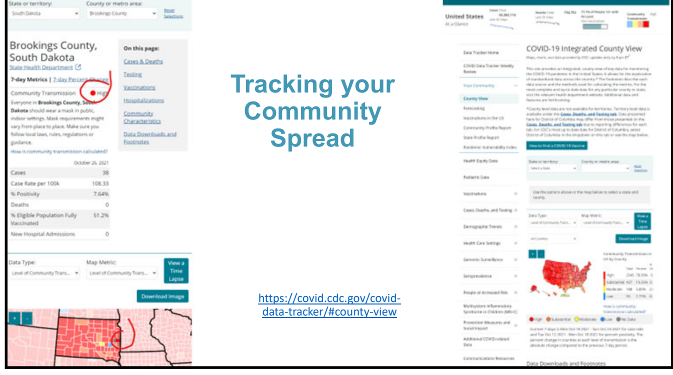

Tracking your Community Spread

https://covid.cdc.gov/covid-data-tracker/#county-view

Multiple Layers of Controls

- Removing from the workplace all infected people
- Mask wearing
- Distancing
- Increased ventilation
- Proper cleaning/disinfecting
- Proper hand hygiene
- Training

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What types of safety equipment are available?

- Fire extinguisher
- CPR equipment (AED, CPR Masks/Supplies)
- Gloves
- Face Masks
- Disinfectant
- Alcohol-based hand rub
- Handwashing Station
- Blood Draw Equipment
- KNOWLEDGE

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Clinical Conscientiousness and Awareness

Maintaining your clinical mindset

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The "Walk"

Welcome
Ask
Listen
Knowledge

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Screening Patients:

Why are you here today?
Has there been a change in how you are feeling since your last visit?
Have you seen anyone else about your health?
Do you have questions about...
Are you worried about your health?

Situational Awareness:
No change or worsening
Observation of patient's mental status, behaviors, or characteristics

Has there been a "Significant Event"?

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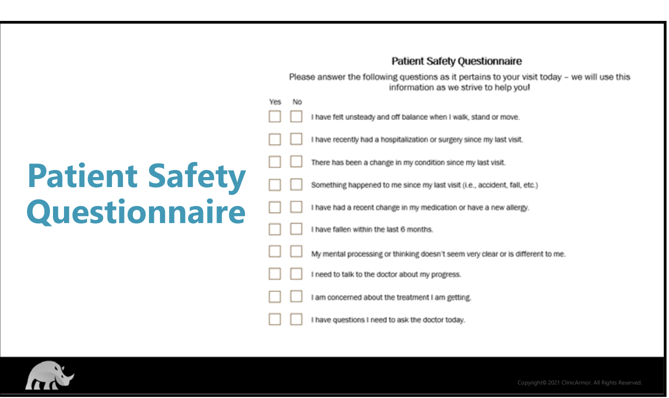
Patient Safety Questionnaire


Patient Safety Questionnaire

Please answer the following questions as it pertains to your visit today – we will use this information as we strive to help you!

Yes	No	
☐	☐	I have felt unsteady and off balance when I walk, stand or move.
☐	☐	I have recently had a hospitalization or surgery since my last visit.
☐	☐	There has been a change in my condition since my last visit.
☐	☐	Something happened to me since my last visit (i.e., accident, fall, etc.)
☐	☐	I have had a recent change in my medication or have a new allergy.
☐	☐	I have fallen within the last 6 months.
☐	☐	My mental processing or thinking doesn't seem very clear or is different to me.
☐	☐	I need to talk to the doctor about my progress.
☐	☐	I am concerned about the treatment I am getting.
☐	☐	I have questions I need to ask the doctor today.

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Does the patient's clinical presentation require urgent need for evaluation and/or care?

The doctor must be informed of any new information about the patient that has been related to staff.

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Stay Connected to Established Patients who are under a treatment plan.

Following the treatment plan, evidence-informed care guidelines, and the patient's response to care…

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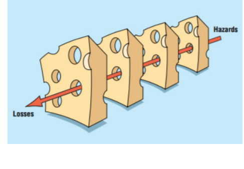
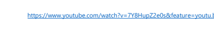
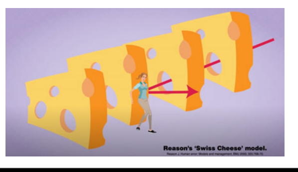
It just takes one thing to block the incident…





https://www.youtube.com/watch?v=7Y8HupZ2e0s&feature=youtu.be



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Thank you!

Scott Munsterman, DC, FICC, CPCO

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What types of safety equipment are available?

- Fire extinguisher
- CPR equipment (AED, CPR Masks/Supplies)
- Gloves
- Face Masks
- Disinfectant
- Alcohol-based hand rub
- Handwashing Station
- Blood Draw Equipment
- KNOWLEDGE

185

An act of omission or commission in planning or execution that contributes or could contribute to an unintended result.

Defining medical error. Ethan D. Grober, John M.A. Bohnen Can J Surg. 2005 Feb; 48(1): 39–44. PMCID: PMC3211566
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3211566/

What is a Clinical Error?

186

Patient safety: the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the process of health care.

National Patient Safety Foundation. *Agenda for research and development in patient safety.*
http://www.ihi.org/Topics/PatientSafety/Pages/default.aspx

First, do no harm.

187

The Institute for Healthcare Improvement defines preventable medical harm as "unintended physical injury resulting from or contributed to by medical care (including the absence of indicated medical treatment), that requires additional monitoring, treatment or hospitalization, or that results in death."

These mistakes, called "preventable harm" or "adverse events" in medical literature, account for up to 1,000 deaths per day.

https://costsofcare.org/tallying-the-high-cost-of-preventable-harm/

What Is Preventable Harm?

188

An unexpected and undesired incident directly associated with the care or services provided to the patient; an incident that occurs during the process of providing health care and results in patient injury or death; or an adverse outcome for a patient, including an injury or complication.

Adverse Event

189

Swiss Cheese model

Reason J. Human error: Models and management. BMJ 2000; 320:768-70

Most interactions are the result of many causes and predisposing conditions

190

It just takes one thing to block the incident…

Hazards
Losses

https://www.youtube.com/watch?v=7Y8HupZ2e0s&feature=youtu.be

Reason's 'Swiss Cheese' model.

191

Reasons for Holes in the Defense Layers

Active Failures are the unsafe acts committed by people who are in direct contact with the patient or system. They take a variety of forms: slips, lapses, fumbles, mistakes, and procedural violations.

Latent Conditions have two kinds of adverse effects:

- they can translate into error provoking conditions within the workplace (i.e. time pressure, understaffing, inadequate equipment, fatigue, inexperience) and
- they can create long-lasting holes or weaknesses in the defenses (i.e. lack of training for staff, improper therapeutic or billing practices, lack of compliance policy).

192

Adverse Events vs Near Misses
Human vs System
Commission vs Omission

Causes of Errors

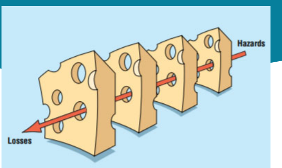
193

But when incidents do occur…

- The incident should not be kept secret. All incidents need to be documented and discussed with the doctor and coworkers.
- The doctor should talk to the patient
  - Discuss what has been learned
  - Provide an honest expression of regret or apology
  - Can often decrease the risk of legal action

194

A bad outcome occurs only when the holes in many defense layers momentarily line up to permit a trajectory of an accident opportunity—bringing hazards into damaging contact with patients.



Holes in the Defense Layers

195

What are the defense layers in the practice?

1. Emergency identification/response procedures are in place.
2. Perform vital signs.
3. Properly diagnosis a patient's condition.
4. Identifying contraindications for care and red flags.
5. Perform manipulation procedure properly.
6. Safely apply therapeutic procedures/activities on each visit.
7. Close oversight/response of patient monitoring during care.
8. Close oversight of visitors/children during patient's visit.
9. Awareness of external activities within and outside of the facility.
10. Doctor/Staff rested and devote 100% present time consciousness.

