State of Connecticut

OFFICE OF INSPECTOR GENERAL

Report Concerning the Deaths of Ronald Johnson and Tyler Cole while in the Custody of the Connecticut Department of Correction

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Inspector General

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ACKNOWLEDGEMENTS

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Connecticut Department of Correction

Department of Emergency Services and Public Protection, Connecticut State Police

Office of the Chief Medical Examiner

Recovery Network of Programs

INTRODUCTION

On July 19, 2024, at approximately 1:57 p.m., Ronald Johnson[1] was found unresponsive in his cell at the Garner Correctional Institution (Garner C.I.) in Newtown, Connecticut. Department of Correction (DOC) personnel provided medical aid as did Newtown EMS (Emergency Medical Service). These efforts were unsuccessful, and Johnson was pronounced deceased at 2:33 p.m. In his shirt pocket investigators found an Inmate Request Form on which Johnson had written that he believed that he was having a negative reaction to methadone.

Two days later, on July 21, 2024, at 9:16 a.m., Tyler Cole[2] was found unresponsive in his cell at Garner C.I. He was pronounced deceased at 10:03 a.m.

As required by statute[3], the Office of Inspector General (OIG) investigated these in-custody deaths. The results of that investigation are contained in this report.

The investigation establishes that both Johnson and Cole had recently enrolled in the methadone program at the Garner C.I. and were receiving daily doses of methadone. This program was administered by the Recovery Network of Programs (Recovery NP). Scientific literature regarding methadone overdose deaths suggests that they occur because (1) the initial dose of methadone is too high, (2) the dose is increased too rapidly, or (3) the prescribed methadone interacts with other drugs. The literature further concludes that most methadone overdose deaths occur within the first two weeks of its administration. In the present cases, tragically, all the above factors were present.

INVESTIGATION

Ronald Johnson

At the time of his death, Ronald Johnson was a thirty-year-old black male. In April 2024, he was arrested in New York on a Connecticut warrant and held at Rikers Island. He waived extradition and was transferred to the Connecticut Department of Correction (DOC) on May 14, 2024. Johnson was admitted to the Garner C.I. on June 12, 2024. He was an unsentenced prisoner and held on a $100,000 bond on a charge of violation of probation.

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[1] On July 19, 2024, Ronald Johnson was a black male, age 30.

[2] On July 21, 2024. Tyler Cole was a black male, age 32.

[3] General Statutes §51-277(a)(2)(B) provides: "[W]henever a person dies in the custody of the Commissioner of Correction, the Inspector General shall investigate and determine whether the deceased person may have died as a result of criminal action and, if so, refer such case to the Chief State's Attorney or state's attorney for potential prosecution."

Intake staff at Garner C.I. conducted a mental health and substance use evaluation of Johnson. He was moderately depressed and anxious. His opioid use was classified as moderate to severe. He also reported a history of polysubstance use that included marijuana, K-2, heroin, methamphetamine, and alcohol.

On July 19, 2024, at approximately 1:56 p.m., Correction Officer (CO) Jonathan Bello was conducting a routine tour of Garner C.I.'s Gulf Unit. Upon reaching cell #102, CO Bello unsecured the cell to allow Ronald Johnson's cellmate, Joshua Fiorillo, to re-enter the cell. Fiorillo had been out of the cell to spend time in the recreation yard. Earlier, at approximately 1:45 p.m., CO Bello had observed Johnson in cell #102. At that time, he appeared alert and was using his tablet. At 1:56 p.m., when Fiorillo entered the cell, he told CO Bello that Johnson was unresponsive. CO Bello tried to communicate with Johnson but received no response. Brian Snyder, LPN, who had been walking behind CO Bello, ran into the cell and started compressions. CO Bello and Snyder called a "Code White."

DOC custody and medical staff responded and started Cardiopulmonary Resuscitation (CPR) along with the use of an Automatic External Defibrillator (AED). Johnson was removed from cell #102 and taken by stretcher to the Admitting and Processing Unit. At 2:05 p.m., Newtown Ambulance Services arrived. The paramedics consulted with Doctor Rengas at Danbury Hospital who pronounced Johnson deceased at 2:33 p.m.

DOC personnel notified both the Connecticut State Police and the Office of the Chief Medical Examiner. They responded to the scene.

While removing Johnson off his bunk, a white pill fell to the floor. This pill was recovered and later identified as Vraylar by investigatory staff of the DOC. Neither Johnson nor his cellmate Fiorillo had been prescribed Vraylar.[4]

Found in Johnson's pant pocket was an Inmate Request Form dated two days before and addressed to the Addiction Services Unit. On the form was a handwritten note that read: "I think I could be having a bad reaction to the methadone because my feet are very swollen till the point that it is noticible I don't know for sure it's the medicine but Im just now getting swollen feet after Ive been taking it." [5]

Johnson entered the Garner C.I. methadone program on July 10, 2024. He was given a saliva drug test that was negative for opioids. His initial dose was set by Dr. Gill Katigbak, M.D. of Recovery NP at 30mg per day. He received that dose for two days and, on July 13, 2024, his dosage was increased pursuant to a prescription order issued by Christi Moreau, P.A. to 40 mg.

