

Supplementary Data S8. Clinical tasks and task-level AI-readiness scores across 22 medical specialties

The complete database contains 330 representative clinical tasks (15 per specialty). To preserve readability, each specialty is presented as a separate table. Scores use a three-point ordinal scale (1-3). The task-level AI-readiness score is the weighted mean with specialty centrality double-weighted.

Abbrev.	Dimension	Scoring
C	Codifiability	1=low, 2=moderate, 3=high
D	Data-structure dependence	1=interpersonal, 2=mixed, 3=data-based
T	Transferability of decision authority	1=high difficulty, 2=moderate, 3=low
P	Physical dependence	1=high dependence, 2=moderate, 3=low
G	Clinical governability	1=difficult, 2=moderate, 3=easy
S	Specialty centrality	1=peripheral, 2=important, 3=core

Allergy and Immunology | MSAIR 2.057

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Evaluate adults with suspected allergic or immunologic disorders through focused history, environmental exposure assessment, and physical examination	Patient assessment	2	1	1	1	2	3	1.857
Evaluate pediatric patients with suspected allergic or immunologic disorders, incorporating developmental, family, and infection history	Patient assessment	2	1	1	1	2	3	1.857
Diagnose common allergic diseases (asthma, allergic rhinitis, atopic dermatitis, food allergy) by integrating clinical findings and test results	Clinical reasoning	2	2	3	2	3	3	2.571
Diagnose primary or secondary immunodeficiency disorders using clinical history, examination findings, and laboratory data	Clinical reasoning	2	2	2	2	2	2	2
Select appropriate allergy and immunology diagnostic tests (skin testing, specific IgE testing, immune evaluation, spirometry)	Diagnostic interpretation	3	2	3	3	3	3	2.857
Interpret allergy, immunology, and pulmonary function test results in clinical context	Diagnostic interpretation	3	2	3	3	3	3	2.857
Perform and interpret allergy skin testing and pulmonary function testing	Procedures	2	1	1	1	1	2	1.429
Counsel patients on allergen avoidance, trigger control, inhaler/device use, and symptom self-management.	Communication	3	2	3	2	3	2	2.429
Develop individualized treatment plans for allergic and immunologic disorders, including pharmacologic and biologic therapies	Treatment planning	2	2	2	2	2	2	2
Prescribe and manage allergen immunotherapy, immunoglobulin replacement, and other specialty therapies	Treatment planning	2	2	2	2	2	2	2
Monitor treatment response, adverse events, and disease control over time, adjusting management accordingly	Monitoring	2	1	2	1	1	2	1.571
Create and communicate action plans for high-risk conditions such as asthma and anaphylaxis	Communication	3	2	3	3	3	2	2.571
Manage acute allergic emergencies, including anaphylaxis and severe angioedema	Emergency decision making	2	1	1	1	1	2	1.429
Coordinate care with primary care physicians, pulmonologists, dermatologists, hematologists, infusion services, and other specialists	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Lead quality and safety initiatives related to allergy testing, immunotherapy administration, vaccine safety, and anaphylaxis preparedness	Quality improvement and systems-based practice	2	2	2	2	2	1	1.714

Anesthesiology | MSAIR 2.010

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Perform pre-anesthetic evaluation and perioperative risk stratification	Patient assessment	2	2	2	2	2	3	2.286
Develop a patient-specific anesthetic plan based on procedure and comorbidities	Treatment planning	2	2	2	2	2	3	2.286
Develop and implement perioperative pain management plans	Treatment planning	2	2	2	1	2	2	1.857
Select, apply, and interpret physiologic monitoring modalities during anesthesia	Diagnostic interpretation	3	3	2	2	3	3	2.714
Insert and manage invasive monitoring devices (arterial lines, central venous catheters)	Procedures	2	1	1	1	2	3	1.857
Plan and deliver intraoperative anesthetic care	Procedures	2	1	1	1	2	3	1.857
Manage induction, maintenance, and emergence from anesthesia	Procedures	2	1	1	1	2	3	1.857
Assess and manage routine and difficult airways, ventilation, and oxygenation.	Procedures	2	1	1	1	1	3	1.714
Perform and interpret point-of-care ultrasound examinations	Diagnostic interpretation	3	2	2	1	3	2	2.143
Perform regional anaesthesia and ultrasound-guided vascular access.	Procedures	2	2	2	1	2	2	1.857
Recognize and manage perioperative and intraoperative crises, resuscitation, and hemodynamic instability.	Emergency decision making	2	1	1	1	1	3	1.714
Manage critically ill patients in intensive care and perioperative settings	Monitoring	2	2	2	1	2	2	1.857
Diagnose and manage postoperative complications and determine disposition	Monitoring	2	2	2	1	2	2	1.857
Coordinate perioperative care with surgeons, intensivists, pain specialists, and nursing teams	Multidisciplinary collaboration	1	1	2	2	2	2	1.714
Lead perioperative safety, documentation, quality improvement, and systems initiatives.	Quality improvement and systems-based practice	3	2	3	3	3	2	2.571