196

Most Common Patient Safety Issues

- Falls
- Equipment malfunction
- Infection prevention procedures
- Faulty patient perception of an incident occurring stemming from lack of communicating to the patient what to expect from treatment
- Underlying medical emergency/red flag (i.e., cardiovascular, cerebrovascular, fracture, infection, cancer)

197

Recognizing Patient Safety Incidents

- Patient complains of pain after treatment
- Modality malfunctioning or not being applied properly
- Patient nearly falling
- Patient safety incidents range from "No Harm" to "Unnecessary Harm"

198

Underlying Causes

- Patient OTC drug use and interactions increase risk of falls
- Provider/therapist fatigue and stress can lead to miscommunications
- Short staffing and increased workload

Follow Safe Practice Procedures

You and your staff must be the **"one thing"**…

Reason's 'Swiss Cheese' model.

Scope of Safety Issues

In Chiropractic…

Commonly Misdiagnosed Conditions

The "Big Three": misdiagnosed cancers (37.8%), vascular events, like stroke and heart attack (22.8%), and infections (13.5%).

Cancers
- Lung, breast, colorectal, prostate, and skin cancers

Vascular events
- Stroke, heart attack, venous thromboembolism (blood clots in the legs and lungs), aortic aneurysm and rupture (dissection), arterial thromboembolism (a blockage of the blood supply to internal organs)

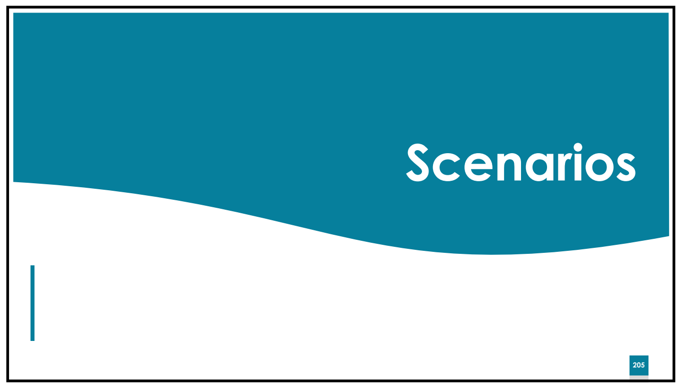
Infections
- Sepsis, meningitis, encephalitis, spinal infection, pneumonia, and endocarditis (a heart infection)

Newman-Toker, D. E., Schaffer, A. C., Yu-Moe, C., Nassery, N., Saber Tehrani, A. S., Clemens, G. D., Wang, Z., Zhu, Y., Fanai, M., & Siegal, D. (2019). Serious misdiagnosis-related harms in malpractice claims: The "Big Three" – vascular events, infections, [illegible] cancers, *Diagnosis*, 6(3), 227-240. doi: https://doi.org/10.1515/dx-2019-0019

What are the various factors that may set us up for risk of a clinical error in practice?

Professional Boundaries in Clinical Practice

Patient Relationships



You are well established in the community and have many patients. Relationships are important to you and especially friendships with others. Because you are a successful doctor, your friends naturally have become patients as well.

Scenario #1

206

Your family is important to you and extended family members come to see you in the practice for care.

Scenario #2

207

A patient recently started receiving treatment in the practice. You and he connect with each other and you sense a bit of a chemistry is there however you don't realize you may be attracted to him. But you find yourself caring about what you look like - you begin to dress up, spend a bit more time doing your hair and make-up on the days you know he will be in for treatment.

Scenario #3

208

In the practice, there are some patients who you don't necessarily like as a person and there are some that you do – and one patient in the practice in particular is so friendly and thoughtful. One evening when you were out getting groceries you run into this person in the aisle and strike up a conversation. About 30 minutes has gone by and you didn't realize you spent that much time talking because it was so enjoyable. You find so many things in common with this person. Finally before you part the patient makes the comment, "Hey, we should get together some time, what are you doing this weekend?"

Scenario #4

209

Were there boundaries crossed in any of these scenarios – or are these just "normal" scenarios we can expect?

210

Boundaries were crossed and yes, we can continue to expect these scenarios. But how we manage these relationships determine the difference between crossing a boundary and committing a boundary violation…

The answer is yes and yes.

Professional boundaries are limits which protect a worker's professional power and their patient's vulnerability. Successful and ethical working relationships are based on a clear understanding of what the workers' role is – and just as importantly – what their role isn't.

Definition of Professional Boundary

https://mcarthur.com.au/media/1429/understanding-professional-boundaries.pdf

When does Clinical Integrity become compromised?

THE ROLE	THE LINE	THE IMPACT
Professional Service Social Interaction		
Mutual Friendship	BOUNDARY CROSSING	CONCIENTIOUSNESS OF BOUNDARY VIOLATION PENDING
Close Friendship Family Intimacy	BOUNDARY VIOLATION	PERSONAL GAIN EMOTIONAL DEPENDENCY VIEWED AS EXPLOITATION IF PROFESSIONAL ROLE IS CONTINUED

What is our role as a health care professional?

- Perform clinical duties and provide care to a patient
- Protect the patient from harm
- Meet reasonable expectations of the patient
  - Respect and dignity
  - Provide competent care
  - Practice ethically
  - Uphold confidentiality
  - Comply with all laws regulating your practice and behaviors
- Honesty in all patient interactions
- Equitable and fair treatment of all patients regardless of their race, religion, socioeconomic status, etc.

Dual Relationships

What are the challenges?

Key questions to ask yourself…

Does the dual relationship compromise the professional role you serve with the patient?

Has a conflict of interest arisen from the dual relationship?

217

Has your allegiance shifted away from your focus in your professional role to a more personal role whereby you are seeking and benefiting personally from the relationship?

218

Maintaining Boundaries

- Do not seek out a personal relationship with your patients, nor with their family, friends or support network
- Do not have a sexual relationship with patients, their family, friends or people in their support network
- Do not introduce patients to your own family, friends or support network (e.g. don't invite people home for family gatherings etc. Work and home should be kept separate.)
- Do not socialize with patients, their family or friends outside of work hours. Your work finishes at the end of your shift
- Do not smoke or drink alcohol in front of patients
- Do not borrow, ask for or lend money to patients
- Do not ask for money, gifts or special favors from your patients
- Keep your family/home life private
- Use professional language at all times
- Do not pay for your patient or let them pay for you
- Empower patients, don't make yourself irreplaceable
- Do not accept gifts or buy gifts for your patients
- Do not allow patients to drive your own/work motor vehicle
- Respect confidentiality and privacy
- Do not disclose personal information
- Do not give advice outside of your skills and expertise
- Do not talk about your personal financial or other life problems with patients
- **DO NOT LET YOUR GUARD DOWN**

219

Evaluation Process

History of Present Illness

Past Family Medical Social History

Review of Systems

Chief Complaints

Physical Comorbidities

Past Medical, Family and Social History

- Prior Major Illnesses and Injuries
- Prior Surgeries
- Prior Hospitalizations
- Current Medications
- Allergies
- Age Appropriate Immunization Status
- Age Appropriate Feeding/Dietary Status
- Marital Status
- Current Employment
- Occupational History
- Alcohol and Tobacco Usage
- Level of Education
- Sexual History

- Ask if there are any members of the patient's family who have had illnesses with features similar to the patient's.
- Determine the health or cause of death of the patient's parents and siblings.
- Establish whether there is a history of heart disease, high blood pressure, cancer, tuberculosis, stroke, diabetes, arthritic conditions, thyroid disease, kidney disease, asthma, blood diseases, sexually transmitted diseases, or any familial diseases.

222

Physical Comorbidities
Review of Systems

1. Constitutional
2. Eyes
3. Ears, nose, mouth, throat
4. Cardiovascular
5. Respiratory
6. Gastrointestinal
7. Genitourinary
8. Musculoskeletal
9. Integumentary
10. Neurological
11. Psychiatric
12. Endocrine
13. Hematologic/Lymphatic
14. Allergic/Immunologic

223

CVA Screening

Has the patient reported any of the following risk factors or symptoms in the medical history?

Is there nausea, vomiting, sensory disturbances (hearing, visual), cramps, weakness, headache, dizziness, and/or loss of consciousness?