[4] Vraylar (cariprazine) is a prescription medicine used to treat bipolar or major depressive disorder. There was no evidence of cariprazine in his system at the time of his death. Moreover, it is important to note a discrepancy between the DOC's investigatory notes and OCME records, which described the pill as being fluoxetine hydrochloride (Prozac).

[5] The note is reprinted in the Appendix.

The Order Note for the new 40 mg prescription states, “Client inducted 7/10/24 and seeking efficacy: sweats, chills, and restlessness.”

Johnson received nine doses of methadone over nine days with his first dosage on July 11, 2024. Per Recovery NP records, Johnson’s methadone dosage history was as follows:

1. Methadone 30mgs given on 7/11/2024
2. Methadone 30mgs given on 7/12/2024
3. Methadone 40mgs given on 7/13/2024
4. Methadone 40mgs given on 7/14/2024
5. Methadone 40mgs given on 7/15/2024
6. Methadone 40mgs given on 7/16/2024
7. Methadone 40mgs given on 7/17/2024
8. Methadone 40mgs given on 7/18/2024
9. Methadone 40mgs given on 7/19/2024

As stated above, Johnson was found unresponsive in his cell on July 19, 2024, at 1:56 p.m.

The DOC Security Division investigated Johnson’s death. They identified three communications that Johnson made to people outside of Garner C.I. relating to his use of methadone. First, on July 17, 2024, at 9:03 p.m., Johnson made a phone call to his mother, Jamie Johnson. At the 5:06 time mark, Johnson stated, “I got put on methadone because that’s the only way I can, you feel what I’m saying? I’m not trying to get involved with nothing else in here.” He goes on to state, “The last time I was on it was August of last year, but I’m not trying to mess around with that shit.”

Second, on July 18, 2024, Johnson sent an E-message to Friend #1 stating, “My feet are super swollen. I don’t know whats wrong wit em I got to see a doctor my dreams are crazier my feet look like water balloons.”

Finally, on July 18, 2024, at 7:18 p.m., Johnson made a phone call to Friend #1. At the 2:42 time mark, Johnson states, “My feet are mad swollen.” The called person states, “It’s probably your liver.” Johnson replies, “No, it’s not my liver it’s that medication that they have me on.”

Staff from DOC’s Security Division attempted to interview cellmate Fiorillo and fifty-nine other inmates from the Gulf Unit. All were reluctant to provide pertinent information. Some speculated about inmates in the Unit stockpiling meds to exchange for commissary items.

In its report, the Security Division concluded: “The circumstances surrounding IM Johnson’s passing raised concerns about the potential ingestion of an unauthorized substance given to him by an [inmate] or an adverse reaction caused by the combination of prescribed medication and methadone.”

Following the submission of the Security Division's report, Deputy DOC Commissioner William Mulligan ordered that a Medical Review Panel examine the circumstances of Johnson's death along with the death of Tyler Cole.

Tyler Cole

Tyler Cole, a thirty-two-year-old black male, was arrested on June 13, 2024, on a charge of assault third degree. Unable to make his $25,000 bond, he was initially held at the Bridgeport Correctional Center (BCC). During a nurse intake health screening at BCC on June 13, 2024, Cole reported a twenty-year history of using recreational drugs. He reported daily use of heroin and daily use of hard liquor – Hennessy. Cole said that he had injected heroin and drank Hennessy that day that he had secreted into the police cell where he was placed. He also told the counselors at BCC that he had graduated college with a degree in psychology, and had served 1.5 years in the Marine Corps. At the time of the assessment, Cole was angry. He was detoxing from alcohol and Xanax. During his interview, he appeared to be experiencing auditory hallucinations and was preoccupied with internal stimuli. His mental health assessment indicated that Cole suffered from schizoaffective disorder. He was assigned a mental health classification of 5, the highest risk score.[6] Cole was transferred to Garner C.I. on June 20, 2024.[7]

On July 18, 2024, Cole met with representatives of the Recovery NP to be screened for participation in the methadone program at Garner C.I. His saliva drug test was negative for opioids. He was admitted into the program to start on July 19, 2024, with a starting methadone dose of 30 mg daily. After his first dose, the dose increased to 40 mg. The Order Note on the new 40 mg prescription states, "Client is new admit on 7/18 and seeking therapeutic dose. Increase 10 mg." Per Recovery NP records, Cole's methadone history was as follows:

1. Methadone 30mgs given on 7/19/2024
2. Methadone 40mgs given on 7/20/2024

Cole was assigned to cell #217 at Garner C.I.'s Gulf Unit. On July 21, 2024, at approximately 9:16 a.m., Correction Officer Marc Griffin was in the Gulf Unit escorting inmates for their methadone program daily dose. Near cell #217, Cole's cellmate, Malik Spears, told CO Griffin that there was something wrong with Cole. CO Griffin entered the cell and found that

[6] The DOC classifies all inmates based on their mental health needs. There are five classifications. Classification 1 is assigned to persons with no mental health history or current needs. Classification 5 is assigned to persons with crisis-level mental health disorders.