Dermatology | MSAIR 2.067

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Evaluate patients with skin, hair, and nail disorders	Patient assessment	2	1	1	2	2	3	2
Develop differential diagnoses for dermatologic presentations	Clinical reasoning	2	2	2	3	2	3	2.429
Diagnose and manage common inflammatory skin diseases	Treatment planning	2	2	2	3	2	3	2.429
Diagnose and manage complex or refractory dermatologic diseases	Treatment planning	2	2	2	3	2	3	2.429
Evaluate and manage pediatric dermatologic conditions	Patient assessment	2	1	1	2	2	2	1.714
Perform and interpret in-office diagnostic testing (KOH, Wood's lamp, scabies prep, etc.)	Diagnostic interpretation	2	2	2	1	3	2	2
Select and interpret laboratory, imaging, and pathology investigations	Diagnostic interpretation	3	2	2	3	3	2	2.429
Perform skin biopsies and other basic dermatologic procedures	Procedures	2	1	1	1	3	2	1.714
Perform dermatologic surgery including excisions and layered closures	Procedures	2	1	1	1	2	2	1.571
Manage procedural complications and postoperative wound care	Monitoring	2	2	2	1	2	2	1.857
Interpret dermatopathology findings and perform clinicopathologic correlation	Diagnostic interpretation	3	3	2	3	3	2	2.571
Select, initiate, and monitor topical therapies	Treatment planning	2	2	2	3	2	2	2.143
Select, initiate, and monitor systemic therapies and biologics	Treatment planning	2	2	2	3	2	2	2.143
Evaluate and deliver cosmetic, laser, and light-based dermatologic treatments.	Procedures	2	2	1	1	2	2	1.714
Coordinate longitudinal care, prevention, patient counseling, and follow-up	Multidisciplinary collaboration	2	1	1	3	2	2	1.857

Emergency Medicine | MSAIR 2.171

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Perform emergency stabilization and resuscitation of critically ill or injured patients	Emergency decision making	2	1	1	1	1	3	1.714
Perform focused history and physical examination under time pressure	Patient assessment	2	1	1	1	1	3	1.714
Triage and risk-stratify patients by acuity	Patient assessment	2	2	2	2	2	3	2.286
Develop prioritized differential diagnoses	Clinical reasoning	2	2	2	3	2	3	2.429
Select and order appropriate diagnostic studies	Diagnostic interpretation	3	2	2	3	3	3	2.714
Interpret laboratory, ECG, imaging, and point-of-care ultrasound findings	Diagnostic interpretation	3	3	3	3	3	3	3
Perform and interpret point-of-care ultrasound examinations	Procedures	2	2	2	1	2	2	1.857
Diagnose and manage common, complex, behavioural, and psychosocial emergency presentations.	Clinical reasoning	2	2	2	3	2	2	2.143
Select and manage emergency pharmacotherapy	Treatment planning	2	2	2	3	2	3	2.429
Perform emergency procedures (airway management, vascular access, procedural sedation, thoracostomy, etc.)	Procedures	2	1	1	1	1	3	1.714
Reassess patients and monitor response to interventions	Monitoring	2	2	2	1	2	3	2.143
Determine patient disposition (discharge, admission, ICU admission, transfer)	Treatment planning	2	2	2	3	2	3	2.429
Coordinate consultations, handovers, transitions, and patient/family risk communication.	Multidisciplinary collaboration	2	1	1	3	2	2	1.857
Manage multiple simultaneous patients and task-switch effectively	Quality improvement and systems-based practice	1	1	2	3	2	3	2.143
Manage mass-casualty, surge, or high-volume emergency situations	Quality improvement and systems-based practice	2	1	2	3	2	2	2

Family Medicine | MSAIR 2.238

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Evaluate patients with acute signs, symptoms, and urgent health concerns	Patient assessment	2	1	1	2	2	2	1.714
Recognize, stabilize, and manage acutely ill patients across home and outpatient settings.	Emergency decision making	2	1	1	1	1	2	1.429
Evaluate and manage patients with undifferentiated symptoms before a definitive diagnosis is established	Clinical reasoning	2	2	2	2	2	3	2.286
Develop prioritized differential diagnoses for common and complex presentations	Clinical reasoning	2	2	2	3	2	3	2.429
Select and interpret diagnostic tests in the context of primary care	Diagnostic interpretation	3	2	2	3	3	3	2.714
Diagnose and manage common acute illnesses	Treatment planning	2	2	2	3	2	3	2.429
Diagnose and manage chronic diseases across the lifespan	Treatment planning	2	2	2	3	2	3	2.429
Develop person-centred plans for multimorbidity using patient context and preferences.	Treatment planning	2	2	2	3	2	3	2.429
Conduct preventive care visits including screening, immunizations, and health maintenance	Prevention	3	2	2	3	2	3	2.571
Counsel patients on lifestyle modification, behavior change, and risk reduction	Communication	1	1	1	3	3	2	1.857
Monitor disease progression, treatment response, continuity, and long-term outcomes.	Monitoring	2	2	2	3	3	3	2.571
Perform office-based and primary care procedures and manage procedural complications	Procedures	2	1	1	1	2	2	1.571
Coordinate referrals, transitions, multidisciplinary care, and community-based support.	Multidisciplinary collaboration	1	1	1	3	2	3	2
Document clinical encounters, care plans, and longitudinal follow-up appropriately	Documentation	3	3	3	3	3	3	3
Lead quality improvement, patient safety, and population health initiatives	Quality improvement and systems-based practice	2	2	2	3	2	2	2.143