Risk Factors:
- Dizziness
- Unsteadiness
- Giddiness
- Vertigo
- Sudden severe pain in the side of the head and/or neck, which is different from any pain the patient has had before
- Age <45 years
- Migraine
- Connective Tissue Disease
- Recent infection (i.e. upper respiratory)

224

What are Vital Signs?

These are measurements of the inner workings of the human body and how vital organs, such as the heart and lungs, are functioning.

225

INITIAL/PROGRESS VISIT EXAMS

VITAL SIGNS
- HEIGHT
- WEIGHT
- BMI
- BLOOD PRESSURE
- HEART RATE
- RESPIRATION

226

Vitals

- Height
- Weight
  - Abnormal weight loss or gain
  - Rapid change in height
- BMI (calculated from height/weight)
- Temperature
  - Signs of systemic infection or inflammation in the presence of a fever (temp > 101.4 F or sustained temp > 100.4 F. COVID-19 >100F).
- Respirations
  - Varies with age, normal reference range is 16-20 breaths/minute.
- Pulse
  - A newborn or infant can have a heart rate of about 130-150 beats per minute.
  - A toddler's heart will beat about 100-120 times per minute,
  - An older child's heartbeat is around 90-110 beats per minute, adolescents around 80-100 beats per minute, and
  -
  - Adults pulse rate is anywhere between 50 and 80 beats per minute.

227

How to Perform Vitals

General Considerations
- The patient should **not** have had alcohol, tobacco, caffeine, or performed vigorous exercise within 30 minutes of the exam.
- Ideally the patient should be sitting with feet on the floor and their back supported. The examination room should be quiet and the patient comfortable.
- History of hypertension, slow or rapid pulse, and current medications should always be obtained.

228

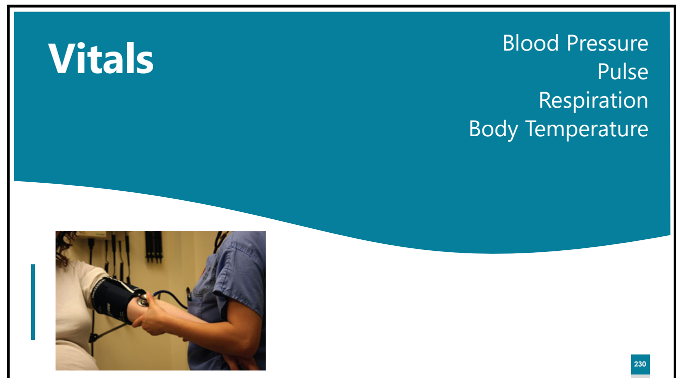
Notes on Vitals

- Unlike pulse, respirations are very much under voluntary control. If you tell the patient you are counting their breaths, they may change their breathing pattern. You cannot tell someone to "breath normally," normal breathing is involuntary.
- With an irregular pulse, the beats counted in any 15 second period may not represent the overall rate. The longer you measure, the more these variations are averaged out.
- **Do not rely** on pressures obtained using a cuff that is too small or too large. This is frequently a problem with obese or muscular adults where the regular cuff is too small. The pressure recorded will most often be 10, 20, even 50 mmHg too high! Finding a large cuff may be inconvenient, but you will also "cure" a lot of high blood pressure.

229

Vitals

Blood Pressure
Pulse
Respiration
Body Temperature



230

Most common primary diagnosis in the US
Essentially silent disorder, 30% of individuals are unaware they are hypertensive
$320 Billion in health care costs US alone
Significant modifiable risk factor for CVD
Related to LBP

Hypertension

231

Hypertension

- **Normal**
  <120 Systolic<80 diastolic medication not needed, lifestyle recommendations
- **Pre-hypertensive**
  120-139 systolic 80-89 diastolic, medication not needed, lifestyle modification (90% chance at 65 to develop stage 1 and stage 2, lifestyle changes will decrease risk to almost 0)
- **Stage 1 hypertension**
  140-159 systolic or 90-99 diastolic, lifestyle modifications given, medications recommended starting with thiazide-type diuretics (consider others if ineffective)
- **Stage 2 hypertension**
  >160 systolic or >100 diastolic, lifestyle modifications given, two-drug combination therapy recommended.

232

Notes on Blood Pressure

- Maximum Cuff Pressure - When the baseline blood pressure is already known or hypertension is not suspected, it is acceptable in adults to inflate the cuff to 200 mmHg and go directly to auscultating the blood pressure. Be aware that there could be an **auscultory gap** (a silent interval between the true systolic and diastolic pressures).
- Bell or Diaphragm? - Even though the Korotkoff sounds are low frequency and should be heard better with the bell, it is often difficult to apply the bell properly in the anticubital fold. For this reason, it is common practice to use the diaphragm when taking blood pressure.
- Systolic Pressure - In situations where auscultation is not possible, you can determine systolic blood pressure by palpation alone. Deflate the cuff until you feel the radial or brachial pulse return. The pressure by auscultation would be approximately 10 mmHg higher. Record the pressure indicating it was taken by palpation (60/palp).
- Diastolic Pressure - If there is more than 10 mmHg difference between the muffling and the disappearance of the sounds, record all three numbers (120/80/45).

233

Blood Pressure

- Higher blood pressures are normal during exertion or other stress. Systolic blood pressures below 80 may be a sign of serious illness or shock.
- Blood pressure should be taken in both arms on the first encounter. If there is more than 10 mmHg difference between the two arms, use the arm with the higher reading for subsequent measurements.
- It is frequently helpful to retake the blood pressure near the end of the visit. Earlier pressures may be higher due to the "white coat" effect.
- Always recheck "unexpected" blood pressures yourself.

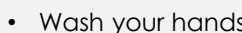
234

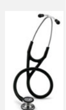
Blood Pressure

- Position the patient's arm so the anticubital fold is level with the heart. Support the patient's arm with your arm or a bedside table.
- Center the bladder of the cuff over the brachial artery approximately 2 cm above the anticubital fold. **Proper cuff size is essential** to obtain an accurate reading. Be sure the index line falls between the size marks when you apply the cuff. Position the patient's arm so it is slightly flexed at the elbow.
- Palpate the radial pulse and inflate the cuff until the pulse disappears. This is a rough estimate of the systolic pressure.
- Place the stethescope over the brachial artery.
- Inflate the cuff to 30 mmHg above the estimated systolic pressure.
- Release the pressure slowly, no greater than 5 mmHg per second.
- The level at which you consistantly hear beats is the systolic pressure.
- Continue to lower the pressure until the sounds muffle and disappear. This is the diastolic pressure.
- Record the blood pressure as systolic over diastolic ("120/70" for example).

235

To take blood pressure using a stethoscope, cuff and aneroid monitor:





- Wash your hands.
- Disinfect stethoscope earpieces and diaphragm (round disk).
- Check to make sure that the blood pressure monitor is in good working order.
- Place fingers on the underside of the elbow to locate pulse (called the brachial pulse).
- Wrap and fasten deflated cuff snugly around the upper arm at least one inch above where you felt the strong and steady brachial pulse.
- Insert stethoscope earpieces and position diaphragm directly over the brachial pulse.
- Pump air, inflating the arm cuff until the dial pointer reaches 170.
- Gently turn the knob on the air pump counter-clockwise to open the valve and deflate the cuff.
- As the dial pointer falls, watch the number and listen for a thumping sound.
- Note the number shown where the first thump is heard (systolic pressure).
- Note the number shown where the last thump is heard (diastolic pressure).
- Deflate and remove cuff.
- Document the reading, written as systolic/diastolic, and note any unusual observations.

236

Pulse, or Heart rate, is the number of times a heart beats per minute (bpm). Heart rates vary by person, and a normal pulse can range between 60 to 100 beats per minute.

Pulse (Heart Rate)

237

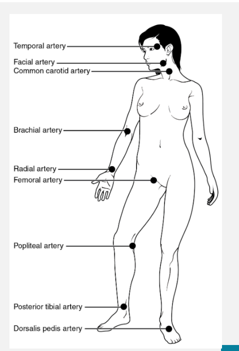
Pulse

Pulse

Pulse indicates heart rate and it is measured clinically to provide clues to a patient's state of health. It is recorded as beats per minute. Both the rate and the strength of the pulse are important clinically. A high or irregular pulse rate can be caused by physical activity or other temporary factors, but it may also indicate a heart condition.

