

# Clinical Audit Report on Adherence to Imaging Guidelines for Patients with Acute Low Back Pain in Airport Health Centre

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Received: November 2021; Accepted: December 2021; Published: January 1, 2022.

Citation: Hanan Al-shamery et al. Clinical Audit Report on Adherence to Imaging Guidelines for Patients with Acute Low Back Pain in Airport Health Centre. World Family Medicine. 2022; 20(1): 166-169

DOI: 10.5742/MEWFM.2022.95229

## Abstract



It is estimated that up to 84 percent of adults have low back pain at some time in their lives [1,2]. The vast majority of patients seen in primary care (>85 percent) will have nonspecific low back pain, meaning that the patient has back pain in the absence of a specific underlying condition that can be reliably identified [3-4]. For most of these individuals, episodes of back pain are self-limited. Patients who continue to have back pain beyond the acute period (four weeks) have subacute back pain (lasting between 4 and 12 weeks), and some may go on to develop chronic back pain (lasting >12 weeks) [5].

Patients who don't improve on pharmacotherapy should be reassessed and must not be given imaging within 6 weeks from the onset of symptoms. However, acute low back pain will go on to develop chronic low back pain if not addressed.

It is observed from practice that most of the physicians did follow the guidelines while treating the patients with acute low back pain, although, sometimes they advised imaging within 6 weeks of symptoms.

The Audit was conducted through a retrospective review of health records of a randomly selected 66 patients with acute low back pain, seen at the Airport Health Center during the months from 1st January 2021 till 31st March 2021. Audit criteria is derived from PHCC Clinical Practice Guideline for the Management of Low Back Pain in Adults.

Audit findings of the total sample of 66 patients showed 95% compliance with the recommended practice on imaging requirement for patients with acute Low Back Pain and didn't do imaging at the first visit.

**Conclusion:** Audit concluded with the recommendation on achieving 100% level of compliance in practice and to sustain the practice.

**Key words:** clinical audit, low back pain, imaging

### Abbreviations:

**PHCC** Primary Health Care Corporation

**LBP** Low Back Pain

## Introduction

The clinical evaluation of low back pain includes a history and physical examination to evaluate for signs or symptoms that indicate need for immediate imaging and further evaluation. For most patients with acute LBP (<6 weeks), laboratory tests and imaging are not necessary in the initial evaluation.

Earlier use of imaging for low back pain without associated symptoms is not associated with improved outcomes but increases the use of invasive procedures and likely health care costs [9]. As examples: A 2009 systematic review and meta-analysis of six trials that compared immediate imaging (lumbosacral spine magnetic resonance imaging [MRI], computed tomography [CT], or radiography) with usual care for patients with acute and subacute low back pain, without signs or symptoms of infection or malignancy, found no differences in short-term (up to three months) or long-term (6 to 12 months) outcomes for measures of patient pain or function [10].

Additionally, imaging exams often show abnormal findings in adults without low back pain, which makes it difficult to determine which imaging findings are clinically significant. As an example, disc herniations on MRI are seen in 22 to 67 percent of asymptomatic adults and spinal stenosis in 21 percent of asymptomatic adults over age 60 [11-12].

## Aim

To ensure adherence to imaging guidelines for patients with acute low back pain and suggest changes in practice if needed.

## Audit Objective

- To determine if imaging is done for patients with acute low back pain within the first 6 weeks from the onset of symptoms.

## Audit Standards / Criteria

<b>Standard: No imaging examination is needed for patients 18 years and above with acute low back pain within the first 6 weeks from the onset of symptoms</b>			
<b>Criteria</b>	<b>Target (%)</b>	<b>Measurement frequency (repeat data collection) if needed</b>	<b>Exceptions</b>
Criteria 1: All patients with acute low back pain do not need imaging examinations within the first 6 weeks of symptom's onset	100%	Repeat data collection after 3 months of implementation of audit recommendations	<ul style="list-style-type: none"> <li>• Patient with Red flag symptoms/signs.</li> <li>• Cauda equina syndrome</li> <li>• Fracture</li> <li>• Infection</li> <li>• Malignancy</li> <li>• Acute onset of back pain resulting from trauma.</li> <li>• Chronic persistent low back pain</li> </ul>

## Methodology and Sample

### Inclusion Criteria

Patients aged 18 years and above with diagnosis of acute low back pain within the audit period from January 1st till 31st of March seen at the Airport Health Center.

### Exclusion criteria

Patients with Red flag symptoms / signs: Cauda equina syndrome, Fracture, Infection, Malignancy, Acute onset of back pain resulting from trauma and chronic persistent low back pain.

### Audit Type:

Retrospective audit

### 1. SAMPLING

A total of 10 % (66 records) from total cases (676) of the total medical records of patients with acute low back pain seen at Airport Health Center from 1st of January till 31 of March 2021 was randomly selected. Each record

was carefully reviewed for documented evidence about if the physician had placed the imaging order within six weeks from the onset of symptoms and recommended measures.

### 2. DATA SOURCE

Patients' records (electronic)

### 3. AUDIT TOOL

Quantitative analysis by using MS excel tables, proportions and percentages.

