Public Safety Medicine

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I have no disclosures to make.
Disclaimers

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Analysis

- Risk of sudden incapacitation
- Inability to perform the essential job functions
- [Medications]
- Relevant guidance
Case 1: Vision

- 28 yo police officer diagnosed with nasopharyngeal carcinoma.
- The cancer spread to his left eye. Surgery done for enucleation of his left eye. Underwent chemotherapy and radiation therapy.
- Now ready to return to work.
Case 1: Vision

- Underwent driving test with the police department – Passed
- Underwent gun range qualification – Passed as a high scoring marksman
- Able to do tactical training without any difficulty
What is the issue: LEO

- Sudden incapacitation: No an issue
- Inability to do the job:
  - Emergency driving
  - Building searches
What is the issue: FF

- Sudden incapacitation: No an issue
- Inability to do the job:
  - Emergency driving
LEOs require binocular vision. In monocularity (using one eye at a time for vision), some depth perception is possible, but stereopsis (true 3-D) viewing is not obtained. Although the literature regarding monocularity and accident risk is mixed, adaptive factors need consideration. In addition to scanning (turning head or eyes side to side to enhance the visual field), monocular drivers often slow down their vehicle speed, especially in non-familiar areas. This is in direct contrast to the essential function of pursuit driving which requires high-speed driving in a variety of areas.
Monocular Vision: NFPA 1582

- Category A
9.12.3.1

(2) Monocular vision, stereopsis without fusional capacity, night blindness, or loss of peripheral vision (i.e., horizontal field of vision less than 110 degrees in each eye) compromise the member’s ability to safely perform essential job task 10.
(10) Operating fire apparatus or other vehicles in an emergency mode with emergency lights and sirens
A.9.12.3.1(3) (...) As of the writing of this section the DOT does not allow monocular persons to hold a commercial driver's license. In view of this and the increased dependence on visual cues when driving emergency vehicles, monocular fire fighters should be restricted from driving fire apparatus and other emergency vehicles.
Case 2: Seizure disorder

- 43 yo firefighter falls off the back of the fire truck at a fire scene. LOC, seizure noticed by co-workers. Wakes up in the ER and confusion noted.
- EEG shows bitemporal spikes in the temporal lobe as well as generalized spikes.
Case 2: Seizure disorder

- Started on anti-epileptic medications, advised not to drive for six months per state law.
- Allowed to return to work after being off for a period of eight months – You were not involved in the RTW!
Case 2: Seizure disorder

- After about two years, returns to clinic with history of falling out the back of the truck again.
- Taken to a local ER, found to have elevated alcohol level as well as non-compliance with anti-seizure medications noted.
Case 2: Seizure disorder

- EEG this time reported as normal.
- Upon further discussion with neurologist, it is determined that initial seizure was due to ETOH abuse and not primary epilepsy.
- Places himself in an ETOH treatment program.
- Requests RTW about 11 months later, seizure-free for two years.
What is the issue: FF/LEO

- Sudden incapacitation: Risk of seizure recurrence, substance abuse
- Inability to do the job:
  - Substance abuse
  - Medications?
  - Comorbidities
- Reliability/integrity
9.13.6.1* Physician Evaluation. Single unprovoked seizure and epileptic conditions, including simple, partial complex, generalized, and psychomotor seizure disorders, compromise the member’s ability to safely perform essential job tasks 8, 9, 10, 11, and 13, and the physician shall report the applicable job limitations to the fire department unless the member meets all of the following provisions:
(1) No seizures for the most recent consecutive 5 years after single unprovoked seizure.
(2) No seizures for the most recent consecutive 10 years if the applicant was diagnosed with epilepsy.
(3) Currently on a stable regimen of antiepileptic drugs for the most recent 5 years, or on no antiepileptic drugs for the most recent 5 years.
(4) Neurological examination is normal.
(5) Brain MRI is normal.
(6) Awake and asleep EEG studies with photic stimulation and hyperventilation are normal.
Seizure: NFPA 1582

- A.9.13.6.1

After a provoked seizure, with the precipitant identified and alleviated, the member can be cleared for duty if anticonvulsants are not prescribed and the conditions described in 9.13.6.1(2) through 9.13.6.1(5) are met.
Seizure: ACOEM LEO

- **Provoked Seizures with Low Risk of Recurrence**
  For the following situations, once the underlying cause has resolved and/or is being appropriately treated, restriction as related solely to the seizure is not recommended.