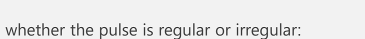
The pulse strength indicates the strength of ventricular contraction and cardiac output. If the pulse is strong, then systolic pressure is high. If it is weak, systolic pressure has fallen, and medical intervention may be warranted.

Pulse can be palpated manually by placing the tips of the fingers across an artery that runs close to the body surface and pressing lightly. While this procedure is normally performed using the radial artery in the wrist or the common carotid artery in the neck, any superficial artery that can be palpated may be used.



238

To take a pulse:



1. Wash your hands.
2. Make sure that individual is at rest before you begin.
3. The easiest place to find a pulse to measure is the radial artery found on the inside of the wrist closest to the thumb. Alternatively, you can find the pulse on the inside of the elbow (brachial artery), behind the knee (popliteal artery) or neck (carotid artery).
4. Use first and second fingertips (never the thumb) to press firmly but gently on the wrist (or otherwise) until you feel a pulse.
5. With an analog clock or watch, wait until the second hand is on the 12.
6. Begin counting the beats of the pulse.
7. Count pulse for 60 seconds until the second-hand returns to the 12 (you may also count for 15 seconds and multiply by 4 to calculate beats per minute).
8. When counting, do not watch the clock continuously, but concentrate on the beats of the pulse.

239

Pulse

- Note whether the pulse is regular or irregular:
  - **Regular** - evenly spaced beats, may vary slightly with respiration
  - **Regularly Irregular** - regular pattern overall with "skipped" beats
  - **Irregularly Irregular** - chaotic, no real pattern, very difficult to measure rate accurately
- Count the pulse for 15 seconds and multiply by 4.
- Count for a full minute if the pulse is irregular.
- Record the rate and rhythm.

240

Staff must report any arrythmias, irregularities in the pulse rate and pace to the doctor.

Pulse

Pulse/Blood Pressure in Children

In children, pulse and blood pressure vary with the age. The following table should serve as a rough guide:

Average Pulse and Blood Pressure in Normal Children Age

	Birth	6mo	1yr	2yr	6yr	8yr	10yr
Pulse	140	130	115	110	103	100	95
Systolic	70	90	90	92	95	100	105

Respiration rate, sometimes referred to as breathing rate, is the number of breaths taken per minute. This measurement is always taken when the individual is at rest.

A single respiration count is equal to the chest rising (inhalation) and falling (exhalation) once. The normal range for an adult is 12 to 28 respirations per minute.

Respiration Rate

Respiration

https://youtu.be/wWAqkbD28uI

- Best done immediately after taking the patient's pulse. Do **not** announce that you are measuring respirations.
- Without letting go of the patient's wrist begin to observe the patient's breathing. Is it normal or labored?
- Count breaths for 15 seconds and multiply this number by 4 to yield the breaths per minute.
- In adults, normal resting respiratory rate is between 12-28 breaths/minute. Rapid respiration is called tachypnea.

To take respiration rate:

1. Wash your hands.
2. Place your fingers on the individual's wrist (either side).
3. Count breaths (inhale + exhale = 1 respiration) for one minute.
4. Document respiration rate, noting any observations (such as wheezing).

Factors like fever, agitation, illness, age, and even sleep can have an effect on breathing and therefore the respiratory rate. Respiratory rate fluctuations are often seen as an early warning sign for acutely-ill hospital patients, and it is closely monitored within acute care settings.

Temperature is considered normal at 98.6 degrees F (37 degrees C), although anything between 97.6 degrees F (36.4 degrees C) to 99.6 degrees F (37.5 degrees C) is acceptable.

A temperature over 100.4 degrees F (38 degrees C) indicates a fever caused by illness or injury. Hypothermia (low temperature) occurs when the body temperature dips below 95 degrees F (35 degrees C).

Body Temperature

Temperature

Temperature can be measured in several different ways:

- **Oral** with a glass, paper, or electronic thermometer (normal 98.6F/37C)
- **Axillary** with a glass or electronic thermometer (normal 97.6F/36.3C)
- **Rectal** or "core" with a glass or electronic thermometer (normal 99.6F/37.7C)
- **Aural** (the ear) with an electronic thermometer (normal 99.6F/37.7C)

Of these, axillary is the least and rectal is the most accurate.

247

To take body temperature using a digital thermometer:

1. Wash your hands.
2. Cover thermometer mouth tip with a clean plastic shield (or clean before and after use for glass).
3. Press button to set the thermometer.
4. Place thermometer under tongue and instruct individual to close mouth.
5. Wait several minutes, remove thermometer when beeping indicates the reading is complete.
6. Document temperature, including the date, time and method used as follows: "O" for oral, "R" for rectal, "E" for ear, "A" for axillary.
7. Clean and sterilize the thermometer.

Note: Oral thermometers are not indicated for some individuals, such as those with a history of seizures. Digital thermometers can be used to take an axillary temperature by being placed under the armpit, against dry skin, for five minutes.

248

Vital Signs Recap
Average Healthy Adults (at rest)

- Blood pressure: 90/60 mm Hg to 120/80 mm Hg
- Respiration: 12 to 18 breaths per minute
- Pulse: 60 to 100 beats per minute
- Temperature: 97.8°F to 99.1°F (36.5°C to 37.3°C)/average 98.6°F (37°C)

249

Observation

- Observe the patient as they move thru the office, get in and out of the chair, actions while you are performing their history.
- Document what you see:
  - Walks with a limp
  - Difficulty getting out of chair
  - Appears to be in acute pain
  - Medical emergency

250

Examination

- Observation
  - Gait Analysis
  - Postural
  - Function
- Palpation
- Range of Motion
- Orthopedic Tests
- Neurologic Evaluation
- Vascular Evaluation
- Visceral Evaluation
- X-ray/Lab Evaluation
- External Imaging or Specialty Referral

251

Not everything is a nail…

Be aware of patient's at-risk.

Recognize indications and contraindications for common modalities.

Know Red and Yellow Flags, Contraindications, etc.

At-Risk Patient Population

253

Red Flags, Yellow Flags, CoMorbidities, and Risk Factors

254

A serious condition that must be recognized through the history and exam process that typically requires referral to another health care provider

Clinical Red Flags

255

Red Flags

Immediate Referral

1. Fracture/dislocation
   - Significant Trauma
   - Osteoporosis
   - Pathologic Fracture
2. Cancer/tumor
   - Night-time Pain
   - Severe Progressive
   - Unexplained Weight Loss
   - Prior History
3. Infection
   - Elevated Temperature
   - Night Sweats
   - Intravenous Drug Abuse
   - Immunosuppression
4. Vertebrobasilar involvement
5. Instability (including degenerative, surgical or rheumatoid etiologies)
6. Progressive scoliosis
7. Severe osteoporosis
8. Severe hypertension
9. Vertebrobasilar involvement
10. Visceral pathology
11. Inflammatory Arthritides
12. Cauda Equina Syndrome (loss of bladder/bowel function)

256

Cauda Equina Syndrome is a serious condition caused by compression of the nerves in the lower portion of the spinal canal.

Cauda Equina Syndrome

257

Cauda Equina Syndrome

McNamee J, Flynn P, O'Leary S, Love M, Kelly B. Imaging in cauda equina syndrome--a pictorial review. *Ulster Med J*. 2013;82(2):100-108. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3756868/

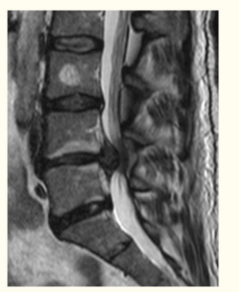


Fig 3a

Sagittal T2WI demonstrates a central disc herniation at L4-L5 with significant compression of the adjacent cauda equina nerve roots. Modic I end plate changes are also present at this level.