Internal Medicine | MSAIR 2.200

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Perform comprehensive history-taking for patients with acute and chronic medical conditions	Patient assessment	2	1	1	2	2	3	2
Perform focused and comprehensive physical examinations	Patient assessment	2	1	1	1	1	3	1.714
Develop prioritized differential diagnoses for complex medical presentations	Clinical reasoning	2	2	2	3	2	3	2.429
Select and interpret laboratory, imaging, and diagnostic studies	Diagnostic interpretation	3	2	2	3	3	3	2.714
Manage hospitalized patients with acute medical illnesses	Treatment planning	2	2	2	3	2	3	2.429
Manage ambulatory patients with chronic diseases	Treatment planning	2	2	2	3	2	3	2.429
Develop evidence-based treatment plans for multimorbidity, risk, and patient goals.	Treatment planning	2	2	2	3	2	3	2.429
Recognize and manage medical emergencies and clinical deterioration	Emergency decision making	2	1	1	1	1	2	1.429
Perform common internal medicine bedside procedures when clinically indicated.	Procedures	2	1	1	1	2	3	1.857
Monitor treatment response and disease progression over time	Monitoring	2	2	2	3	2	3	2.429
Communicate diagnoses, uncertainty, prognosis, treatment options, and goals of care.	Communication	2	1	1	3	2	3	2.143
Document clinical encounters and care plans accurately	Documentation	3	3	3	3	3	3	3
Coordinate care across specialties, settings, and transitions of care	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Provide preventive care and risk-reduction interventions	Prevention	2	2	2	3	2	2	2.143
Lead quality improvement and patient safety initiatives	Quality improvement and systems-based practice	2	2	2	3	2	2	2.143

Medical Genetics and Genomics | MSAIR 2.324

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Obtain and interpret detailed personal, family, and multigenerational pedigrees	Patient assessment	3	2	2	3	2	3	2.571
Perform targeted physical examinations for suspected genetic disorders	Patient assessment	2	2	2	1	1	2	1.714
Identify patients who may benefit from genetic evaluation and testing	Clinical reasoning	2	2	2	3	2	3	2.429
Select appropriate genetic and genomic tests for specific clinical questions	Diagnostic interpretation	3	3	2	3	2	3	2.714
Interpret genetic results, variants, uncertainty, and secondary findings in clinical context.	Diagnostic interpretation	3	3	2	3	3	3	2.857
Establish diagnoses of inherited and genomic disorders	Clinical reasoning	3	3	2	3	2	3	2.714
Provide pre-test genetic counseling regarding risks, benefits, and limitations	Communication	2	1	1	3	2	3	2.143
Provide post-test genetic counseling and communicate results to patients and families	Communication	2	1	1	3	2	3	2.143
Develop management plans for patients with genetic and genomic disorders	Treatment planning	2	2	2	3	2	3	2.429
Coordinate cascade testing and screening for at-risk family members	Prevention	2	2	2	3	2	2	2.143
Monitor disease progression and long-term outcomes in genetic disorders	Monitoring	2	2	2	3	2	2	2.143
Manage ethical, legal, and psychosocial issues related to genetic information	Clinical reasoning	1	2	1	3	1	2	1.714
Coordinate care with subspecialists, laboratories, and genetic counselors	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Document genetic evaluations, test interpretations, and care plans	Documentation	3	3	3	3	3	3	3
Lead quality, safety, and systems initiatives related to genomic medicine	Quality improvement and systems-based practice	3	3	2	3	2	2	2.429