[7] The person who conducted the nurse health screening of Cole was Issac Folorunsho. It was subsequently learned that Folorunsho had fraudulently obtained his nursing credentials. The Connecticut Department of Health suspended his nursing license on September 18, 2024, and he surrendered his nursing license in October 2024.

Cole was unresponsive. He had foam emanating from his mouth and was cold to the touch. CO Griffin called a Code White.

DOC staff started CPR in combination with the AED machine. Cole was removed from his cell and transported to the Admitting and Processing Unit. Narcan was administered. At 9:24 a.m., Newtown EMS arrived. While at Garner, a paramedic contacted Danbury Hospital. At 10:03 a.m., Doctor Glen Blondstrum remotely pronounced Cole deceased.

A member of DOC's Security Division spoke to Cole's cellmate, Malik Spears. Spears stated that he last saw Cole alert and responsive at 3:00 p.m. on July 20, 2024. He also reported that Cole later fell asleep and did not wake up. Spears said that he heard Cole snoring at 4:00 a.m. Spears also denied any foul play with respect to Cole's death. He declined to provide any further details.

Office of the Chief Medical Examiner (OCME)

Ronald Johnson

Associate Medical Examiner Christopher Borck, M.D. performed an autopsy on the body of Ronald Johnson on July 20, 2024. Associate Medical Examiner Borck performed an external and internal examination of the body. In addition, blood and urine samples were submitted for toxicological analysis. The cause of death was reported to be"[a]cute intoxication due to the combined effects of methadone, olanzapine, and quetiapine." The manner of death was listed as "[a]ccidental (Took Drugs)."

The toxicology analysis from NMS Labs in Horsham, Pennsylvania reported positive findings for methadone, 2-ethylidene-1,5-dimethyle-3,3-diphenylpyrrolidine (EDDP),[8] olanzapine, and quetiapine.[9] The methadone level in the blood specimen was 1000 ng/mL and the level in the urine sample was 3900 ng/mL. The level of EDDP (a methadone metabolite) was 35 ng/mL in the blood specimen and 7300 ng/mL in the urine specimen.

The autopsy report includes the following comment regarding the methadone levels:

> "A reported range of blood concentrations in methadone-related fatalities is 400 to 1800 ng/mL. However, in cases of deaths from accidental overdose of methadone, especially in naïve (non-tolerant) users, postmortem blood concentrations of methadone as low as 140 ng/mL have been reported. [Because] the reported blood concentration range for individuals on methadone maintenance overlaps that found in fatalities in non-tolerant individuals, it may be difficult to distinguish between the two. It has been suggested

[8] EDDP is a methadone metabolite.

[9] All of these medications were taken by Johnson pursuant to prescriptions from the DOC.

that levels of the EDDP metabolite may be indicative of prior usage of the analyte and, therefore, tolerance."

In this regard, the toxicology report notes that the level of EDDP found in the urine (7300 ng/mL) and blood (35 ng/mL) was in the low range of levels present in methadone maintenance subjects. This could indicate that Johnson was a non-tolerant user of methadone.

The level of olanzapine (Zyprexa) in the blood was 160 ng/mL. Olanzapine is an antipsychotic medicine. The concentration of quetiapine (Seroquel) was 270 ng/mL in the blood specimen. Quetiapine is an antipsychotic medication.[10]

Tyler Cole

Associate Medical Examiner Shana Straub, M.D. performed an autopsy on the body of Tyler Cole on July 22, 2024. She performed an external and internal examination of the body. In addition, blood and urine specimens were submitted for toxicological analysis.

The cause of death was reported as [a]cute intoxication by the combined effects of methadone, clonazepam, diphenhydramine, and olanzapine." The manner of death was listed as "[a]ccidental (Ingested Medications)."

The toxicology analysis from NMS Labs reported positive findings for methadone, EDDP, olanzapine, diphenhydramine, and ammo clonazepam.[11] The methadone level in the blood specimen was 300 ng/mL and the level on the urine specimen was 4400 ng/mL. The level of EDDP (a methadone metabolite) was 24 ng/mL in the blood specimen and 3900 ng/mL in the urine specimen.

The report includes the same comment regarding the methadone levels that was part of Johnson's toxicology report, namely: "A reported range of blood concentrations in methadone-related fatalities is 400 to 1800 ng/mL. However, in cases of deaths from accidental overdose of methadone, especially in naïve (non-tolerant) users, postmortem blood concentrations of methadone as low as 140 ng/mL have been reported. [Because] the reported blood concentration range for individuals on methadone maintenance overlaps that found in fatalities in non-tolerant individuals, it may be difficult to distinguish between the two. It has been suggested that levels of the EDDP metabolite may be indicative of prior usage of the analyte and, therefore, tolerance."

In this regard, the toxicology report notes that the levels of EDDP found in the urine (3900 ng/mL) and blood (24 ng/mL) were in the low range of levels present in methadone

[10] A copy of Johnson's toxicology report is reprinted in the Appendix.

[11] All of these medications were taken by Cole pursuant to prescriptions from the DOC.

maintenance patients. These levels could indicate that Cole was a non-tolerant user of methadone.

The level of olanzapine (Zyprexa) in the blood sample was 200 ng/mL. Olanzapine is an antipsychotic medicine.