258

Cauda Equina Syndrome

Symptoms of cauda equina syndrome include the following:

- Low back pain
- Unilateral (single leg) or bilateral (both legs) sciatica (pain originating in the buttocks and traveling down the back of the thigh and legs)
- Saddle and perineal hypoesthesia or anesthesia (numbness in the groin or area of contact if sitting on a saddle)
- Bowel and bladder disturbances
- Lower extremity motor weakness and loss of sensations
- Reduced or absent lower extremity reflexes

259

Patients **without** Red Flag Indicators

- Patients will be evaluated with a focused history and examination
- Patients will be evaluated with a thorough spinal examination
- Patients will complete the appropriate outcome measure and the patient will be monitored during the treatment plan with the outcome measure.

260

A condition that must be recognized thru the history and exam process which requires the DC to be cautious when providing physical medicine to the patient and may require co-management with another health care provider

Cautious Considerations

261

Cautious Considerations

1. Osteoporosis
2. Congenitally blocked vertebrae
3. Rheumatoid arthritis
4. Seronegative arthropathies
5. Spinal stenosis
6. Spinal instability (i.e. listhesis)
7. A diagnosis of disc herniation or sequestration
8. Previous surgery
9. Use of corticosteroids or Cushing's disease
10. Use of anticoagulant medication
11. Positives on vertebrobasilar testing (if used) other than neurological responses

(e.g. alternate position for adjustment if position induces a dizziness response)

12. Previous adverse reaction to a specific therapy or therapeutic trial

262

"Yellow flags" are risk factors associated with chronic pain or disability.

Psychological Yellow Flags

263

Yellow Flag Behaviors

Two or more could suggest substance use disorder

- Deterioration in functioning at work or socially
- Illegal activities—selling medications, forging prescriptions, or buying medications from nonmedical sources
- Using medications in ways other than prescribed (e.g., injecting or snorting medication)
- Multiple reports of lost or stolen prescriptions
- Resistance to change in medications despite adverse effects
- Refusal to comply with random drug screens, call backs, or pill counts
- Concurrent abuse of alcohol or drugs Use of multiple physicians and pharmacies

Knowing When to Say When: Transitioning Patients from Opioid Therapy University of Massachusetts Medical School (Massachusetts Consortium) Jeff Baxter, M.D. April 2, 2014

264

Behavioral Comorbidities

- **Depression**
- History of Trauma/Abuse
- Personality Disorders
- Substance Abuse, Dependence, Addiction
- Opioid Use Disorder
- Anxiety Disorder
- Post Traumatic Stress Disorder
- Coping Skills/Catastrophizing
- Fear Avoidance

265

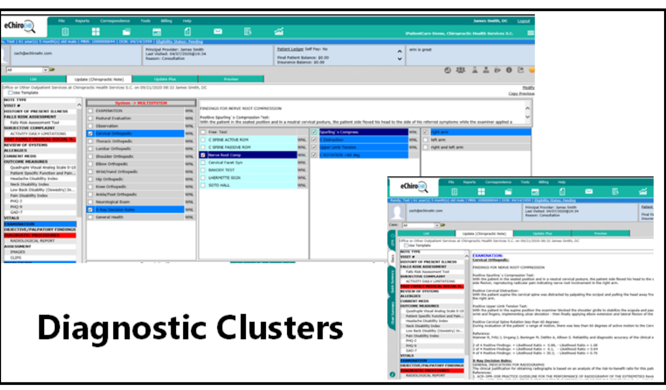
Risk Factors with Strong Predictive Ability for developing chronic pain and disability

- Fear avoidance beliefs
- Catastrophizing
- Somatization
- Depressed mood
- Distress and anxiety
- Early disability or decreased function
- High initial pain levels
- Increased age
- Poor general health status
- Non-organic signs
- Secondary gain (occupational, social, family, financial)

266

Differential Diagnosis

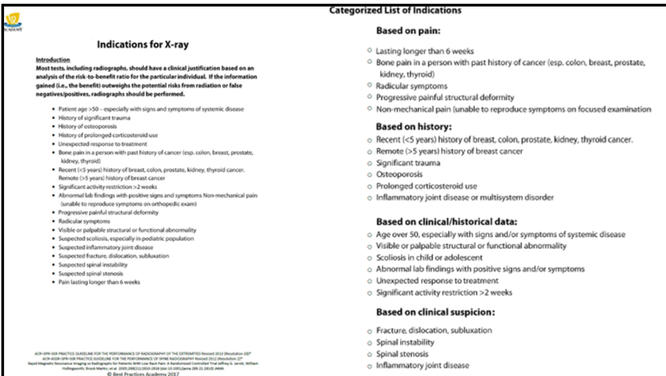
268



Radiographic Indications

When is it clinically indicated to perform radiographs or other imaging?

270



Indications for X-ray

Introduction

Most tests, including radiographs, should have a clinical justification based on an analysis of the risk-to-benefit ratio for the particular individual. If the information gained (i.e., the benefit) outweighs the potential risks from radiation or false negatives/positives, radiographs should be performed.

- Patient age >50 – especially with signs and symptoms of systemic disease
- History of significant trauma
- History of osteoporosis
- History of prolonged corticosteroid use
- Unexpected response to treatment
- Bone pain in a person with past history of cancer (esp. colon, breast, prostate, kidney, thyroid)
- Recent (<5 years) history of breast, colon, prostate, kidney, thyroid cancer. Remote (>5 years) history of breast cancer
- Significant activity restriction >2 weeks
- Abnormal lab findings with positive signs and symptoms Non-mechanical pain (unable to reproduce symptoms on orthopedic exam)
- Progressive painful structural deformity
- Radicular symptoms
- Visible or palpable structural or functional abnormality
- Suspected scoliosis, especially in pediatric population
- Suspected inflammatory joint disease
- Suspected fracture, dislocation, subluxation
- Suspected spinal instability
- Suspected spinal stenosis
- Pain lasting longer than 6 weeks

ACR–SPR–SSR PRACTICE GUIDELINE FOR THE PERFORMANCE OF RADIOGRAPHY OF THE EXTREMITIES Revised 2013 (Resolution 28)*
ACR–ASSR–SPR–SSR PRACTICE GUIDELINE FOR THE PERFORMANCE OF SPINE RADIOGRAPHY Revised 2012 (Resolution 2)*
Rapid Magnetic Resonance Imaging vs Radiographs for Patients With Low Back Pain: A Randomized Controlled Trial Jeffrey G. Jarvik, William Hollingworth, Brook Martin; et al. 2003;289(21):2810-2818 (doi:10.1001/jama.289.21.2810) JAMA
© Best Practices Academy 2017

Categorized List of Indications

Based on pain:

- Lasting longer than 6 weeks
- Bone pain in a person with past history of cancer (esp. colon, breast, prostate, kidney, thyroid)
- Radicular symptoms
- Progressive painful structural deformity
- Non-mechanical pain (unable to reproduce symptoms on focused examination

Based on history:

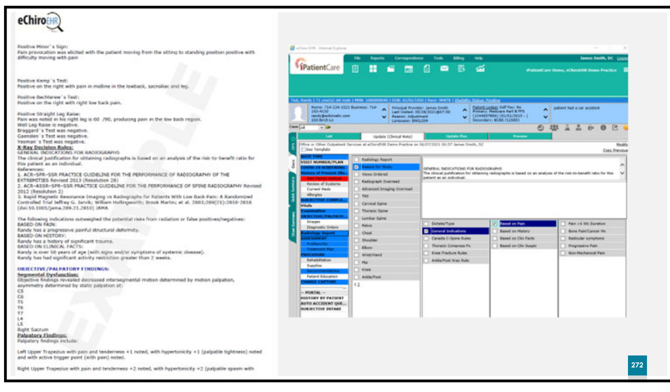
- Recent (<5 years) history of breast, colon, prostate, kidney, thyroid cancer.
- Remote (>5 years) history of breast cancer
- Significant trauma
- Osteoporosis
- Prolonged corticosteroid use
- Inflammatory joint disease or multisystem disorder

Based on clinical/historical data:

- Age over 50, especially with signs and/or symptoms of systemic disease
- Visible or palpable structural or functional abnormality
- Scoliosis in child or adolescent
- Abnormal lab findings with positive signs and/or symptoms
- Unexpected response to treatment
- Significant activity restriction >2 weeks

