



دائرة الصحة
DEPARTMENT OF HEALTH

JAWDA Quarterly Guidelines for Orthopedic Surgery (OS)

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Table of Contents

Executive Summary	3
About this Guidance.....	4
Orthopedic Surgery Quality Indicators	5
Surgical site infection (SSI) for Knee Prosthesis surgery procedure	5
Surgical site infection (SSI) for Hip Prosthesis surgery procedure.....	7
All-cause 30-day readmission for planned primary Knee replacement	8
All-cause 30-day readmission for planned primary Hip replacement	9
All-cause 30-day readmission for selected Orthopedic surgery admission.....	10
Unplanned return to operating room within 30 days of planned elective Orthopedic surgery procedure.....	11
Emergency room visit within 30 days of planned elective Orthopedic surgery procedure.....	12
Mortality within 90 days of elective Orthopedic surgery admission.....	13
Blood transfusion within 7 days of elective Orthopedic surgery procedure.....	14
Appendix-A (Selected Orthopedic Procedure Code).....	15
References.....	16

Executive Summary

The Department of Health– Abu Dhabi (DOH) is the regulatory body of the healthcare sector in the Emirate of Abu Dhabi and ensures excellence in healthcare for the community by monitoring the health status of its population.

The Emirate of Abu Dhabi is experiencing a substantial growth in the number of hospitals, centers and clinics. This is ranging from school clinics and mobile units to internationally renowned specialist and tertiary academic centers. Although, access and quality of care has improved dramatically over the last couple of decades, mirroring the economic upturn and population boom of the Abu Dhabi Emirate, however challenges remain in addressing further improvements.

The main challenges that are presented with increasingly dynamic population include an aging population with increased expectation for treatment, utilization of technology and diverse workforce leading to increased complexity of healthcare provision in Abu Dhabi. All of this results in an increased and inherent risk to quality and patient safety.

DOH has developed dynamic and comprehensive quality framework in order to bring about improvements across the health sector. This guidance relates to the quality indicators that DOH is mandating the quarterly reporting against by the operating general and specialist hospitals in Abu Dhabi.

The guidance sets out the full definition and method of calculation for patient safety and clinical effectiveness indicators. For enquiries about this guidance, please contact jawda@DoH.gov.ae

This document is subject for review and therefore it is advisable to utilize online versions available on the DOH website at all times.

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About this Guidance

The guidance sets out the definitions and reporting frequency of JAWDA Orthopedic Surgery (OS) performance indicators. Department of Health (DoH) with consultation of local and international Orthopedic surgeon professionals has developed Orthopedic surgery performance indicators that are aimed for assessing the degree to which a provider competently and safely delivers the appropriate clinical services to the patient within the optimal time period.

The Orthopedic indicators in this guidance include measures to monitor morbidity and mortality in patients undergoing Orthopedic surgeries i.e., (surgical site infections for selected measures, readmission to operating room and hospitals, patient safety, emergency visits, and use of blood). Orthopedic surgeons are the most qualified professionals to develop and evaluate quality of care measures for patients with musculoskeletal conditions. Therefore, it is crucial that Orthopedic surgeons retain a leadership position in defining quality of Orthopedic care.

Who is this guidance for?

All DoH licensed healthcare facilities providing Orthopedic services in the Emirate of Abu Dhabi.

How do I follow this guidance?

Each provider will nominate one member of staff to coordinate, collect, monitor and report Orthopedic surgery quality performance indicators data as per communicated dates. The nominated healthcare facility lead must in the first instance e-mail their contact details (if different from previous submission) to JAWDA@doh.gov.ae and submit the required quarterly quality performance indicators through Jawda online portal.

What are the Regulation related to this guidance?

- Legislation establishing the Health Sector
- As per DoH [Policy for Quality and Patient Safety](#) issued January 15th 2017, this guidance applies to all DOH Licensed Hospital Healthcare Facilities in the Emirate of Abu Dhabi in accordance with the requirements set out in this Standard.