The level of diphenhydramine (Benadryl) was 110 ng/mL in the blood specimen. The level of amino clonazepam (a Klonopin metabolite) was 66 ng/mL in the blood sample and 140 ng/mL in the urine sample.[12]

Follow-up Meeting with OCME

On October 16, 2025, inspectors from the OIG met with Doctor Borck and Doctor Straub. Prior to the meeting, they were both provided with the methadone dosage histories of Johnson and Cole.

Doctor Borck affirmed that Ronald Johnson had a highly elevated amount of methadone in his system at his death. These levels resulted in acute intoxication manifesting itself in respiratory depression and fluid buildup. The excessive methadone had the effect of an opioid overdose, slowing Johnson's breathing and ultimately causing his death. The fluid buildup noted during his autopsy buttressed Johnson's complaint of swelling in his feet.

Doctor Straub noted that while the level of methadone in Cole was less than Johnson, it was still elevated even after just two doses. She agreed that Cole's death, like that of Johnson, was caused by acute intoxication from methadone along with the other prescribed drugs he had been taking. Like Johnson, Cole died from respiratory depression.

Both doctors found no other causes of death for Johnson or Cole other than acute intoxication cause by methadone and the other medicines that both were taking. Although Doctor Borck and Doctor Straub acknowledged the variations in the doses of methadone administered to Johnson and Cole, neither provided an opinion about the medical implications of these dosage decisions and changes. Both opined that an addiction specialist would be more qualified to comment on whether such dosage changes contributed to the acute intoxication that caused the deaths of Johnson and Cole.

Prescribed Medications

In addition to methadone, at the time of their deaths, DOC Health Services prescribed the following medications for Johnson and Cole:

[12] A copy of Cole's toxicology report is reprinted in the Appendix.

Ronald Johnson

1. Buspirone – 10 mg two times a day (BID). Busiprone is an antianxiety medication that may slow breathing when taken with other drugs.
2. Quetiapine (Seroquel) – 100 mg BID. Quetiapine is an antipsychotic medication that has sedating effects.
3. Olanzapine (Zyprexa) – 30 mg BID. Olanzapineis an antipsychotic medication that has sedating effects.

Tyler Cole

1. Quetiapine (Seroquel) – 100 mg three times per day.
2. Olanzapine (Zyprexa) – 10 mg tablet PO QHS plus I tablet at 1400.
3. Chlorpromazine (Thorazine) – 50 mg. Chlorpromazine is an antipsychotic medication that has sedating effects.
4. Diphenhydramine (Benadryl) – 50 mg cap BID. Diphenhydramine is an over -the-counter antihistamine that has sedating effects.
5. Loxapine Succinate – 50 mg BID. This is an antipsychotic medication that has sedating effects.
6. Clonazepam (Klonopin) – 1 mg BID. Clonazepam is a benzodiazepine that can slow or stop breathing.
7. Depakote – 500 mg qhs (once before bed) – Depakote treats seizures and bipolar disorder and can be sedating.

DOC Methadone Program

DOC's Office of Health Services provided an overview of the Garner C.I. methadone program. Garner C.I. is served by Recovery NP (Recovery Network of Programs). Garner does not have a full methadone dispensing room since it serves a limited population. The methadone is prepared offsite at the Recovery NP facility in Bridgeport, delivered to Garner C.I. in a locked box, then administered to inmates at Garner C.I. Recovery NP is a community addiction treatment provider based in Bridgeport, CT. CT DOC contracts with Recovery NP to provide medication-assisted treatment (MAT) services at the Bridgeport and Garner correctional facilities.

Recovery NP uses MethaSoft to prepare the doses of liquid methadone that are given to patients at Garner C.I. MethaSoft is a software/hardware application used to identify and prepare specific doses of liquid methadone via the MethaSoft titrating apparatus.

Recovery NP determines who is admitted to the methadone program at Garner C.I. The admission process requires an inmate request, meeting with addiction treatment counselors, consent, a physical exam, lab work, and an ECG. In addition, Recovery NP evaluates whether the applicant has a documented history of opioid use, documented detox or verification of treatment in the community.

Ronald Johnson met with Recovery NP advanced practice registered nurse (APRN) Kerry-Ann McPherson Everett and Recovery NP Addiction Treatment Counselor Ryan Mclaughlin on July 10, 2024, for his methadone treatment induction intake process. Based on a review of DOC and Recovery NP records, it does not appear that the physician who ordered the 30 mg initial dose (Dr. Katigbak) was present at this meeting.[13]

Tyler Cole met with Recovery NP physician assistant Charles Severo (aka CJ) and Addiction Treatment Counselor Ryan McLaughlin on July 18, 2024, for his methadone treatment induction intake process. Based on a review of DOC and Recovery NP records, it does not appear that the physician assistant who ordered the 30 mg initial dose, Christi Moreau, PA, was present at this meeting.[14]

Once an inmate is admitted to the program, dosage decisions are made by Recovery NP clinical staff. The typical initial dose of methadone is 30mg. Any change in dosage is determined by Recovery NP clinical staff.