### 4. DATA ANALYSIS

1. Quantitative analysis was done by using MS excel comparisons, proportions and percentages.

2. Each patient's record was audited based on the audit criteria as coded into: YES= 1, No= 0 and Not applicable = NA.

3. Data was entered to a pre-formatted MS excel and MS words document template analyzed and then tables and charts were generated.

## Results

Criteria 1: All patients with acute low back pain, don't need imaging examination within the first 6 weeks of symptoms onset

Figure -1: Adherence to PHCC imaging guideline for patients with acute LBP

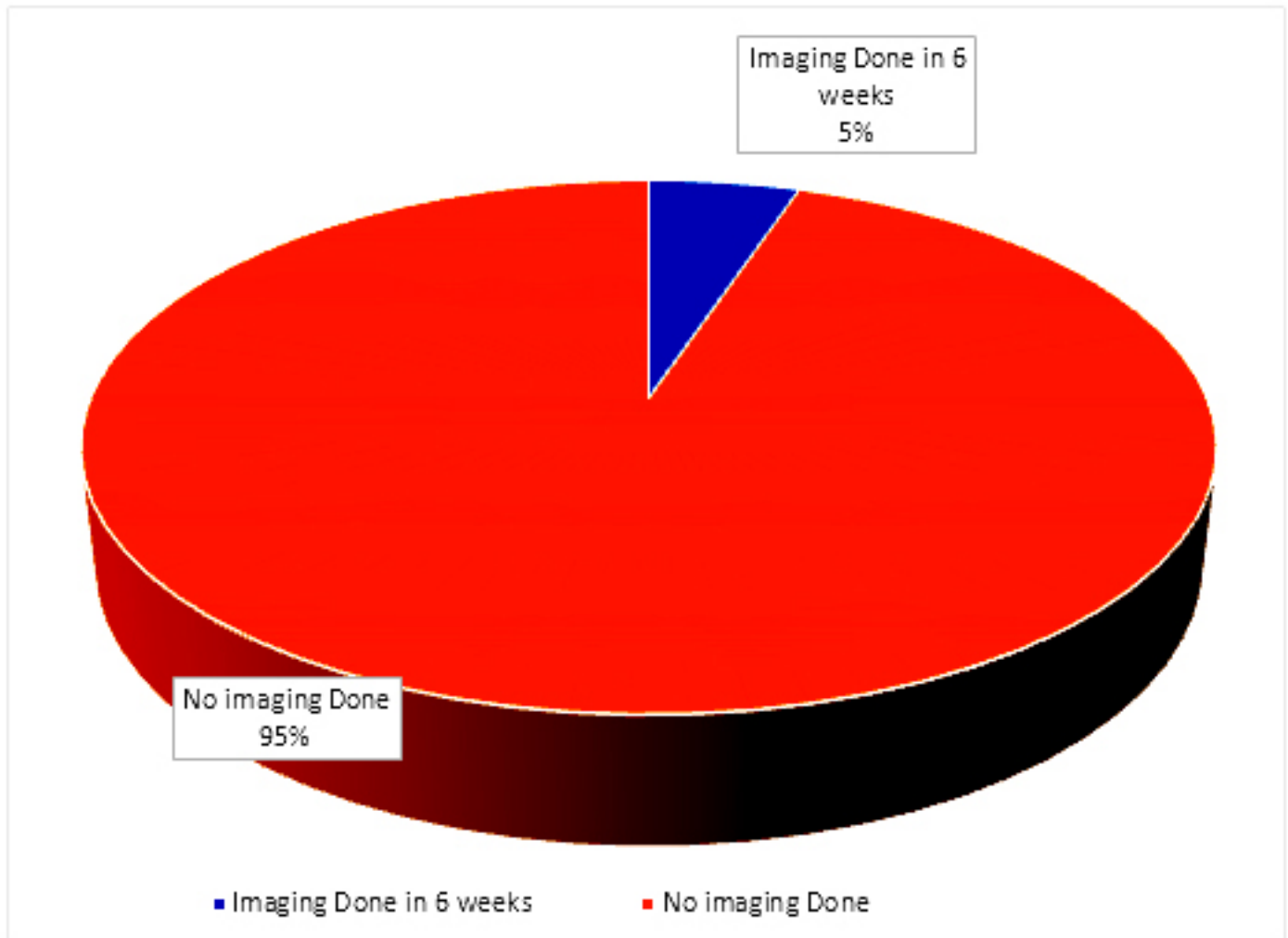


Figure 1 shows that in 95% of records imaging was not requested in the initial 6 weeks as recommended by best practice guideline, which indicate a satisfactory level of compliance among Physicians with the PHCC practice guidelines for imaging (patients with acute LBP).

## Recommendations

To improve the compliance to 100% of the recommended imaging practice for patient with low back pain

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## Clinical Audit Action Plan

Audit Topic	Adherence to PHCC Imaging Guidelines for Patients with Acute Low Back Pain	Audit No.	HC/CA.21-014
Health Centers	Airport health center	Audit Dates	1 <sup>st</sup> January 2021
Audit Lead	Dr. Hanan Al-shamery	Section Manager	Dr Mariam Jaber
Recommendations	Actions Required	Responsible	Initiation date
Improve the compliance level to achieve 100%	Share the audit findings through email, ppt and repeat the audit after 6 months to ensure the guideline followed 100% adherence.	Dr. Hanan Al-shamery	Oct 2021