Neurology | MSAIR 2.143

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Obtain comprehensive neurologic histories	Patient assessment	2	2	1	3	2	3	2.286
Perform detailed neurologic examinations	Patient assessment	2	1	1	1	1	3	1.714
Develop neurologic localizations and differential diagnoses	Clinical reasoning	2	2	2	3	2	3	2.429
Diagnose and manage neurologic disorders in the outpatient setting	Treatment planning	2	2	2	3	2	3	2.429
Diagnose and manage neurologic disorders in the inpatient setting	Treatment planning	2	2	2	3	2	3	2.429
Recognize and manage neurologic emergencies including stroke and status epilepticus	Emergency decision making	2	1	1	1	1	3	1.714
Manage neurocritical care, coma, brain injury, and neurological deterioration.	Emergency decision making	2	1	1	1	1	3	1.714
Interpret neuroimaging and other neurological investigations in clinical context.	Diagnostic interpretation	3	3	2	3	3	3	2.857
Perform and interpret electroencephalography (EEG)	Diagnostic interpretation	3	3	2	1	2	2	2.143
Perform and interpret nerve conduction studies and electromyography	Procedures	2	2	1	1	2	2	1.714
Perform lumbar punctures and manage procedure-related complications	Procedures	2	1	1	1	2	1	1.286
Integrate psychiatric and functional neurologic symptoms into diagnosis and management	Clinical reasoning	2	2	2	3	2	3	2.429
Monitor neurological progression, treatment response, disability, and functional outcomes.	Monitoring	2	2	2	3	2	3	2.429
Coordinate care with neurosurgery, rehabilitation, psychiatry, and other specialties	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Document neurologic evaluations and management plans	Documentation	3	3	2	3	3	3	2.857

Nuclear Medicine | MSAIR 2.333

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Evaluate patients referred for diagnostic nuclear medicine studies	Patient assessment	3	3	2	3	2	3	2.714
Select appropriate nuclear medicine imaging examinations	Diagnostic interpretation	3	3	2	3	3	3	2.857
Interpret planar nuclear medicine imaging studies	Diagnostic interpretation	3	3	2	3	3	2	2.571
Interpret SPECT imaging studies	Diagnostic interpretation	3	3	2	3	3	3	2.857
Interpret PET imaging studies	Diagnostic interpretation	3	3	2	3	3	3	2.857
Perform and supervise cardiovascular stress testing	Procedures	2	1	1	1	2	2	1.571
Interpret nuclear cardiology studies	Diagnostic interpretation	3	3	2	3	3	2	2.571
Develop treatment plans using radioiodine for benign thyroid disease	Treatment planning	2	2	2	3	2	2	2.143
Develop treatment plans using radioiodine for thyroid malignancies	Treatment planning	2	2	2	3	2	2	2.143
Administer and manage parenteral radiopharmaceutical therapies	Procedures	2	1	1	1	2	2	1.571
Monitor therapeutic response and treatment-related toxicities	Monitoring	2	2	2	3	2	2	2.143
Communicate imaging and therapy findings to referring clinicians	Communication	3	2	2	3	2	2	2.286
Ensure radiation safety for patients, staff, and the public	Quality improvement and systems-based practice	2	2	2	3	2	2	2.143
Coordinate care with oncology, endocrinology, cardiology, and radiology teams	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Document diagnostic interpretations and therapeutic plans	Documentation	3	3	2	3	3	3	2.857

Obstetrics and Gynecology | MSAIR 2.048

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Provide routine antepartum care and manage pregnancy complications	Patient assessment	2	2	1	2	2	3	2.143
Evaluate and manage pregnancy complications and pregnancy-related diagnostic uncertainty.	Clinical reasoning	2	2	2	3	2	3	2.429
Manage labor and delivery during the intrapartum period	Treatment planning	2	2	1	1	2	3	2
Provide postpartum and interconception care	Treatment planning	2	2	2	3	2	3	2.429
Perform obstetrical procedures including operative vaginal delivery and cesarean section	Procedures	2	1	1	1	1	3	1.714
Recognize and manage obstetric emergencies and critically ill obstetric patients	Emergency decision making	2	1	1	1	1	3	1.714
Select and interpret obstetric and gynaecologic investigations.	Diagnostic interpretation	3	2	3	3	3	3	2.857
Perform hysteroscopy and cystoscopy procedures	Procedures	2	1	1	1	2	2	1.571
Perform laparoscopic gynecologic surgery	Procedures	2	1	1	1	2	2	1.571
Perform vulvar, vaginal, cervical, and pelvic-floor procedures.	Procedures	2	1	1	1	2	2	1.571
Perform open gynecologic surgical procedures	Procedures	2	1	1	1	1	2	1.429
Provide contraception, fertility, subfertility, and reproductive planning care.	Prevention	2	2	2	3	2	3	2.429
Evaluate and manage ambulatory gynecologic conditions	Patient assessment	2	2	2	2	2	3	2.286
Coordinate consultations and multidisciplinary women's health care	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Document obstetric and gynecologic evaluations and management plans	Documentation	3	3	2	3	3	3	2.857