Orthopedic Surgery Quality Indicators

Type: Quality Indicator

Indicator Number: OS001

KPI Description (title):	Surgical site infection (SSI) for Knee Prosthesis surgery procedure
Domain	Patient safety
Sub-Domain	Complication
Definition:	Percentage of patients meeting CDC NHSN SSI infection criteria within 90 days of Knee Prosthesis Surgery procedure.
Calculation and criteria to define SSI	<p><i>Numerator:</i> Count total number of surgical site infections detected within 90 days from denominator procedures.</p> <p><i>Denominator:</i> Count total number of all patients who had surgery for any of the following knee prosthesis procedure codes: during the reporting period knee prosthesis procedure CPT codes: (27437, 27438, 27440, 27441, 27442, 27443, 27445, 27446, 27447, 27486, 27487, 27488)</p> <p><i>Surgical Site Infection Criteria: Organ/Space OR Deep SSI</i> Infection occurs within 90 days after the NHSN operative procedure (where day 1 = the procedure date) ;AND Infection involves any part of the body deeper than the fascial/muscle layers, that is opened or manipulated during the operative procedure, AND <i>patient has at least one of the following:</i></p> <ol style="list-style-type: none"> a) purulent drainage from a drain that is placed into the organ/space (e.g., closed suction drainage system, open drain, T-tube drain, CT guided drainage) b) organisms are identified from an aseptically-obtained fluid or tissue in the organ/space by a culture or non-culture based microbiologic testing method c) an abscess or other evidence of infection involving the organ/space that is detected on gross anatomical or histopathology exam, or imaging test evidence suggestive of infection, AND d) patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness.
Reporting Frequency:	Quarterly
Unit of Measure:	(%) percentage of SSI per 100 Knee prosthesis procedure
International comparison if available	CDC/ NHSN chapter 9, Procedure-associated Module SSI: Surgical Site Infection (SSI) Event
Desired direction:	Lower is better
Notes for all providers	

Data sources and guidance:	<ul style="list-style-type: none">- Captured by infection control team/ nursing as part of regular surveillance activities and infection control documentation- Patient's records- Hospital internal mortality and morbidity
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Department of Health JAWDA Orthopedic Surgery Performance Indicators

Type: Quality Indicator

Indicator Number: OS002

KPI Description (title):	Surgical site infection (SSI) for Hip Prosthesis surgery procedure
Domain	Patient safety
Sub-Domain	Complication
Definition:	Percentage of patients meeting CDC NHSN SSI infection criteria within 90 days of Hip Prosthesis Surgery procedure.
Calculation and criteria to define SSI	<p><i>Numerator:</i> Count total number of surgical site infections detected within 90 days from denominator procedures.</p> <p><i>Denominator:</i> Count total number of all patients who had surgery for any of the following hip prosthesis procedure during the reporting period. Hip prosthesis procedure PT codes: (27125, 27130, 27132, 27134, 27137, 27138, 27236, 27299)</p> <p><i>Surgical Site Infection Criteria: Organ/Space or Deep SSI patient has at least one of the following:</i></p> <ol style="list-style-type: none"> a) purulent drainage from a drain that is placed into the organ/space (e.g., closed suction drainage system, open drain, T-tube drain, CT guided drainage) b) organisms are identified from an aseptically-obtained fluid or tissue in the organ/space by a culture or non-culture based microbiologic testing method c) an abscess or other evidence of infection involving the organ/space that is detected on gross anatomical or histopathology exam, or imaging test evidence suggestive of infection, AND d) patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness.
Reporting Frequency:	Quarterly
Unit of Measure:	(%) percentage of SSI per 100 hip prosthesis procedure
International comparison if available	CDC/ NHSN chapter 9, Procedure-associated Module SSI: Surgical Site Infection (SSI) Event
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	<ul style="list-style-type: none"> - Captured by infection control team/ nursing as part of regular surveillance activities and infection control documentation - Patient's records - Hospital internal mortality and morbidity

