Back Pain and Neck Pain Pathway

Back and neck pain are extremely common. Up to 84% of adults are affected by back pain at some time during their life and 26% say they have had back pain in the last 3 months. 10% of adults have neck pain at any one time.[1] [2] Most patients have nonspecific pain, without an identifiable cause. Only a fraction of patients have a serious systemic etiology[2] and the vast majority of back and neck pain self-resolves.[2] However, some back and neck pain persists. Treating back and neck pain is very complex — due to high variability of patient's signs and symptoms and low specificity of diagnostic tests — but critically important because of the high burden of this pain on our populations. Low back pain is the most common cause of disability in the United States and also around the world.[5] [3] And low back and neck pain have the highest health care spending of all measured conditions in the US, and one of the greatest increases in costs over the last decade.[4] Helping patients with back pain and neck pain is a high priority at Sutter Health in order to improve clinical outcomes, improve the quality of life of our patients, and increase the affordability of health care.

Sutter has created this Back and Neck Pain Care Pathway for the diagnosis, treatment and support of patients with acute, subacute, chronic and surgical pain. This pathway is designed to ensure consistent use of best practice care by all members of the care team to improve the lives of our patients. Tracking core process and outcomes metrics will ensure improvements in the clinical care of our patients over time. Please reference the back and neck pain pathway guidelines, medication tables and patient education materials at SutterMD.com for further information. The key back pain, neck pain and surgical treatment algorithms are included on the second page for review.

Outcome Measures

The Sutter Health Back and Neck Pain dashboard includes measures to ensure we are improving outcomes for patients who experience this pain. The measures include the following:

1) **Prevalence of Low Back & Neck Pain**
2) **Symptoms & Quality of Life of People who live with back and neck pain**
3) **Back and Neck Pain ED Rates**
4) **Spinal Surgery and Complication Rates**
5) **Spinal Intervention Rates**
6) **Surgery 30- and 90- day Readmissions**
7) **90-day Post Surgery Utilization**

Acute and Subacute Pain

Classification

- Evaluate for Yellow Flags (including Keele STarT tool for back pain). If a moderate to high yellow flag score, offer early PT and psychosocial support (CBT).
- Evaluate for Red Flags.

Imaging

- Order imaging and triage patients with red flags appropriately.
- No imaging is recommended if acute, axial, localized, non-radiating back pain (< 4 weeks) and if no red flags.

Self-Management

- Provide assurance, education and self-care
- Offer a streamlined, augmented self-management back and neck pain program

Treatment

- Refer early (< 4 weeks) to Physical Therapy if:
  1) Moderate to high risk score on a Yellow Flags screening tool or
  2) Radiculopathy or
  3) Significant pain or impairment
- Otherwise refer to PT if pain lasts for > 4 weeks.
- Use medications appropriate for acute pain and avoid excess use of opioids.
- Use alternate modalities for pain management using shared decision tools if persistent subacute pain

Acute and Subacute Pain Process Measures

- Documentation of Self-Management
- Documentation of Yellow Flags and Red Flags
- Imaging Rates
- PT Utilization Rates and Time to Appointment
- Opioid Utilization Rate

Chronic Pain

Treatment

- Use medications appropriate for chronic pain and avoid excess use of opioids.
- Use alternate modalities for pain management if persistent subacute or chronic pain using shared decision tools

Referral

- Refer patients with chronic pain to non-surgical back and neck pain specialists.

Chronic Pain Process Measures

- Alternate Therapies Rate
- Opioid Utilization Rate
- Non-surgical Back Pain Specialist Rate and Time to Appointment
- Non-surgical Interventions

Surgical Pain

Surgical Back and Neck Pain

- Refer patients to Spinal Surgeon if:
  1) Red flags with positive imaging or
  2) Radiculopathy > 4 weeks with positive imaging or
  3) Per non-surgical back pain specialist

Pre-operative management

- Surgical Back and Neck Pain
  - Preoperative management of smoking, diabetes (A1C < 8), hypertension (BP at goal), obesity, and osteoporosis before surgery

Surgical Pain Process Measures

- Spinal Surgeon Rate
- Pre-surgical Rates of Smoking, A1C and BP Control, Obesity and Osteoporosis Treatment
- Post-Surgery Mobilization Rates
- Multimodal Pain Management Rates