- **Provoked Seizures with High Risk of Recurrence**
  Same criteria as epilepsy.
Substance abuse: NFPA 1582

- **9.15.3.1** Substance abuse disorder according to DSM 5 criteria compromises the member’s ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13, and the physician shall report the applicable job limitations to the fire department.

- **9.15.3.2.2** Although there is a high recidivism rate with treatment, members shall be offered counseling/treatment because substance abuse disorder is a treatable illness.
Substance abuse: ACOEM LEO

- Appropriate treatment
- DSM-5 criteria for early remission
- Abstinence for 1 to 3 months (3 months for dependence)
Why do we have medical requirements in public safety occupations?

Example of Diabetes
Appeals court rules for former KC officer who accidentally shot truck driver after a diabetic reaction

A federal appeals court ruled Thursday in favor of a former Kansas City police officer who accidentally wounded an area truck driver after suffering a diabetic reaction. In September 2007, Ritchie, who has Type I diabetes, was working with homicide detectives and became intensely hungry. Ritchie recognized that as a hypoglycemic reaction from his diabetes and went with another officer to a convenience store for a doughnut and a soda.

After consuming the food, Ritchie walked out of the store and began firing his weapon. One bullet struck David W. Gardner, a truck driver who was delivering food to the store. Officers soon found a disoriented Ritchie walking down a nearby street.
While investigating the case, lawyers found evidence that Ritchie had passed out twice on duty because of his medical condition, with fellow officers removing his weapons from him each time.
Medical & Physical Fitness Standards
and
Procedures for Police Officer Candidates

Prescribed by the Municipal Police Training Council
Endocrine and metabolic systems. Requires a case-by-case assessment as to the control of the condition and the presence and severity of symptoms and complications to determine if the candidate is able to perform the essential functions of the position.

1. Uncontrolled Thyroid Disease.
2. Diabetes Mellitus.
3. Adrenal Dysfunction, including but not limited to, Addison's Disease and Cushing's Disease.
4. Symptomatic Hypoglycemia.
5. Untreated Thyroid Malignancy.
MEDICAL SCREENING GUIDELINES

IMPLEMENTATION MANUAL

FORM G-3
SECTION NINE – ENDOCRINE AND METABOLIC SYSTEMS

9.1 UNCONTROLLED THYROID DISEASE

9.2 DIABETES MELLITUS
Potential exclusibility requires a case by case assessment as to the control of diabetes and presence and severity of symptoms and complications.

9.3 ADRENAL DYSFUNCTION
Including, but not limited to, Addison’s disease and Cushing’s disease

9.4 INSULIN REACTIONS

9.5 ANY MALIGNANCY
Potential exclusibility requires a case by case evaluation of relevance to performance of essential tasks.

Relevant Essential Tasks:
1) Perform Numerous Physically Demanding Duties, e.g. Fight, Run, Pull, Carry, etc.
2) Endure Emotionally Stressful Circumstances, e.g. Domestic, Death Scene, Deadly Force, etc.
3) Endure Exposure to Numerous Environmental Circumstances, e.g. Cold, Heat, etc.
4) Work without Relief and Around the Clock.
5) Perform without Dysfunction During Irregular Work Schedule.
Commonwealth of Massachusetts
Human Resources Division
Physician’s Guide
Initial-Hire Medical Standards
(Effective June 6, 2003)
(m) Endocrine And Metabolic

1. Category A medical conditions shall include:
   - a. *uncontrolled* diabetes mellitus or diabetes controlled through use of an insulin pump.

2. Category B medical conditions shall include:
   - a. *diseases* of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland of clinical significance,
   - b. *nutritional deficiency disease* or metabolic disorder,
   - c. *diabetes mellitus* not covered in Category A,
   - d. any other endocrine or metabolic condition that results in an individual not being able to perform as a police officer.
Mississippi

27.3.1.3.2.1 Height/Weight has been annotated and the doctor has marked either satisfactory or excessive/deficient. If the applicant's weight exceeds the threshold weight values to the degree that a reasonable person should know to a moral certainty that the officer's performance/safety would be adversely affected, the condition must be corrected before admittance.
Why do we need medical standards?