Johnson's dose was increased to 40 mg daily on July 13, 2024. The order was entered by Anissa Amraoui-Assous, LPN who met with Johnson on July 13th. The 40 mg prescription was ordered by Christi Moreau, PA. It does not appear that PA Moreau physically met with Johnson.

Cole's dose was increased to 40 mg daily on July 19, 2024. The order was entered by Anissa Amraoui-Assous, LPN who met with Cole on July 19th. The 40 mg prescription was ordered by Christi Moreau, PA. It does not appear that PA Moreau physically met with Cole.

DOC Health Services advised the OIG that Recovery NP did have access to the medications prescribed for each inmate listed in the DOC's Electronic Health Record (EHR).

[13] In response to an inquiry by the OIG as to whether Dr. Katigbak was present at the July 10, 2024 meeting, Recovery NP responded, "Kerry-Ann McPherson is an APRN and can order/prescribe Methadone independently. Dr. Katigbak was not present at Garner [for] this meeting."

[14] In response to an inquiry as to whether Christi Moreau was present at the meeting with Cole, Recovery NP responded, "CJ is Charles Severo, PA. CJ met with the client at Garner on July 18, 2024. CJ cannot enter orders in the electronic health record while at Garner. Orders are entered in the EHR at Center for Human Services and may be signed by another provider in the clinic such as Christi Moreau or Dr. Katigbak to activate the order."

Medical Review Panels

The DOC Health Services Unit (HSU) conducted a medical review of circumstances surrounding the untimely deaths of Johnson and Cole. Copies of each report are reprinted in the Appendix.[15]

Ronald Johnson

The HSU report contains identifying information for Ronald Johnson and notes the date and time of his death. It then states:

> "It is noted in the Medical Incident Report that an empty capsule of illicit medicine fell from the offender's bunk when being removed to perform CPR. This medication is identified as Vraylar (by Nursing Report). Thus the possibility of medication overdose or suicide are possible circumstances leading to this death event.
>
> "HSU Central Office review of the available EHR documents indicates that this Offender was being treated for serious psychiatric illness, and he had recently been inducted into MAT, receiving Methadone. There are no overt indicators of medical illness, acute or chronic, found in the recent EHR that would pre-dispose this offender to sudden death.
>
> "However, it is noted that the current list of psychiatric medicines does have some interaction and caution to the use of Methadone.
>
> "On 7/11/24 the offender received MAT Induction of Methadone 30 MG (low dose). The EHR indicates that some documents were sent to the MAT vendor as part of the induction protocol, but the EHR does not contain a physical exam or an EKG for induction. Although it is noted that an EKG is not explicitly required for low dose Methadone use, but a physical exam is required.
>
> **"PMH**: PSA (Opiate/Stimulant/EtOH, THC), Tobacco abuse, Asthma, MDD-recurrent, PTSD
> **"Meds:** Methadone 40 mg 7/19/24, Zyprexa, Buspirone, (noted absence of asthma HFA inhaler)
> "Newly placed on the MD Sick Call list.

[15] The reports are silent as to who authored them or served on the panels. It is our understanding that only individuals within the DOC Health Services Unit participated in this review.

"Last medical contact: MH Programs 7/18/24, Discharged MH IPU 6/17/24."

Tyler Cole

This report contains identifying information for Tyler Cole and notes the date and time of his death. It then states:

"*HSU Central Office review of the available EHR documents indicates that this Offender was being treated for serious psychiatric illness, and he had recently been inducted into MAT on 7/19/24 receiving Methadone. There are no overt indicators of mental illness, acute or chronic, found in the recent EHR that would pre-dispose this offender to sudden death. A completed health maintenance physical exam was conducted on 6/24/24.* (Emphasis in original).

"It is noted that the current list of psychiatric medicines does have some interaction and precaution to the use of Methadone. And this patient was on two of the same psychiatric medications as a recent prior deceased offender, in combination with methadone. However, this offender also had several other psychiatric medications prescribed that carry interaction risks to methadone. Thus the possibility of medication interaction or overt overdose, or even suicide are possible circumstances relating to this death.

"The patient did not appear for DOT medications 7/20/24 afternoon or late PM, and he was not seen on 7/20/24 for MH therapy due to lockdown. He was seen by MH-APRN on 7/17/24. He was seen for the system-wide wellness evaluation on 7/18/24, citing no complaints. The extensive urine drug test was negative on 7/18/24.

"On 7/19/24 the offender received MAT induction of Methadone 30 MG. An induction EKG is not seen, however, a slightly abnormal EKG was done on 12/17/23.

"**PMH**: PSA (Opiate/EtOH), Tobacco abuse, Asthma,
"MEDS: Methadone 40 mg 7/20/24, Clonazepam 1 mg BID, Zyprexa, Seroquel, Depakote, Diphenhydramine, Hyoscyamine, Albuterol."

Scientific Literature Re: Methadone Administration

Several medical journals have published practice guides for methadone therapy, particularly the initial phase of such therapy called methadone induction. A review of four of those articles and their recommendations follows.

1. *Manitoba Opioid Agonist Therapy Recommended Practice Guide,* April 2023, The College of Physicians & Surgeons of Manitoba.