Based on clinical suspicion:

- Fracture, dislocation, subluxation
- Spinal instability
- Spinal stenosis
- Inflammatory joint disease



272

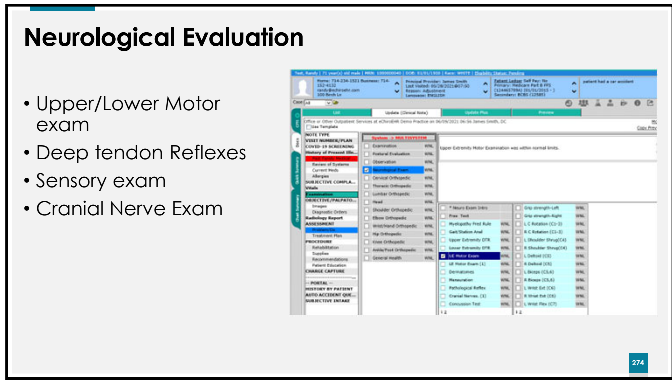
X-ray
Lab
Special Imaging (MRI, CT, DEXA, US)
Electrodiagnostic studies

Advanced Studies

273

Neurological Evaluation

- Upper/Lower Motor exam
- Deep tendon Reflexes
- Sensory exam
- Cranial Nerve Exam



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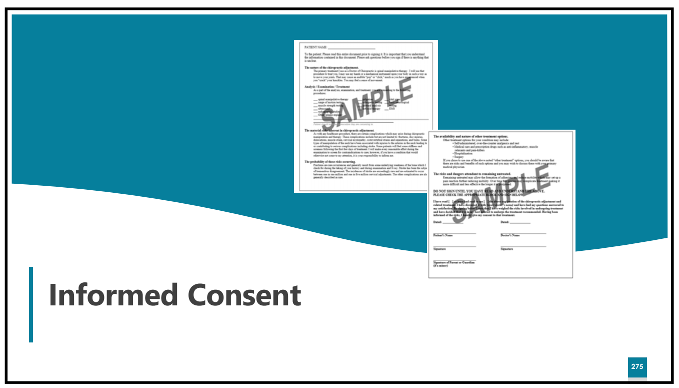


Informed Consent

275

Consent by a person to undergo a medical procedure, participate in a clinical trial, or be counseled by a professional such as a social worker or lawyer, after receiving all material information regarding risks, benefits, and alternatives.

informed consent. (n.d.) *The American Heritage® Medical Dictionary*. (2007). Retrieved May 26 2020 from https://medical-dictionary.thefreedictionary.com/informed+consent

Patient Safety
Informed Consent

276

Informed Consent Process

Informing patients properly depends upon the sequence and information provided to disclose material risk.

277

Discussion between the Clinician and the Patient

Obtain the patient's informed consent to the procedures **after** they have been provided material information **and** discussion with the doctor about all of the alternatives or risks of care.

278

Informed Consent **must be obtained annually** and with new patients as part of the intake procedure and/or upon **re-admit, new diagnosis, new evidence, or new treatment**.

Informed Consent Process

279

Informed Consent Process

PROCEDURE:

1. Upon patient's check-in, staff provides the unsigned Informed Consent form to the patient following taking the patient's history.
2. Informed Consent is reviewed and discussed with the patient **BY THE CLINICIAN**, at the time of visit, immediately after health history and exam and **prior to treatment and diagnostic procedures**. Any questions the patient may have are answered, always by the clinician.
3. Patient signs and dates form; clinician signs and dates form;
4. Completed form gets turned in to the front desk and gets scanned into patient record – or is signed within the EHR system records directly.

280

When do we use Informed Consent?

281

Every new patient and those patients who are re-admitted for care due to a new injury or condition, etc.

New Patient/Re-Admit

282

A new diagnosis for the patient represents a material change for the patient.

283

New evidence regarding treatment and/or procedures may represent a material change for the patient for consideration of alternative treatment or procedures. New risks for specific treatments/procedures should be updated in the informed consent form as well.

New Evidence

284

A change in the use of a procedure in the care of the patient regardless of a change in the diagnosis.

New Treatment Procedure

285

Six Key Elements of Informed Consent

For the patient's consent to be valid, the following elements need to be reviewed with the patient:

1. The patient's diagnosis/condition and the proposed treatment, modality or procedures for correction.
2. The relevant risks and benefits of the proposed treatment, modality or procedures
3. Alternative treatment or procedures that are available to the patient and the relative risk, benefits, and uncertainties related to each alternative;
4. The risk and benefits of not receiving or undergoing any treatment procedure
5. The assessment of the patients understanding of the information provided (decision making capacity)
6. The acceptance by the patient to undergo the recommended treatment, modality or procedure.

286

Practice Name

Informed Consent for Treatment

I understand that the treatment I receive at this clinic is from a licensed Doctor of Chiropractic. Chiropractic scope of practice includes a wide range of services but if the doctor determines the services I need cannot be provided by this office, then he/she will direct me to the appropriate health care provider.

Within the service provided by this office, chiropractic treatment almost always includes the chiropractic adjustment, a specific type of joint manipulation. Spinal manipulation is done to ease pain and help the body function better. Like most health care procedures, the chiropractic adjustment carries with it some risks. Unlike many such procedures, the serious risks associated with the chiropractic adjustment are extremely rare. **The following are the potential risks:**

- ☐ **Temporary soreness or increased symptoms or pain** It is not uncommon for patients to experience temporary soreness or increased symptoms or pain after the first few treatments.
- ☐ **Dizziness, nausea, flushing** These symptoms are relatively rare. It is important to notify the doctor if you experience these symptoms during or after your care.
- ☐ **Fractures** When patients have underlying conditions that weaken bones, like osteoporosis, they may be susceptible to fracture. It is important to notify your doctor if you have been diagnosed with a bone weakening disease or condition. If your doctor detects any such condition while you are under care, you will be informed, and your treatment plan will be modified to minimize risk of fracture.
- ☐ **Disc herniation or prolapse** Spinal disc conditions like bulges or herniations may worsen even with chiropractic care. It is important to notify your doctor if symptoms change or worsen.
- ☐ **Stroke** According to the most recent research, there is no evidence of excess risk of stroke associated with chiropractic care. Regarding neck pain and headache symptoms, there is an association between stroke and visits to all provider-types, including primary care medical visits, which may occur before or during the provider visit.
- ☐ **Other risks** associated with chiropractic treatment include rare burns from physiotherapy devices that produce heat.
- ☐ **Bruising** Instrument assisted soft tissue manipulation may result in temporary soreness or bruising.
- ☐ **Alternatives** to manipulation discussed through a shared decision-making process include: Medicines, Physical therapy, Massage, Mobilization, Acupuncture, and/or Cognitive-behavioral therapy. You can do these whether or not you are doing spinal manipulation.
- ☐ **Refusing Care** may carry a risk to future capabilities in regard to performing activities of daily living or progression towards chronic pain.

I understand that the practice of chiropractic, like the practice of all healing arts, is not an exact science, and I acknowledge that no guarantee can be given as to the results or outcome of my care. The material risks have been disclosed to me, including a description of those material risks; and after consideration, I agree to the procedures understanding any material risks which are inherent to that procedure.

• PATIENT PLEASE REVIEW • PRINT & SIGN NAME •

I have read or had read to me this informed consent document. I have discussed or been given the opportunity to discuss any questions or concerns with my chiropractor and have had these answered to my satisfaction prior to my signing this informed consent document. I have made my decision voluntarily and freely.