- Consistency of determinations
- Transparency of determinations
- Not reinventing the wheel
Basis for Restrictions

- Risk of sudden incapacitation
- Physical inability to perform the essential job functions
- Cognitive inability to perform the essential job functions
Risk of Sudden Incapacitation

*Sudden incapacitation* means abrupt onset of loss of control of physical or mental function(s), whether reversible or not, which is likely to result in safety, performance or conduct issues that may undermine the agency's commitment to maintaining a safe working environment for all employees and others. (5 CFR 339)
Risk of Sudden Incapacitation

- Acceptable risk?
  - School bus driver with epilepsy
Risk of Sudden Incapacitation

- Severe hypoglycemia
- Seizure
- Syncope
- Psychosis
- Narcolepsy with cataplexy
Risk of Sudden Incapacitation

• Threshold of 1% per year
  • ACOEM (IACP)
  • FMCSA MRB
  • ICAO
  • NFPA
Cognitive inability to perform the essential job functions

- Dementia
- Medications
- Hypoglycemia
- Substance abuse
- Sleep deprivation
Physical inability to perform the essential job functions

- Blindness
- Limited range of motion of a joint
- Amputation
- Performance & METs
- Hearing loss & speech recognition
EJF: Definition

- Basic job duties that an employee must be able to perform, with or without reasonable accommodation

https://www.eeoc.gov/facts/ada17.html
https://askjan.org/topics/jobdesc.cfm
EJF

- Frequency – driving
- Criticality – shooting a firearm

- Determination by the employer
- Must be documented in writing

What they do vs.
what they might have to do
EJFs for LEOs

- Use of force (decision-making)
- Use of force (physical aspects)
- Emergency driving

- 50 to 400 EJFs

http://lib.post.ca.gov/Publications/JobDemands.pdf
http://www.michigan.gov/mcoles/0,4607,7-229-41624-161687--,00.html
Federal Law Enforcement Training Center
Use of Force Model
EJFs for FFs

- Fire-fighting tasks (including using tools and hoses)
- Wearing an SCBA
- Physical workload

www.iaff.org/HS/wfiresource/Seattle/Misc/FireFighterJobAnalysesSeattle.doc
www.mass.gov/anf/docs/hrd/cs/essential-functions/firefighter-essential-functions.doc
Existing Guidance in Public Safety

- NFPA
- CA POST
- ACOEM LEO
NFPA 1582

Standard on Comprehensive Occupational Medical Program for Fire Departments

www.nfpa.org/1582
ACOEM LEO Guidance

ACOEM Guidance for the Medical Evaluation of Law Enforcement Officers (by subscription)

www.leoguidance.org
Case 3: Medications

- 35 year old male
- Applicant (LEO or FF)
- History of recurrent deep venous thromboses and Factor V Leiden deficiency
- On life-long anticoagulation
- Currently takes warfarin
Case 3: Medications

- Postphlebitic syndrome with chronic bilateral leg pain
- Takes a combination of short-acting and long-acting oxycodone
- Questionable compliance with medications
Case 3: Medications

- Do you clear him?
- Why?
- Why not?
- How about novel anticoagulants?
Medications & public safety employees

- Potential effects on the FF/LEO’s ability to safely perform job functions
- Risk of sudden incapacitation
Warfarin: ACOEM LEO

- R – approved only if the officer is assigned to restricted duty
- Medication may cause significant bleeding (particularly intracranial), resulting in sudden incapacitation in case of altercation or fall.
Giordano v. City of New York

- 274 F.3d 740, 746 (2d Cir. 2001)
- Police officer on Coumadin after aortic valve prosthesis
Giordano v. City of New York

Giordano testified that Dr. Guzman "told [him] that because [he] take[s] Coumadin [he] could bleed to death in the event of a blow or physical attack and that [he] should put in [his] papers to retire."
Giordano v. City of New York