Department of Health JAWDA Orthopedic Surgery Performance Indicators

Type: Quality Indicator

Indicator Number: OS003

KPI Description (title):	All-cause 30-day readmission for planned primary Knee replacement
Domain	Effectiveness
Sub-Domain	Readmission
Definition:	Rate of unplanned emergency readmission for adult patients 18 years and over undergoing a planned Knee replacement within 30 days of discharge.
Calculation:	<p><i>Numerator:</i> number of adult patients with unplanned readmission to any facilities within 30 days following discharge from hospital for having Knee replacement (all types). <i>If patient has multiple readmissions within 30 days of index discharge, only count as a single readmission</i></p> <p><i>Denominator:</i> number of discharged adult patients with planned primary Knee replacements during the reporting period</p> <p><i>Denominator Exclusions:</i></p> <ul style="list-style-type: none"> • Patients who are discharged against medical advice • Patients having a planned knee replacement procedure during the index hospitalization and subsequently transferred to another acute care facility. <p><i>Knee replacement CPT Code</i> (27437, 27438, 27440, 27441, 27442, 27443, 27445, 27446, 27447, 27486, 27487, 27488)</p>
Reporting Frequency:	Quarterly
Unit of Measure:	Rate per 100 knee discharges
International comparison if available	AHRQ, American Association Academy of Orthopedic Surgeons, UCLA Health
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	<ul style="list-style-type: none"> - Hospital internal adverse event and incident reporting system - Mortality and morbidity record - Hospital patient data and record

Department of Health JAWDA Orthopedic Surgery Performance Indicators

Type: Quality Indicator

Indicator Number: OS004

KPI Description (title):	All-cause 30-day readmission for planned primary Hip replacement
Domain	Effectiveness
Sub-Domain	Readmission
Definition:	Rate of unplanned emergency readmission for adult patients 18 years and over undergoing a planned hip replacement within 30 days of discharge.
Calculation:	<p><i>Numerator:</i> number of adult patients with unplanned readmission to any facilities within 30 days following discharge from hospital for having hip replacement (all types). <i>If patient has multiple readmissions within 30 days of index discharge, only count as a single readmission</i></p> <p><i>Denominator:</i> number of discharged adult patients with planned primary Hip replacements during the reporting period.</p> <p><i>Denominator Exclusions:</i></p> <ul style="list-style-type: none"> • Patients who are discharged against medical advice • Patients having a planned hip replacement procedure during the index hospitalization and subsequently transferred to another acute care facility <p><i>Hip replacement CPT Code (27125, 27130, 27132, 27134, 27137, 27138, 27236, 27299)</i></p>
Reporting Frequency:	Quarterly
Unit of Measure:	Rate per 100 hip discharges
International comparison if available	AHRQ , American Association Academy of Orthopedic Surgeons , UCLA Health
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	<ul style="list-style-type: none"> - Hospital internal adverse event and incident reporting system - Mortality and morbidity record - Hospital patient data and record

Department of Health JAWDA Orthopedic Surgery Performance Indicators

Type: Quality Indicator

Indicator Number: OS005

KPI Description (title):	All-cause 30-day readmission for selected Orthopedic surgery admission
Domain	Patient Safety
Sub-Domain	Readmission
Definition:	Rate of all-cause 30-day readmission within 30 days of Orthopedic surgery discharge
Calculation:	<p><i>Numerator:</i> Total number of adult patients (18+) with unplanned readmission within 30 days of being discharge from hospital for having a planned orthopedic surgery.</p> <p><i>Numerator guidance:</i> If patient has multiple readmissions within 30 days of index discharge, only count as a single readmission</p> <p><i>Denominator:</i> Total number of discharged adult (18+) patients with planned Orthopedic Surgery during the reporting period (<i>See Appendix -A Selected Orthopedic Procedure Code</i>). :</p> <p><i>Denominator Exclusions:</i></p> <ul style="list-style-type: none"> • Patients who are discharged against medical advice • Patients having a planned any of <i>selected orthopedic procedure in the Appendix -A</i> during the index hospitalization and subsequently transferred to another acute care facility
Reporting Frequency:	Quarterly
Unit of Measure:	Rate per 100 selected orthopedic discharges
International comparison if available:	AHRQ , American Association Academy of Orthopedic Surgeons , UCLA Health
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	<ul style="list-style-type: none"> • Hospital internal adverse event and incident reporting system • Mortality and morbidity record • Hospital patient data and record