The Guide begins with a section styled, "GENERAL CONSIDERATIONS." Among the considerations discussed are the risks associated with methadone therapy – particularly overdose. In this regard, the Guide states: "The most common reason for death or non-fatal overdose from methadone treatment is overly aggressive prescribing/dose-titration during the first two weeks of treatment. The combination of overestimated cross-tolerance and underestimated serum-level accumulation of methadone is the main cause." (p.1)

In the section labeled "SPECIFIC CONSIDERATIONS," the Guide states:

"**[M]ethadone induction and titration MUST be approached slowly and cautiously."** (Emphasis in original) "The patient's dose should be titrated with a 'start low and go slow' approach, based on regular clinical assessment, until dose stability is reached." (p.3).

The Guide states that, as part of the preparation for induction, it is necessary to consider other medications the patient is taking. "If concurrent use of sedative/hypnotic medications and/or substances are a concern, and/or if comorbid conditions could contribute to increased risk of respiratory depression or opioid toxicity during induction, further consultation with an addiction medicine specialist is recommended." (p. 4).

The first two weeks of methadone therapy is referred to as the "early stabilization phase." The Guide emphasizes that:

"Methadone has a **significant risk of morbidity and mortality during the early stabilization phase.**

"Since methadone has a highly variable elimination half-life of 22 to 48 hours and the time to reach steady state can vary from 3 to 7 days, the clinical response can be difficult to predict. Additionally, methadone is a full agonist and has no ceiling effect. Thus, dose accumulation may lead to toxicity and serious harm if the induction dose is too high, or

the dose is increased too quickly. A dose that is barely adequate on day one can be toxic after a few days at the same dose." (Emphasis in original) (p.4).

The Guide recommends the following dosing protocol during the early stabilization phase:

"The initial dose should be between 10-30 mg of methadone per day for at least the first three days. Patients at higher risk for methadone toxicity . . . should start at no more than 5-20 mg. During the early stabilization phase for patients new to methadone, doses may be increased by 5 mg every 3-5 days, or by 10 mg increments every 7 or more days. During the early stabilization phase for patients new to methadone, providers may elect to prescribe a single dose increase of 10 mg after 5 days, but all subsequent 10 mg dose increases should occur no sooner than 7 days apart. Alternatively, a 5 mg dose increase may be considered 5 days after a 10 mg increase. **Caution surrounding serial 10mg dose increases is emphasized."** (Emphasis in original) (p.5).

As stated above, patients at higher risk for methadone toxicity require a different approach. The Guide states:

"**An initial dose of 5-20 mg with careful titration** is recommended for the high-risk patients described below." (Emphasis in original)

High-risk patients include the following:

a. "**Patients using benzodiazepines/Z drugs** are higher risk.[16]

b. **"Patients using other sedating/psychoactive medications.** Patients using antipsychotic and sedating antidepressants are at higher risk, particularly if the sedating drug was started or increased within the last two months, or the dose is moderate or high.[17]

c. "Patients struggling with alcohol use or Alcohol Use Disorder. (Emphasis in original) (p.6).

[16] Cole was using Clonazepam, a benzodiazepine.

[17] Both Johnson and Cole were taking the antipsychotic medications, Quetiapine and Olanzapine.

d. **"Patients with lower opioid tolerance** (e.g. . . . a recent period of abstinence due to incarceration . . .).[18] Tolerance is difficult to establish through history; therefore, if in doubt, it is safer to initiate methadone at a lower dose." (Emphasis in original) (p.7).

The Guide reports that "[u]rine drug testing (UDT) can be helpful in confirming the patient's self-reported use . . . **Initiate methadone at 5-10 mg for the recently abstinent with initial negative urine screening."** (Emphasis in original) (p. 7). In addition, **"[i]t is paramount to reassess patients frequently during the first two weeks of treatment – they are at the highest risk of fatal overdose during this period.**" (Emphasis in original) (p. 8).

In circumstances where a patient's urine test is negative for opioids, opioid agonist therapy (OAT) may still be appropriate. The dosing, however, must be adjusted. The Guide states:

> "However, if patients report recent abstinence and initial UDT results are negative for opioids – but OAT is indicated based on reliable history . . . Methadone could be considered in some circumstances . . . , but titration must be approached with caution. **The initial methadone dose should be 5-10 mg, titrated upwards in increments of 5 mg or less every five or more days,** with careful assessment of withdrawal symptoms and sedation."[19] (Emphasis in original) (p. 10).

2. *The ASAM National Practice Guideline For the Treatment of Opioid Use Disorder*, 2020 Focused Update, American Society of Addiction Medicine.

This publication is a comprehensive Guideline covering all aspects of opioid use disorder therapies, including methadone.

Table 4 of the Guideline lists contraindications and precautions for pharmacotherapy options. For methadone, the warnings and precautions include: "risk of life-threatening respiratory depression and death when used in association with benzodiazepines or other CNS [central nervous system] depressants including alcohol, other opioid, and illicit drugs." (p.28).

[18] Johnson had been incarcerated for 56 days before starting the methadone program. Cole had been incarcerated for 37 days before he began the program. Therefore, both appeared to have a significant period of abstinence.