Occupational and Environmental Medicine | MSAIR 2.286

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Obtain occupational and environmental exposure histories	Patient assessment	2	2	1	2	2	3	2.143
Assess fitness for work, impairment, disability, and work restrictions.	Patient assessment	2	1	1	2	2	3	2
Evaluate and manage occupational injuries and illnesses	Treatment planning	2	2	2	3	2	3	2.429
Evaluate and manage environmentally related diseases	Treatment planning	2	2	2	3	2	3	2.429
Assess causation and work-relatedness of medical conditions	Clinical reasoning	2	2	2	3	2	3	2.429
Recognize and manage toxic exposures and poisonings	Emergency decision making	2	1	1	2	1	3	1.857
Interpret exposure, surveillance, and epidemiologic data	Diagnostic interpretation	2	3	2	3	2	3	2.571
Design and implement medical surveillance programs	Monitoring	2	3	2	3	2	3	2.571
Develop return-to-work and work accommodation recommendations	Treatment planning	3	2	2	3	2	2	2.286
Advise organizations on worker health, prevention, accommodations, and organizational risk.	Prevention	2	2	2	3	2	3	2.429
Identify workplace and environmental hazards and recommend controls	Prevention	2	2	2	3	2	3	2.429
Coordinate care with employers, insurers, public health agencies, and specialists	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Communicate occupational risks and fitness determinations to stakeholders	Communication	1	1	1	3	3	3	2.143
Document occupational evaluations, impairment assessments, and regulatory reports	Documentation	2	3	3	3	2	3	2.714
Lead workplace health, safety, and quality improvement initiatives	Quality improvement and systems-based practice	2	2	2	3	2	2	2.143

Ophthalmology | MSAIR 2.200

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Obtain ophthalmic histories and assess visual symptoms	Patient assessment	2	1	2	2	2	3	2.143
Perform comprehensive ophthalmologic examinations	Patient assessment	2	1	1	1	1	3	1.714
Diagnose medical and surgical eye diseases	Clinical reasoning	2	2	2	2	2	3	2.286
Interpret ophthalmic imaging and diagnostic testing	Diagnostic interpretation	3	3	2	3	3	3	2.857
Develop treatment plans for ophthalmic disorders	Treatment planning	2	2	2	3	2	3	2.429
Manage glaucoma and monitor disease progression	Monitoring	2	2	2	3	2	3	2.429
Manage retinal and macular diseases	Monitoring	2	3	2	3	2	3	2.571
Perform office-based procedures, including injections, lasers, and minor ophthalmic interventions.	Procedures	2	2	1	1	2	2	1.714
Perform cataract surgery	Procedures	2	1	1	1	2	3	1.857
Perform refraction and prescribe optical correction when indicated.	Diagnostic interpretation	3	3	2	3	3	3	2.857
Manage ophthalmic emergencies and acute vision-threatening conditions	Emergency decision making	2	1	1	1	1	3	1.714
Evaluate and manage pediatric ophthalmologic conditions	Patient assessment	2	1	1	2	2	2	1.714
Communicate diagnoses, prognoses, and treatment options to patients	Communication	2	1	1	3	2	3	2.143
Coordinate care with primary care physicians and subspecialists	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Document ophthalmologic evaluations, procedures, and treatment plans	Documentation	3	3	2	3	3	3	2.857

Orthopaedic Surgery | MSAIR 2.019

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Evaluate and manage adult musculoskeletal conditions	Patient assessment	2	2	1	2	2	3	2.143
Evaluate and manage pediatric musculoskeletal conditions	Patient assessment	2	1	1	2	2	3	2
Diagnose fractures, dislocations, and traumatic injuries	Clinical reasoning	2	2	2	3	2	3	2.429
Develop operative, non-operative, immobilisation, rehabilitation, and assistive-device plans.	Treatment planning	2	2	2	2	2	3	2.286
Perform operative management of fractures and dislocations	Procedures	2	1	1	1	1	3	1.714
Perform operative management of soft tissue disorders	Procedures	2	1	1	1	1	3	1.714
Perform operative management of degenerative musculoskeletal conditions, including arthroplasty.	Procedures	2	1	1	1	1	3	1.714
Select and interpret musculoskeletal imaging, laboratory tests, aspiration, and biopsy.	Diagnostic interpretation	3	3	2	2	3	3	2.714
Perform arthroscopic procedures	Procedures	2	1	1	1	2	2	1.571
Perform operative management of pediatric orthopaedic conditions	Procedures	2	1	1	1	1	2	1.429
Manage orthopaedic emergencies including compartment syndrome and open fractures	Emergency decision making	2	1	1	1	1	2	1.429
Monitor postoperative recovery and complications	Monitoring	2	2	2	2	2	3	2.286
Coordinate care with rehabilitation, primary care, and other specialists	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Communicate operative risks, outcomes, and rehabilitation expectations	Communication	2	1	1	3	3	3	2.286
Document orthopaedic evaluations, procedures, and treatment plans	Documentation	3	3	2	3	3	3	2.857