• [...] "a number of physicians, including two department vascular surgeons," who "were of the opinion that the anticoagulation needed for plaintiff's prosthetic aortic valve would preclude plaintiff from performing full duty because plaintiff could sustain catastrophic bleeding from even minor injuries."
Opioids: ACOEM LEO

- Long-acting oxycodone – approved only if assigned to restricted duties
- Short-acting oxycodone – approved only if taken off-duty (?)
NFPA – Applicants

- 6.24.1 Category A – chronic or frequent treatment with:
  - (1) Narcotics, including methadone
  - (3) Full-dose or low-dose anticoagulation medications or any drugs that prolong prothrombin time (PT), partial thromboplastin time (PTT), or international normalized ratio (INR)
NFPA – Incumbents

• “Full-dose or low-dose anticoagulation or any drugs that prolong prothrombin time, partial thromboplastin time, or international normalized ratio (INR) compromise the member’s ability to perform essential job task 8 due to the risk of internal bleeding from trauma (…)

• “Narcotics compromise the member’s ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 due to alterations in mental status including vigilance, judgment, and other neurologic functions”
Case 4: LEO with depression

- 50 yo, divorced, 24 years on the force
- Increasing feelings of worthless, depressed mood, sleep difficulties, anhedonia x 6 months
- Recently developed attendance problems at work
- Admitted passive SI to partner
- Accepted referral to EAP
- Sent to you for FFD
Case 4: LEO with depression

- Seen for FFD
  - History of MDD 5 years ago, following his divorce. Did well on sertraline, came off after 6 months
  - Admits to 4-5 beers per night, up from 0-1 a year ago
  - Denies plan for suicide, no HI ever
  - No psychotic symptoms
Case 4: LEO with depression

- Referred for psych evaluation
  - Test scores consistent with MDD
  - Substance use does not seem to be the primary issue
  - Cooperative with testing and consistency of responses is high
- Agrees to go back to the psychiatrist who treated him in the past
  - Started back on sertraline and BIW counseling
  - Placed on restricted duty
What is the issue: LEO

- Sudden incapacitation: No an issue
- Inability to do the job:
  - Emotional instability, decision-making, impairment of alertness and cognition and psychomotor slowing impair performance in several domains of function.
- Risk of suicide / access to firearms
What is the issue: FF

- Sudden incapacitation: No an issue
- Inability to do the job:
  - Performing firefighting tasks, rescue operations, and other emergency response actions
  - Critical, time-sensitive, complex problem solving during physical exertion
  - Functioning as an integral component of a team
ACOEM LEO – RTW criteria

- Full remission as defined by DSM-5 (“During the past 2 months, no significant signs or symptoms of the disturbance were present”)
- Absence of symptoms which could cause occupational impairment in the past two months
ACOEM LEO – RTW criteria

- If requested by the police physician an evaluation by a mental health provider (PhD, PsyD, MD or DO), acceptable to police physician, who is informed of the functions, and demands of police work
- Compliance with treatment and ongoing evaluations
- No disqualifying side effects from treatment (e.g. medication, electroconvulsive therapy)
ACOEM LEO – RTW criteria

- Appropriate judgment and attention
- Appropriate inter-personal interaction
- Treatment of comorbidities (including substance abuse and sleep disorders)
- LEOs with current or past psychotic symptoms, suicidal ideation or attempt, or personality disorders will require additional evaluation.
ACOEM LEO

- Bipolar I (manic episode)
- Schizophrenia
- Other psychotic disorders
Case 4: LEO with depression

- After 10 weeks of sertraline and counseling – major improvements in mood, affect, energy level.
- No side effects from medication
- Compliant with treatment plan
- Has stopped drinking
- Psychiatrist is willing to clear him for return to work
Case 4: LEO with depression

- Regular evaluations on a monthly basis or more frequently, for at least 6 months for a first episode of depressive disorders and at least 24 months for recurrent depressive disorders
- Regular evaluations on a monthly basis or more frequently when the antidepressant is tapered
- Regular evaluations on a monthly basis or more frequently after discontinuing antidepressant, for at least 3 months
- Evaluation 6 months and 12 months after discontinuing antidepressant

However, since LEO had recurrent MDD:
- Careful consideration must be given to whether anti-depressant medication can be discontinued
- The police physician may also require ongoing follow-up to monitor for recurrence