Post-Surgical Care

Post-Operative Management

- Utilize enhanced recovery including:
  - Early mobilization
  - Multimodal approaches to Post-Operative Pain Management

Post-Acute Disposition

- Optimize number of patients who return home post-surgery by using a model or risk score to determine who needs to be discharged to a SNF/Rehab/IRF

Post-Surgery Complications

- Provide extra support and care after discharge for patients with highest risk of readmissions

Post-Surgical Chronic Pain

- Refer patients with chronic back and neck pain after surgery to non-surgical physician specialist and/or team-based multidisciplinary care

Post-Surgical Care Process Measures

- Post-surgical Complication and Infection Rate
- Home Health Utilization Rates
- SNF and IRF Utilization Rates
- Non-surgical Back Pain Specialist Referral Rate

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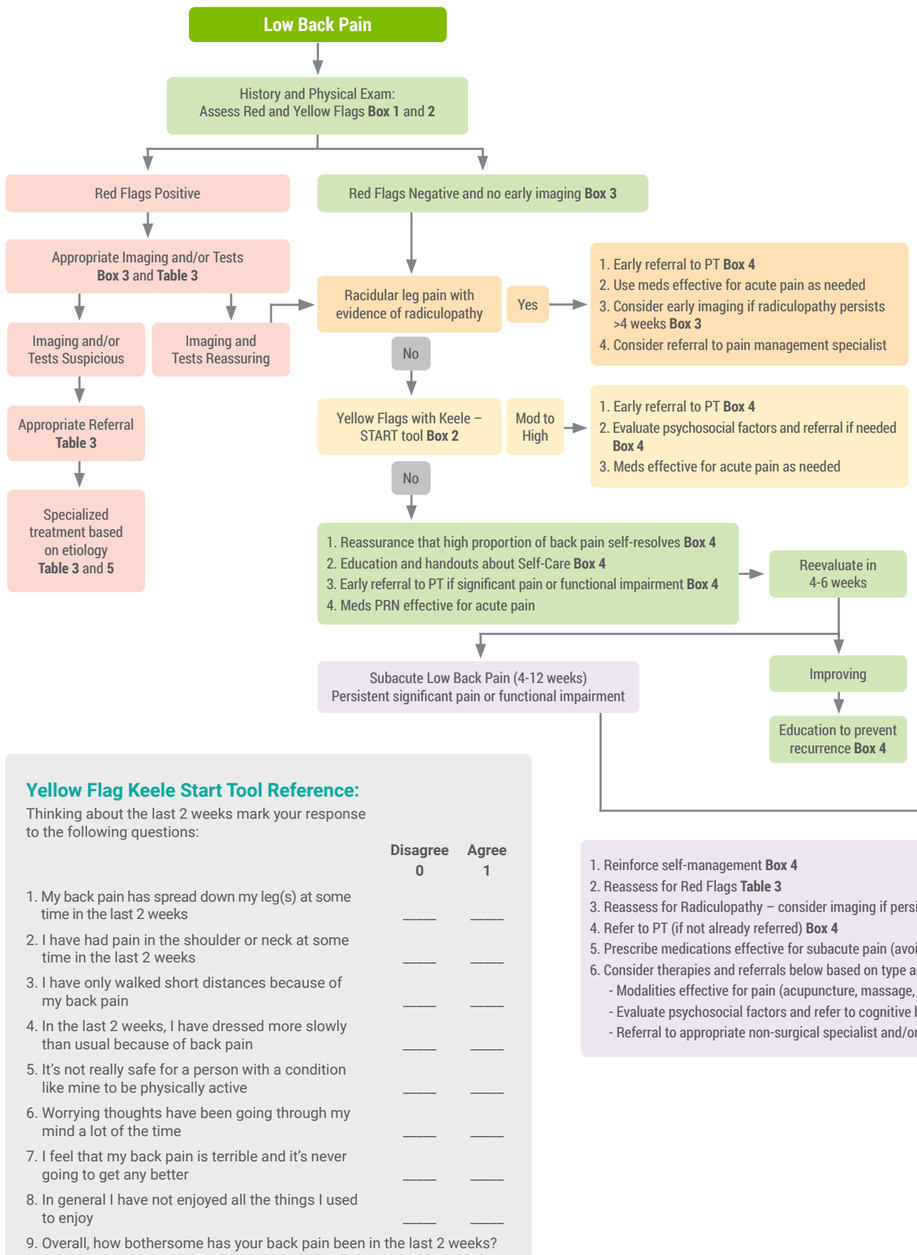
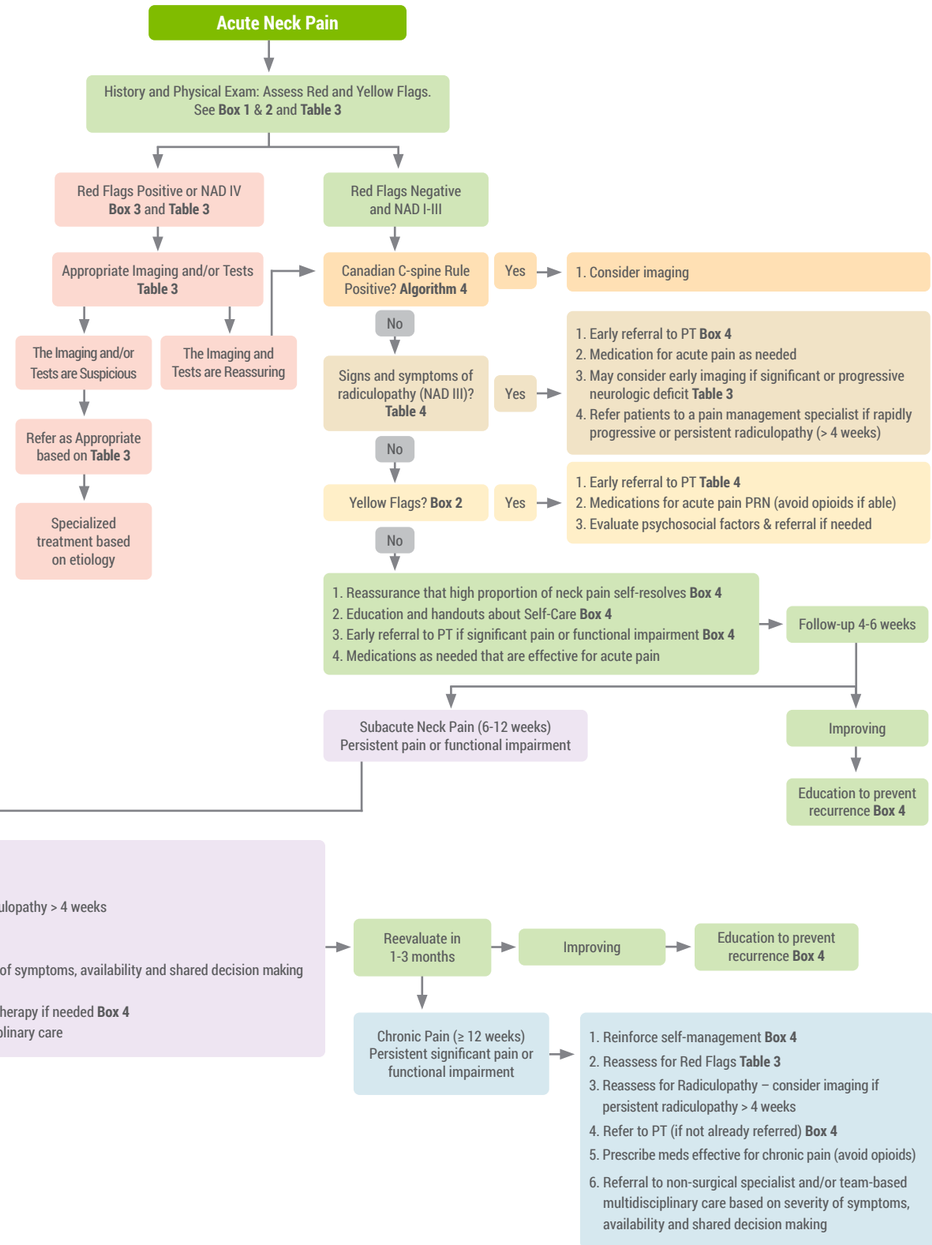
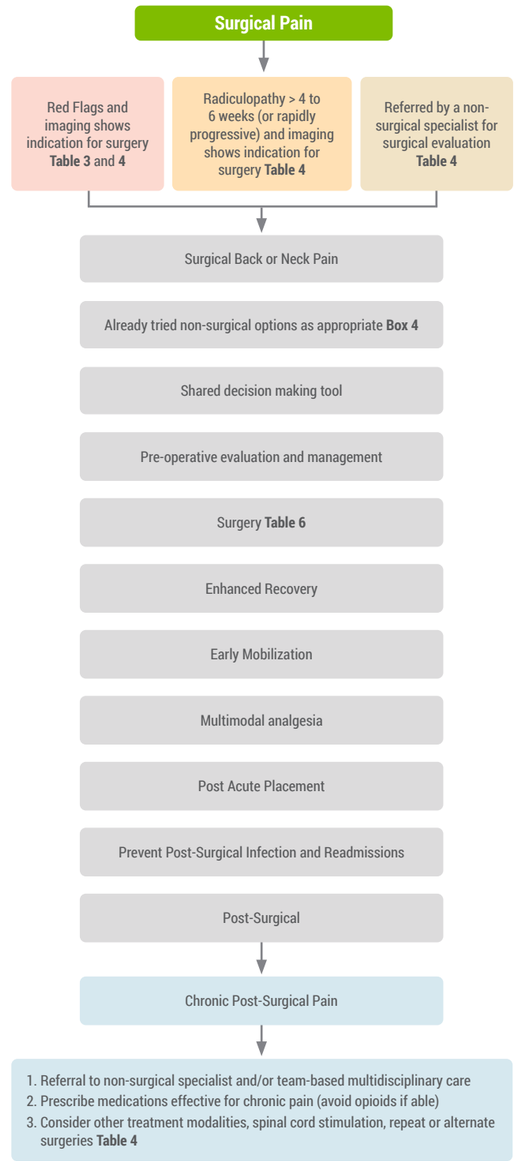
Back and Neck Pain Assessment and Management Algorithms