Otolaryngology | MSAIR 2.057

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Evaluate patients with ear, nose, throat, and head and neck complaints	Patient assessment	2	1	1	2	2	3	2
Diagnose and manage otologic, vestibular, and hearing problems.	Clinical reasoning	2	2	2	3	2	3	2.429
Diagnose and manage rhinologic disorders	Clinical reasoning	2	2	2	3	2	3	2.429
Diagnose and manage voice, swallowing, laryngologic, and airway disorders.	Clinical reasoning	2	2	2	1	2	3	2.143
Diagnose and manage head and neck neoplasms	Treatment planning	2	2	2	3	2	3	2.429
Evaluate and manage pediatric otolaryngologic conditions	Patient assessment	2	1	1	2	2	3	2
Evaluate and manage sleep-related breathing disorders	Clinical reasoning	2	2	2	3	2	3	2.429
Manage airway, epistaxis, deep neck infection, and other ENT emergencies.	Emergency decision making	2	1	1	1	1	3	1.714
Manage facial trauma and related injuries	Emergency decision making	2	1	1	1	1	2	1.429
Perform head and neck surgical procedures	Procedures	2	1	1	1	2	2	1.571
Perform facial plastic and reconstructive surgical procedures	Procedures	2	1	1	1	2	2	1.571
Perform diagnostic endoscopy and office-based ENT procedures	Procedures	2	1	1	1	3	3	2
Monitor postoperative recovery and treatment outcomes	Monitoring	2	2	2	2	2	2	2
Coordinate care with oncology, pulmonology, allergy, and speech therapy teams	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Document otolaryngologic evaluations, procedures, and treatment plans	Documentation	3	3	3	3	3	3	3

Pathology | MSAIR 2.543

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Review clinical information and determine appropriate pathologic evaluation	Patient assessment	3	3	2	3	2	3	2.714
Perform gross examination and specimen dissection	Procedures	2	1	1	1	2	3	1.857
Interpret histopathology specimens	Diagnostic interpretation	3	3	2	3	3	3	2.857
Interpret cytopathology specimens	Diagnostic interpretation	3	3	2	3	3	3	2.857
Interpret hematopathology specimens	Diagnostic interpretation	3	3	2	3	3	3	2.857
Interpret molecular pathology and genomic testing results	Diagnostic interpretation	3	3	2	3	3	3	2.857
Diagnose, grade, stage, and risk-stratify neoplastic and non-neoplastic disease.	Diagnostic interpretation	3	3	2	3	3	3	2.857
Correlate pathology findings with clinical, imaging, and laboratory information.	Diagnostic interpretation	3	3	2	3	3	2	2.571
Develop integrated pathologic diagnoses	Clinical reasoning	2	2	2	3	2	3	2.429
Generate pathology reports and diagnostic documentation	Documentation	3	3	2	3	3	3	2.857
Communicate critical pathology findings to treating physicians	Communication	2	2	2	3	2	3	2.429
Provide clinicopathological consultation and participate in multidisciplinary diagnostic decision-making.	Multidisciplinary collaboration	2	2	2	3	2	3	2.429
Monitor laboratory quality, diagnostic accuracy, workflow, and regulatory compliance.	Quality improvement and systems-based practice	3	3	2	3	2	1	2.143
Interpret autopsy and medicolegal pathology findings.	Diagnostic interpretation	2	2	2	2	2	2	2
Lead laboratory safety and quality improvement initiatives	Quality improvement and systems-based practice	3	3	2	3	2	2	2.429

Pediatrics | MSAIR 2.181

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Obtain age-appropriate pediatric histories	Patient assessment	2	1	1	2	2	3	2
Perform pediatric physical examinations	Patient assessment	2	1	1	1	1	3	1.714
Organize and prioritize care for multiple pediatric patients	Clinical reasoning	2	2	2	3	2	2	2.143
Develop differential diagnoses for pediatric presentations	Clinical reasoning	2	2	2	3	2	3	2.429
Diagnose and manage acute pediatric illnesses	Treatment planning	2	2	2	2	2	3	2.286
Diagnose and manage chronic pediatric conditions	Treatment planning	2	2	2	3	2	3	2.429
Recognize and manage pediatric emergencies	Emergency decision making	2	1	1	1	1	3	1.714
Select and interpret pediatric diagnostic tests	Diagnostic interpretation	3	2	2	3	3	3	2.714
Provide preventive pediatric care including immunizations	Prevention	3	2	2	3	2	3	2.571
Monitor growth, development, and treatment outcomes	Monitoring	2	2	2	3	2	3	2.429
Counsel children, adolescents, and families about health, development, and self-management.	Communication	1	1	1	3	2	2	1.714
Coordinate care transitions and multidisciplinary pediatric care	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Apply safeguarding procedures and advocate for vulnerable children and population health.	Prevention	2	1	1	3	2	2	1.857
Document pediatric evaluations and care plans	Documentation	3	3	2	3	3	3	2.857
Lead pediatric patient safety and quality improvement initiatives	Quality improvement and systems-based practice	2	2	2	3	2	2	2.143