Department of Health JAWDA Orthopedic Surgery Performance Indicators

Type: Quality Indicator

Indicator Number: OS006

KPI Description (title):	Unplanned return to operating room within 30 days of planned elective Orthopedic surgery procedure
Domain	Patient Safety
Sub-Domain	Complication
Definition:	Rate of return to operating room within 30 days of being discharge from hospital for having a planned orthopedic surgery.
Calculation:	<p><i>Numerator:</i> Total number of adult patients (18+) who had unplanned returned to operating room within 30 days of being discharge from hospital for having a planned orthopedic surgery.</p> <p><i>Denominator:</i> Total number of discharged adult (18+) patients with planned Orthopedic Surgery during the reporting period (<i>See Appendix –A Selected Orthopedic Procedure Code</i>).</p> <p><i>Denominator Exclusions:</i></p> <ul style="list-style-type: none"> • Patients who are discharged against medical advice • Patients having a planned any of <i>selected orthopedic procedure in the Appendix –A</i> during the index hospitalization and subsequently transferred to another acute care facility
Reporting Frequency:	Quarterly
Unit of Measure:	Rate per 100 orthopedic discharges
International comparison if available:	AHRQ , American Association Academy of Orthopedic Surgeons , UCLA Health
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	<ul style="list-style-type: none"> • Hospital internal adverse event and incident reporting system • Mortality and morbidity record • Hospital patient data and record

Department of Health JAWDA Orthopedic Surgery Performance Indicators

Type: Quality Indicator

Indicator Number: OS007

KPI Description (title):	Emergency room visit within 30 days of planned elective Orthopedic surgery procedure
Domain	Patient Safety
Sub-Domain	Complication
Definition:	Rate of emergency room visit within 30 days of being discharge from hospital for having a planned Orthopedic surgery.
Calculation:	<p><i>Numerator:</i> Total number of adult patients (18+) with emergency visit within 30 days of being discharge from hospital for having a planned orthopedic surgery.</p> <p><i>Denominator:</i> Total number of discharged adult (18+) patients with planned Orthopedic Surgery during the reporting period (<i>See Appendix -A Selected Orthopedic Procedure Code</i>).</p> <p><i>Denominator Exclusions:</i></p> <ul style="list-style-type: none"> • Patients who are discharged against medical advice • Patients having a planned any of <i>selected orthopedic procedure in the Appendix -A</i> during the index hospitalization and subsequently transferred to another acute care facility
Reporting Frequency:	Quarterly
Unit of Measure:	Rate per 100 emergency visits
International comparison if available	AHRQ , American Association Academy of Orthopedic Surgeons , UCLA Health
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	<ul style="list-style-type: none"> - Hospital internal adverse event and incident reporting system - Mortality and morbidity record - Hospital patient data and record

Department of Health JAWDA Orthopedic Surgery Performance Indicators

Type: Quality Indicator

Indicator Number: OS008

KPI Description (title):	Mortality within 90 days of elective Orthopedic surgery admission
Domain	Patient Safety
Sub-Domain	Mortality
Definition:	Rate of all mortality within 90 days of elective Orthopedic surgery procedure.
Calculation:	<p><i>Numerator:</i> Total number of deaths among adults (18+) within 90 days of elective Orthopedic surgery procedure.</p> <p><i>Denominator:</i> Total number of adult (18+) patients with planned Orthopedic Surgery during the reporting period (<i>See Appendix -A Selected Orthopedic Procedure Code</i>).</p>
Reporting Frequency:	Quarterly
Unit of Measure:	Rate per 100 mortality
International comparison if available	AHRQ , American Association Academy of Orthopedic Surgeons , UCLA Health
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	<ul style="list-style-type: none"> - Hospital internal adverse event and incident reporting system - Mortality and morbidity record - Hospital patient data and record