[19] Both Johnson and Cole tested negative for opioids on their saliva drug screen tests.

Part 4 of the Guideline discusses methadone therapy. It begins with the observation that, "Methadone, a slow acting opioid agonist, is an effective treatment for opioid withdrawal management and treatment of opioid use disorder." (p. 36).

The Guideline addresses the initiation of methadone therapy with particular attention to dosing:

"Initiation

"Initial dosing of methadone depends on the level of physical dependence. The recommended initial dose ranges from 10 to 30 mg, with reassessment clinically indicated in 2 – 4 hours when peak levels have been reached . . . ."

"Given the risk of overdose in the first 2 weeks, tolerance is an important safety consideration. Federal law mandates that the initial dose cannot exceed 30 mg and the total dosage on the first day cannot exceed 40 mg. For individuals with no or low opioid tolerance (e.g. . . . . patients reentering the community after residential treatment or incarceration [with no agonist treatment] . . .) use a lower than usual dose (2.5 to 10 mg). Increase doses slowly and with careful monitoring for all patients, with particular attention to patients who have not used opioids in 5 or more days . . . ."

On the question of question of titration, the Guideline counsels caution:

"Titration

"Methadone has a long half-life, and care must be taken to avoid too rapid dose increases during the first 1 – 3 weeks of treatment to avoid increasing the dose before the full effect of the last dose has been realized. Doses do not correlate well with blood level. Dosing should be based on the patient's response and can vary widely between patients. Methadone should generally not be increased every day but rather increased no more than 10 mg approximately every 5 days based on patient's symptoms of opioid withdrawal or sedation. . . . A relatively low dose of methadone (e.g. less than 30 mg per day) can lessen acute withdrawal but is often not effective in suppressing craving. Patients should be educated to understand that the full benefits of methadone treatment take time and that it is common to feel unwell during the first few days of methadone titration." (p. 36).

Part 12 of the Guideline discusses pharmacotherapy for individuals in the criminal justice system. The Guideline asserts that such therapy can be effective for this population:

"Effectiveness of Pharmacotherapy

"Pharmacotherapy can effectively treat opioid use disorder among incarcerated individuals. … Most research on the effectiveness of pharmacotherapy for the treatment of opioid use disorder among incarcerated individuals had focused on methadone. . . . A randomized controlled trial of methadone in conjunction with counseling compared with counseling alone found that in the year following release from jail, those who were treated with methadone and counseling spent 7 times as many days in treatment for substance use disorder during the post-release year compared with those who had counseling alone. . . . A recent 2019 systematic review and meta-analysis . . . found that among 807 inmates (within prisons and jails), methadone treatment during incarceration increased community treatment engagement, reduced illicit opioid use and reduced injection drug use post-release.

"Treatment with methadone or buprenorphine while incarcerated results in significant reductions in deaths from overdose in the weeks and months following release from prison. … A retrospective analysis from the Rhode Island Office of State Medical Examiners found that among recently incarcerated individuals, there was a 60.5% reduction in deaths resulting from drug overdose in 2017 compared with 2016 following introduction of a new model for screening and treating incarcerated individuals with opioid use disorder within the Rhode Island Department of Corrections prison/jail system." (p. 60, 61).

As to the use of methadone therapy in prisons, the Guideline notes:

"Methadone

Treatment with methadone has been shown to have several beneficial effects for incarcerated individuals with opioid use disorders. Individuals treated with methadone inject less drugs, use less drugs after release, and are more likely to participate in community-based addiction treatment. Treatment with methadone lowered the rate of reincarceration during the 3-year period following first incarceration." (p. 61).

At the end of the Guideline are several appendices. Appendix III lists the advantages and disadvantages of various pharmacotherapy options to treat opioid use disorder. For methadone

listed as a disadvantage is the "higher risk for respiratory depression due to long half-life and stacking effect (requires more monitoring)." (p. 76).

3. *Methadone Safety: A Clinical Practice Guideline From the American Pain Society and College on Problems of Drug Dependance, in Collaboration With the Heart Rhythm Society,* The Journal of Pain, Vol. 15, No. 4, (April), 2014

The American Pain Society and the College on Problems of Drug Dependence, in collaboration with the Heart Rhythm Society commissioned an expert panel to develop a clinical practice guideline on safer prescribing of methadone for treatment of opioid addiction and chronic pain. The panel begins by framing the problem:

> "Methadone is a synthetic opioid used for the treatment of opioid addiction and for the treatment of chronic pain. The safety of methadone has been called into question by data indicating a large increase in the number of methadone-associated deaths. This increase appears largely related to the dramatic rise in the use of methadone for chronic pain, though a small proportion of deaths occur in patients treated for opioid addiction." (p. 322).

In discussing the challenges of ascribing causes of methadone-associated death, the panel notes, "it is widely acknowledged that the pharmacology of methadone may be associated with unique safety concerns. This pharmacology includes a long and variable half-life, potential interactions with multiple medications, [and other concerns]." (p. 322). Another risk associated with methadone administration is respiratory depression. (p. 324).

In Table 1, the panel describes various interactions of methadone with other drugs. The table lists diphenhydramine as adding to the respiratory depressing effect of methadone. Quetiapine and benzodiazepines increase the effect of methadone levels.