PATIENT'S NAME (PRINT) ____________ DATE OF BIRTH: ____________

PATIENT GUARDIAN/REPRESENTATIVE (PRINT) ____________

(PATIENT GUARDIAN/REPRESENTATIVE SIGNATURE) (DATE) (TRANSLATOR | INTERPRETER SIGNATURE) (DATE)

CLINICIAN ONLY

Based on my personal observation, the patient's history and physical exam, I conclude that throughout the informed consent process the patient was:

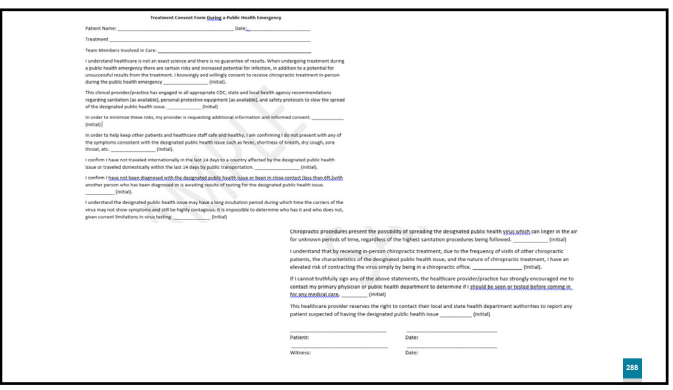
☐ OF LEGAL AGE ☐ APPEARS UNIMPAIRED ☐ CONSENT GIVEN THROUGH GUARDIAN/PATIENT REPRESENTATIVE
☐ ORIENTED X3 ☐ FLUENT IN ENGLISH ☐ ASSISTED BY A TRANSLATOR OR INTERPRETER

____________, D.C. ____________
(CLINICIAN SIGNATURE) (DATE)

STUDENT INTERN/EXTERN INITIALS AS WITNESS TO PATIENT DISCUSSION WITH CLINICIAN: ____________

Informed Consent Form

287



Treatment Consent Form During a Public Health Emergency

Patient Name: ____________ Date: ____________

Treatment ____________

Team Members Involved in Care: ____________

I understand healthcare is not an exact science and there is no guarantee of results. When undergoing treatment during a public health emergency there are certain risks and increased potential for infection, in addition to a potential for unsuccessful results from the treatment. I knowingly and willingly consent to receive chiropractic treatment in-person during the public health emergency ____________ (Initial).

This clinical provider/practice has engaged in all appropriate CDC, state and local health agency recommendations regarding sanitation [as available], personal protective equipment [as available], and safety protocols to slow the spread of the designated public health issue. ____________ (Initial)

In order to minimize these risks, my provider is requesting additional information and informed consent. ____________ (Initial)

In order to help keep other patients and healthcare staff safe and healthy, I am confirming I do not present with any of the symptoms consistent with the designated public health issue such as fever, shortness of breath, dry cough, sore throat, etc. ____________ (Initial).

I confirm I have not traveled internationally in the last 14 days to a country affected by the designated public health issue or traveled domestically within the last 14 days by public transportation. ____________ (Initial).

I confirm I have not been diagnosed with the designated public health issue or been in close contact [less than 6ft.]with another person who has been diagnosed or is awaiting results of testing for the designated public health issue. ____________ (Initial).

I understand the designated public health issue may have a long incubation period during which time the carriers of the virus may not show symptoms and still be highly contagious. It is impossible to determine who has it and who does not, given current limitations in virus testing. ____________ (Initial)

Chiropractic procedures present the possibility of spreading the designated public health virus which can linger in the air for unknown periods of time, regardless of the highest sanitation procedures being followed. ____________ (Initial)

I understand that by receiving in-person chiropractic treatment, due to the frequency of visits of other chiropractic patients, the characteristics of the designated public health issue, and the nature of chiropractic treatment, I have an elevated risk of contracting the virus simply by being in a chiropractic office. ____________ (Initial).

If I cannot truthfully sign any of the above statements, the healthcare provider/practice has strongly encouraged me to contact my primary physician or public health department to determine if I should be seen or tested before coming in for any medical care. ____________ (Initial)

This healthcare provider reserves the right to contact their local and state health department authorities to report any patient suspected of having the designated public health issue ____________ (Initial)

Patient: ____________ Date: ____________

Witness: ____________ Date: ____________

288

Six Exceptions of Informed Consent

(1) Detailed technical information that in all probability a patient would not understand.

(2) Risks apparent or known to the patient.

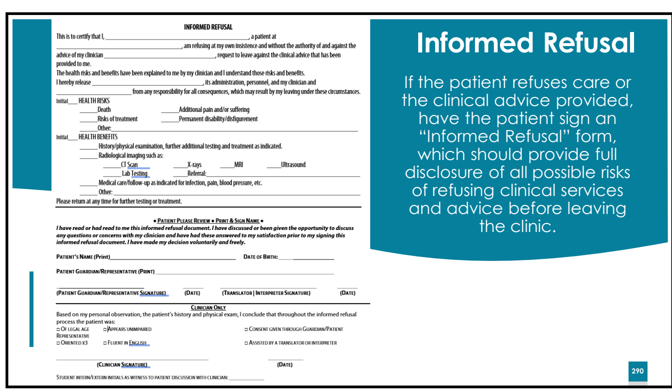
(3) **Extremely remote possibilities that might falsely or detrimentally alarm the patient.**

(4) Information in emergencies where failure to provide treatment would be more harmful to the patient than treatment.

(5) Information in cases where the patient is incapable of consenting.

(6) Information about alternate modes of treatment for any condition the chiropractor has not included in his or her diagnosis at the time the chiropractor informs the patient.

289



INFORMED REFUSAL

This is to certify that I, ____________________, a patient at ____________________, am refusing at my own insistence and without the authority of and against the advice of my clinician ____________________, request to leave against the clinical advice that has been provided to me.

The health risks and benefits have been explained to me by my clinician and I understand those risks and benefits.

I hereby release ____________________, its administration, personnel, and my clinician and ____________________ from any responsibility for all consequences, which may result by my leaving under these circumstances.

Initial___ HEALTH RISKS

______Death ______Additional pain and/or suffering

______Risks of treatment ______Permanent disability/disfigurement

______Other: ____________________

Initial___ HEALTH BENEFITS

______ History/physical examination, further additional testing and treatment as indicated.

______ Radiological imaging such as:

______CT Scan ______X-rays ______MRI ______Ultrasound

______ Lab Testing ______Referral: ____________________

______ Medical care/follow-up as indicated for infection, pain, blood pressure, etc.

______ Other: ____________________

Please return at any time for further testing or treatment.

• PATIENT PLEASE REVIEW • PRINT & SIGN NAME •

I have read or had read to me this informed refusal document. I have discussed or been given the opportunity to discuss any questions or concerns with my clinician and have had these answered to my satisfaction prior to my signing this informed refusal document. I have made my decision voluntarily and freely.

PATIENT'S NAME (Print)____________________ **DATE OF BIRTH:** ____________

PATIENT GUARDIAN/REPRESENTATIVE (PRINT) ____________________

(PATIENT GUARDIAN/REPRESENTATIVE SIGNATURE) **(DATE)** **(TRANSLATOR | INTERPRETER SIGNATURE)** **(DATE)**

CLINICIAN ONLY

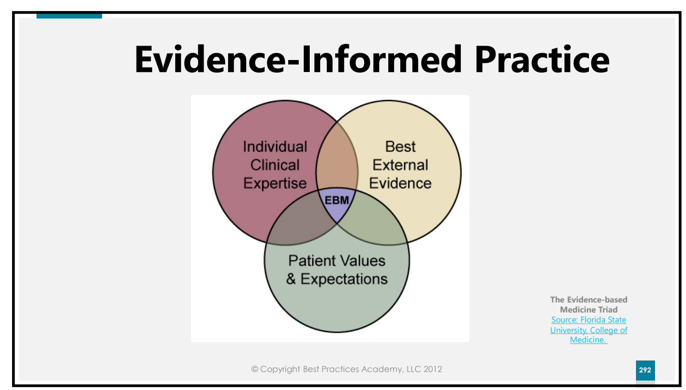
Based on my personal observation, the patient's history and physical exam, I conclude that throughout the informed refusal process the patient was:

□ OF LEGAL AGE □ APPEARS UNIMPAIRED □ CONSENT GIVEN THROUGH GUARDIAN/PATIENT REPRESENTATIVE

□ ORIENTED X3 □ FLUENT IN ENGLISH □ ASSISTED BY A TRANSLATOR OR INTERPRETER

(CLINICIAN SIGNATURE) **(DATE)**

STUDENT INTERN/EXTERN INITIALS AS WITNESS TO PATIENT DISCUSSION WITH CLINICIAN: ____________



Standard of Care

How does your state licensing board view YOUR responsibilities as a clinician, within the interest of public safety?