Physical Medicine and Rehabilitation | MSAIR 2.095

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Obtain rehabilitation-focused histories and functional assessments	Patient assessment	2	2	1	2	2	3	2.143
Perform physiatric physical examinations	Patient assessment	2	1	1	1	1	3	1.714
Diagnose functional impairments and rehabilitation needs	Clinical reasoning	2	2	2	3	2	3	2.429
Develop comprehensive rehabilitation treatment plans	Treatment planning	2	2	2	3	2	3	2.429
Manage medical conditions affecting rehabilitation outcomes	Treatment planning	2	2	2	3	2	2	2.143
Perform injections for abnormalities of tone and movement	Procedures	2	1	1	1	2	2	1.571
Manage neurological rehabilitation after stroke, spinal cord injury, brain injury, and neuromuscular disease.	Treatment planning	2	2	2	3	2	3	2.429
Perform electrodiagnostic studies including EMG and nerve conduction testing	Procedures	2	2	1	1	2	2	1.714
Prescribe and manage assistive technologies and adaptive equipment	Treatment planning	2	2	2	3	2	2	2.143
Coordinate physical, occupational, and speech therapy interventions	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Monitor functional recovery and rehabilitation outcomes	Monitoring	2	2	2	2	2	3	2.286
Manage pain and musculoskeletal rehabilitation conditions	Treatment planning	2	2	2	2	2	2	2
Facilitate safe discharge planning and community reintegration	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Document rehabilitation evaluations, procedures, and care plans	Documentation	3	3	2	3	3	3	2.857
Lead rehabilitation quality improvement and patient safety initiatives	Quality improvement and systems-based practice	2	2	2	3	2	2	2.143

Psychiatry | MSAIR 2.133

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Conduct psychiatric interviews, mental status examinations, and functional assessments.	Patient assessment	2	1	1	3	2	3	2.143
Develop psychiatric formulations and differential diagnoses	Clinical reasoning	1	2	1	3	2	3	2.143
Assess suicide, violence, safeguarding, relapse, and psychiatric emergency risks.	Emergency decision making	1	1	1	2	2	3	1.857
Develop individualized psychiatric treatment plans	Treatment planning	2	2	1	3	2	3	2.286
Prescribe and manage psychopharmacologic therapies	Treatment planning	2	2	2	3	2	3	2.429
Provide individual psychotherapy	Procedures	2	1	1	3	1	3	2
Apply capacity, consent, confidentiality, and involuntary-care principles from medicolegal and ethical perspectives.	Clinical reasoning	3	2	1	3	2	2	2.143
Administer and manage somatic therapies including ECT when indicated	Procedures	2	1	1	1	2	2	1.571
Evaluate and manage substance use disorders	Treatment planning	2	2	2	3	2	2	2.143
Monitor treatment response, side effects, and clinical outcomes	Monitoring	2	2	2	3	2	3	2.429
Provide psychiatric consultation to other medical specialties	Multidisciplinary collaboration	1	1	1	3	2	3	2
Communicate diagnosis, risk, uncertainty, treatment options, and shared decisions.	Communication	2	1	1	3	2	3	2.143
Coordinate multidisciplinary mental health care	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Document psychiatric assessments and treatment plans	Documentation	3	3	2	3	3	3	2.857
Lead patient safety and quality improvement initiatives in mental health care	Quality improvement and systems-based practice	2	2	2	3	2	2	2.143

Radiation Oncology | MSAIR 2.143

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Perform radiation oncology consultations and patient evaluations	Patient assessment	2	1	1	2	2	3	2
Determine indications for radiation therapy	Clinical reasoning	2	2	2	3	2	3	2.429
Perform simulation for radiation treatment planning	Procedures	2	2	1	1	2	2	1.714
Contour target volumes and organs at risk	Procedures	3	3	2	3	2	3	2.714
Develop radiation treatment plans	Treatment planning	3	3	2	3	2	3	2.714
Evaluate and approve radiation treatment plans	Clinical reasoning	3	3	2	3	2	3	2.714
Supervise radiation treatment delivery	Procedures	2	2	2	1	2	2	1.857
Manage acute and late radiation-related toxicities	Treatment planning	2	2	2	2	2	3	2.286
Perform brachytherapy procedures	Procedures	2	1	1	1	2	2	1.571
Perform radiation oncology–related invasive procedures	Procedures	2	2	1	1	2	2	1.714
Monitor treatment response and disease status	Monitoring	2	2	2	3	2	2	2.143
Provide survivorship and long-term follow-up care	Monitoring	2	2	2	3	2	2	2.143
Communicate treatment goals, risks, and outcomes with patients	Communication	1	1	1	3	2	2	1.714
Coordinate care with medical oncology, surgery, and supportive care teams	Multidisciplinary collaboration	1	1	1	3	2	3	2
Lead radiation safety, quality assurance, and quality improvement initiatives	Quality improvement and systems-based practice	3	3	2	3	2	2	2.429