Department of Health JAWDA Orthopedic Surgery Performance Indicators

Type: Quality Indicator

Indicator Number: OS009

KPI Description (title):	Blood transfusion within 7 days of elective Orthopedic surgery procedure
Domain	Patient Safety
Sub-Domain	Clinical effectiveness
Definition:	Rate of blood transfusion within 7 days of elective Orthopedic surgery procedure surgery.
Calculation:	<p><u>Numerator:</u> Total number of adult patients (18 and older) having blood transfusion within 7 days of elective Orthopedic surgery procedure surgery.</p> <p><u>Denominator:</u> Total number of adult patients who had planned Orthopedic surgery procedure (<i>See Selected Orthopedic Procedure Codes Appendix</i>).</p> <p>Denominator Exclusions:</p> <ul style="list-style-type: none"> • Revision hip surgery • Sarcoma surgery • Hip or trauma surgery in obese patients • Trauma surgery in patients with significant initial blood loss
Reporting Frequency:	Quarterly
Unit of Measure:	Rate per 100 blood transfusion
International comparison if available	AHRQ , American Association Academy of Orthopedic Surgeons , UCLA Health
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	<ul style="list-style-type: none"> - Hospital internal adverse event and incident reporting system - Mortality and morbidity record - Hospital patient data and record

Appendix-A (Selected Orthopedic Procedure Code)

Procedure Name	CPT Code
JOINTS	
<i>Hip Replacement</i>	27130, 27132
<i>Hip Revision</i>	27033, 27132, 27134, 27137, 27138
<i>Knee Replacement</i>	27445, 27446, 27447, 27442
<i>Knee Revision</i>	27486, 27487, 27488
<i>Shoulder Replacement</i>	23470, 23472
SPINE	
<i>Spinal Fusion</i>	22532, 22533, 22548, 22551, 22554, 22556, 22558, 22586, 22590, 22595, 22600, 22610, 22612, 22614, 22630, 22632, 22800, 22802, 22804
FRACTURE SURGERY	
<i>Hip</i>	27200, 27227, 27228, 27235, 27236, 27244, 27245, 27248, 27513
<i>Lower Extremity</i>	27380, 27385, 27422, 27506, 27511, 27513, 27514, 27524, 27532, 27535, 27536, 27759, 27827, 27828, 27829
SPORTS	
<i>Shoulder Arthroscopy</i>	29806, 29822, 29823, 29824, 29826, 29827
<i>Knee Arthroscopy</i>	29871, 29881, 29888, 29882, 29875, 29880, 29877, 29874, 29879, 29883, 29886, 29876, 29884, 29889
ONCOLOGY	
<i>Soft Tissue Tumor</i>	21554, 24073, 24079, 25078, 27355, 27356, 27364
<i>Curettage of Bone</i>	20245, 23150, 23156, 24110, 24116, 25126, 27066, 27355, 27356, 27638
<i>Radical Resection of Bone</i>	23200, 23220, 24900, 27059, 27075, 27640, 27645, 27598, 27880
HAND	
<i>Carpal Tunnel Release</i>	64721, 29848, 20526, 29848, 64708, 25290, 25115
<i>Trigger Finger</i>	26055, 26145, 26440
FOOT & ANKLE	
<i>Hammertoe</i>	28285, 28043, 64632
<i>Bunionectomy</i>	28290, 28292, 28293, 28294, 28296, 28297, 28298, 28299

References

1. [Definition of an NHSN Operative Procedure](#)
2. [Surgical Site Infection \(SSI\) Even](#)
3. NHSN Operative Procedure Category Mappings to ICD-10-PCS and CPT Codes.
(www.cdc.gov/nhsn/xls/cpt-pcm-nhsn.xlsx/)