Are you and your staff attending regular clinical education training?
Do you provide hands-on training for staff?
Are you using FDA approved devices?
Does your treatment follow guidelines?
Are you monitoring and documenting the progress of your patients?

Questions to Ask

295

Misinformed Treatment Plans

Communicating to patients regarding the treatment plan and expectations of care process.

296

Care Management Considerations

Transitional Care (Hand-off)
Environment/Falls
Medication Errors/Reconciliation
Team/Communication

297

Dry Needling/Acupuncture Adverse Effects

The act of puncturing the skin comes with a number of predictable adverse events (bruising or bleeding, pain during or following treatment) which commonly occur and are mild in nature.

This may be considered normal side effects of treatment. However, from the patient's perspective they may be considered adverse particularly if the patient has not been educated about the risks associated with their dry needling/acupuncture technique.

298

Manipulation/Manual Therapy Potential Risks

- ✓ Temporary soreness or increased symptoms or pain It is not uncommon for patients to experience temporary soreness or increased symptoms or pain after the first few treatments.
- ✓ Dizziness, nausea, flushing These symptoms are relatively rare. It is important to notify the doctor if you experience these symptoms during or after your care.
- ✓ Fractures When patients have underlying conditions that weaken bones, like osteoporosis, they may be susceptible to fracture. It is important to notify your doctor if you have been diagnosed with a bone weakening disease or condition. If your doctor detects any such condition while you are under care, you will be informed, and your treatment plan will be modified to minimize risk of fracture.
- ✓ Disc herniation or prolapse Spinal disc conditions like bulges or herniations may worsen even with chiropractic care. It is important to notify your doctor if symptoms change or worsen.
- ✓ Stroke According to the most recent research, there is no evidence of excess risk of stroke associated with chiropractic care. Regarding neck pain and headache symptoms, there is an association between stroke and visits to all provider-types, including primary care medical visits, which may occur before or during the provider visit.
- ✓ Other risks associated with chiropractic treatment include rare burns from physiotherapy devices that produce heat.
- ✓ Bruising Instrument assisted soft tissue manipulation may result in temporary soreness or bruising.

299

Recognizing and Preventing Safety Hazards

1. Therapy Modalities
2. Hydraulic/Spring-loaded adjusting tables
3. Sharps (i.e. needles) and Sharps Containers
4. Theraband/Exercise Stations

300

Therapeutic Modalities and Table Equipment

- Are all therapeutic modalities and equipment (both, company and employee-owned) used by staff, providers and workforce members at their workplace in good condition?
- Are all of the operating manuals and instructions available to staff, providers and workforce members for all therapeutic modalities and equipment?
- Are staff, providers and workforce members made aware of the hazards caused by faulty or improperly used modalities and equipment?
- Are all cord-connected, electrically operated modalities and equipment effectively grounded or of the approved double insulated type?
- Are children monitored at all times and parent/guardian warned of crush risk or safety issue around modalties?

301

Therapeutic Modalities and Table Equipment

- Are all therapeutic modalities and equipment turned off after use and remain off prior to patient use?
- Do patients know what to expect prior to the application of the modality?
- Do patients know what to expect as potential temporary symptoms or reactions to the application of the therapy?

302

Preventing Blood-borne Pathogens

Bloodborne Pathogen Standard Policy
Sharps/Needle sticks

303

Preventing Air-borne Pathogens

Exposure Control Plan

304

Theraband Exercise Station

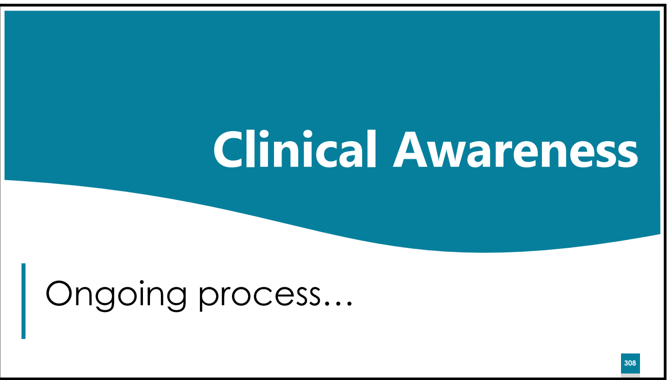
Eye Protection

305

What types of safety equipment are available?

- Fire extinguisher
- CPR equipment (AED, CPR Masks/Supplies)
- Gloves
- Face Masks
- Disinfectant
- Alcohol-based hand rub
- Handwashing Station
- Blood Draw Equipment
- KNOWLEDGE

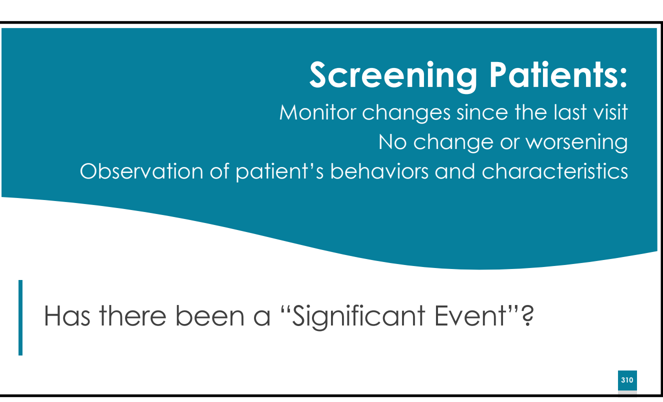
306



Wait
Ask
Listen
Knowledge

The "Walk"

309



Does the patient's clinical presentation require urgent need for evaluation and/or care?

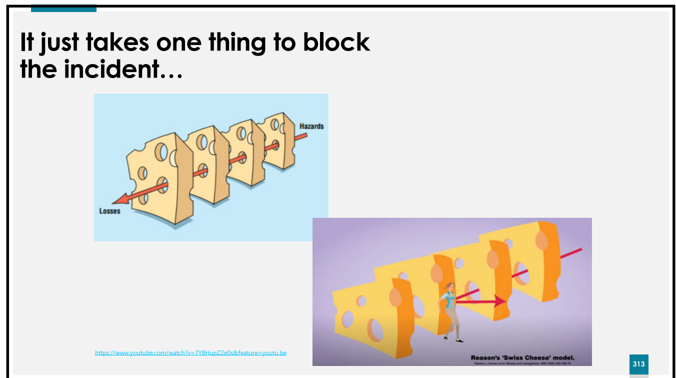
The doctor must be informed of any new information about the patient that has been related to staff.

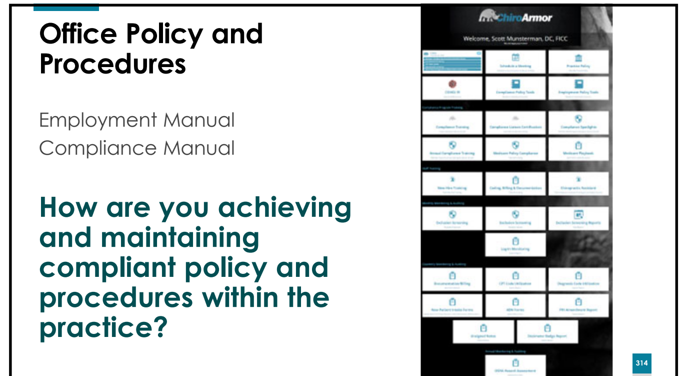
311

Stay Connected to Established Patients who are under a treatment plan.

Following the treatment plan, evidence-informed care guidelines, and the patient's response to care...

312


It just takes one thing to block the incident…
Hazards
Losses
Reason's 'Swiss Cheese' model.
313


Office Policy and Procedures
Employment Manual
Compliance Manual
How are you achieving and maintaining compliant policy and procedures within the practice?
ChiroArmor
Welcome, Scott Munsterman, DC, FICC
314

Thank you!
Scott Munsterman, DC, FICC, CPCO
315