The key back pain, neck pain and surgical treatment algorithms are included below for reference. Please see the full back and neck pain guidelines and medication tables for complete details and references to boxes, tables, and additional algorithms.







Yellow Flag Keele Start Tool Reference:

Thinking about the last 2 weeks mark your response to the following questions:

	Disagree 0	Agree 1
1. My back pain has spread down my leg(s) at some time in the last 2 weeks	____	____
2. I have had pain in the shoulder or neck at some time in the last 2 weeks	____	____
3. I have only walked short distances because of my back pain	____	____
4. In the last 2 weeks, I have dressed more slowly than usual because of back pain	____	____
5. It's not really safe for a person with a condition like mine to be physically active	____	____
6. Worrying thoughts have been going through my mind a lot of the time	____	____
7. I feel that my back pain is terrible and it's never going to get any better	____	____
8. In general I have not enjoyed all the things I used to enjoy	____	____

9. Overall, how bothersome has your back pain been in the last 2 weeks?

____ Not at all (0) ____ Slightly (0) ____ Moderately (0) ____ Very much (1) ____ Extremely (1)

Low risk: Total score ≤ 3.
Medium risk: Total score > 3 and sub score ≤ 3
High risk: Total score > 3 and sub score > 3

This back and neck pain pathway is intended for the care of adults with back and neck pain. It is not intended for pregnant patients, children or adolescents. It is intended to help clinicians, educators, case managers and patients make decisions according to standard clinical practice and to improve the care and management of patients with back and neck pain at Sutter Health. It should not replace individual clinical judgment nor specialty consultation when indicated. The diagnosis of HF and all clinical decisions should be made within the context of the specific situation for each patient including current health, medications, risk of treatment side effects, quality of life, life expectancy, and patient preference.

[1] AHQR, "Noninvasive Treatments for Low Back Pain," AHQR, 2016.[2] UpToDate, "Evaluation of low back pain in adults," 2020.[3] Wu A, et al."Global low back pain prevalence and years lived with disability from 1990 to 2017: estimates from the Global Burden of Disease Study 2017," Ann Transl Med, vol. 8, no. 6, p. 299., 2020.[4] J. L. Dieleman and e. al., "US Health Care Spending by Payer and Health Condition, 1996-2016," JAMA, vol. 323, no. 9, pp. 863-884, 2020.[5] D. Thorson, "Adult Acute and Subacute Low Back Pain," March 2018. [Online]. Available: www.icsi.org.