Radiology | MSAIR 2.543

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Evaluate imaging requests and select appropriate modality, protocol, and urgency.	Clinical reasoning	3	3	2	3	2	3	2.714
Interpret radiographic examinations and develop imaging-based differential diagnoses.	Diagnostic interpretation	3	3	2	3	3	3	2.857
Interpret computed tomography examinations	Diagnostic interpretation	3	3	2	3	3	3	2.857
Interpret magnetic resonance imaging examinations	Diagnostic interpretation	3	3	2	3	3	3	2.857
Interpret ultrasound examinations	Diagnostic interpretation	3	3	2	3	3	3	2.857
Interpret nuclear medicine and hybrid imaging studies	Diagnostic interpretation	3	3	2	3	3	3	2.857
Generate structured radiology reports	Documentation	3	3	2	3	3	3	2.857
Communicate urgent and unexpected findings to treating clinicians	Communication	2	2	1	3	2	3	2.286
Provide imaging consultation to referring physicians	Multidisciplinary collaboration	2	2	2	3	2	3	2.429
Recommend additional imaging or diagnostic evaluation when indicated	Clinical reasoning	3	3	2	3	2	3	2.714
Perform image-guided diagnostic procedures	Procedures	2	2	2	1	2	3	2.143
Perform image-guided therapeutic procedures	Procedures	2	2	2	1	2	2	1.857
Monitor procedural outcomes and complications	Monitoring	2	2	2	2	2	2	2
Ensure radiation protection, contrast safety, dose optimisation, and image quality.	Quality improvement and systems-based practice	3	3	2	3	2	2	2.429
Lead imaging workflow, quality improvement, and patient safety initiatives	Quality improvement and systems-based practice	3	3	2	3	2	2	2.429

General Surgery | MSAIR 2.114

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Evaluate patients with surgical diseases and conditions	Patient assessment	2	1	1	2	2	3	2
Develop operative, non-operative, and perioperative management plans.	Treatment planning	2	2	2	2	2	3	2.286
Determine surgical indication, urgency, timing, and operative approach.	Clinical reasoning	2	2	2	2	2	3	2.286
Obtain informed consent and counsel patients regarding surgical risk	Communication	2	1	1	3	2	2	1.857
Perform core open and minimally invasive general surgical procedures.	Procedures	2	1	1	1	1	3	1.714
Perform emergency surgical interventions	Procedures	2	1	1	1	1	3	1.714
Provide intraoperative management and decision-making	Clinical reasoning	2	2	2	1	2	3	2.143
Manage postoperative care and recovery	Monitoring	2	2	2	2	2	3	2.286
Recognize and manage postoperative complications	Clinical reasoning	2	2	2	2	2	3	2.286
Manage surgical emergencies, critical illness, and intraoperative emergencies.	Emergency decision making	1	1	1	1	1	3	1.571
Coordinate multidisciplinary perioperative care	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Interpret diagnostic studies relevant to surgical management	Diagnostic interpretation	3	3	2	3	3	2	2.571
Provide longitudinal follow-up after surgical treatment	Monitoring	2	2	2	2	2	3	2.286
Document surgical evaluations, procedures, and outcomes	Documentation	3	3	2	3	3	3	2.857
Lead surgical quality improvement and patient safety initiatives	Quality improvement and systems-based practice	2	2	2	3	2	2	2.143

Urology | MSAIR 2.105

Clinical task	Task category	C	D	T	P	G	S	Task-level AI-readiness
Assess patients with urinary, genital, and reproductive problems.	Patient assessment	2	1	1	2	2	3	2
Develop differential diagnoses for urologic conditions	Clinical reasoning	2	2	2	3	2	3	2.429
Develop operative and non-operative management plans for urologic disease	Treatment planning	2	2	2	2	2	3	2.286
Provide peri-procedural urologic care	Treatment planning	2	2	2	2	2	3	2.286
Perform major open, laparoscopic, robotic, and reconstructive urologic surgery.	Procedures	2	1	1	1	1	3	1.714
Manage functional, sexual, reproductive, and quality-of-life urologic problems.	Treatment planning	2	2	2	3	2	3	2.429
Perform minimally invasive laparoscopic and robotic procedures	Procedures	2	2	2	1	2	2	1.857
Perform office-based urologic procedures	Procedures	2	1	1	1	2	2	1.571
Manage urologic emergencies including obstruction, infection, and trauma	Emergency decision making	2	1	1	1	1	3	1.714
Interpret urologic imaging and diagnostic testing	Diagnostic interpretation	3	2	2	3	3	3	2.714
Monitor postoperative recovery and long-term outcomes	Monitoring	2	2	2	2	1	2	1.857
Counsel patients regarding treatment options and procedural risks	Communication	2	1	1	3	2	3	2.143
Coordinate care with oncology, nephrology, primary care, and other specialists	Multidisciplinary collaboration	1	1	1	3	2	2	1.714
Document urologic evaluations, procedures, and treatment plans	Documentation	3	3	2	2	3	3	2.714
Lead quality improvement and patient safety initiatives in urologic practice	Quality improvement and systems-based practice	2	2	2	3	2	2	2.143