The panel makes several recommendations. With respect to the initiation of methadone, the recommendation is that "clinicians initiate methadone at low doses individualized based on the indication for treatment and prior opioid exposure status, titrate doses slowly, and monitor patients for sedation." (p. 328).

Although the initial starting dose to treat opioid addiction should be no more than 30 to 40 mg once daily, for opioid naïve patients, a different approach is recommended:

> "The panel recommends that clinicians consider those patients previously prescribed methadone, but who have not currently taken opioids for 1 to 2 weeks, opioid-naïve for the purpose of methadone reinitiation." For these patients, the recommendation is that "clinicians start methadone at low doses and titrate slowly." (p. 328.) The "overarching goal of a more conservative (lower) initial dosing regimens [is to] to prioritize patient safety. The rationale for the panel's recommendation for careful initiation and dose titration is related to the drug's long and highly variable half-life. Slow titration may reduce the risk of unintended accumulation that can occur as the serum concentration slowly rises toward steady state once a dose is selected. It is possible that rapid titration of the dose to a level that is efficacious for pain could be followed by toxicity over the course of the next few days or even weeks as the concentration rises. In the most serious outcome, this late toxicity could take the form of respiratory depression and death. Consistent with this principle is evidence showing that the period shortly following methadone initiation appears to be associated with increased risk of overdose and other adverse events. Although the half-life of methadone is usually assumed to be approximately 1 day and is rarely outside a range of 15 to 60 hours, in some reports the half-life is as high as 120 hours. . . . Without knowing the half-life in an individual patient, risk can be minimized only by cautious titration. Clinicians should be aware that the variable half-life of methadone does mean that some patients may not reach steady state (5 half-lives) for over 3 weeks. Therefore, it is critical that clinicians not increase the dose solely based on preset parameters but also evaluate patients clinically and withhold the dose if there is evidence of sedation." (p. 328).

The panel suggests that clinicians treat patients who have not taken opioids for 1 to 2 weeks as opioid-naïve. (p. 329). Therefore, requiring a lower dose/slower titration approach.[20]

In the section on medication interactions, the panel notes that several types of drugs can increase risk in patients using methadone. Included are drugs that have additive or synergistic sedative or respiratory suppressant effects. (p. 331). The panel observes: "In addition, like other opioids, methadone has sedating and respiratory depressant effects that may be augmented by use of medications and drugs (such as alcohol) with similar effects. In particular, a high proportion of cases of overdoses involving methadone occurred in patients with benzodiazepines in their systems." (p. 331).

[20] At the time they began methadone therapy, both Johnson and Cole had been incarcerated for longer than two weeks and both tested negative for opioids on their saliva tests.

In the Conclusion section, the panel states that "the recommendations in this Guideline also address aspects of patient risk assessment, education and counseling, dose initiation and titration, monitoring and medication interactions that are directly or indirectly related to the risk of respiratory depression, thought to be the primary cause of methadone-associated deaths." (p .332).

4. *Safe Methadone Induction and Stabilization, Report of an Expert Panel,* Journal of Addiction Medicine, Volume 7, Issue 6, p. 377-386, November/December 2013.

The American Society of Addiction Medicine convened this expert panel (the Action Group) to develop recommendations for the safe induction and stabilization of methadone patients in opioid treatment programs. This report from the Action Group followed. The Action Group did a comprehensive literature search to develop a consensus statement on methadone induction and stabilization. The Action Group found that the published data indicate that "deaths during methadone induction occur because the initial dose is too high, the dose is increased too rapidly, or methadone interacts with another drug." (p. 377).

At the beginning of the report, it noted that methadone is available in tablet, wafer, and liquid form all of which are bioequivalent and readily absorbed.

> "Methadone is stored extensively in the liver and secondarily in other body tissues. Its elimination half-life averages 24 to 36 hours at a steady state but may range from 4 to 91 hours. Because of this long half-life, achieving steady-state serum methadone levels (SMLs) – in which elimination is in balance with the amount of drug remaining in the body – requires 4 to 5 days on average, although it can take much longer in some individuals. When methadone is initiated, a rule of thumb is that half of each day's dose remains in the body and is added to the next day's new dose, producing rising SMLs (which can reach dangerous levels if doses are excessive)." (p. 379).

The Action Group further noted that, "[m]ethadone blood levels found in patients who die of methadone overdose sometimes are the same as methadone blood levels that are therapeutic for other individuals." (p. 379).

In the section of the report styled "Safety Profile," the Action Group emphasized that methadone generally has a favorable safety protocol and that mortality from all causes in methadone-treated patients is many-fold lower than in untreated patients with opioid addiction. In other words, the benefits of methadone administration outweigh the combined risks associated with it or leaving an opioid user untreated. The Action Group, however, observed the following:

"In general, 3 patterns of methadone use are associated with overdose deaths.

1. S*ingle overdose*: In some cases, overdose occurs with the initial dose. This typically occurs with accidental ingestion in an intolerant individual (such as a child) or in a previously tolerant user whose use has been interrupted long enough to cause a loss of tolerance. As with most other opioids, the primary toxic effect of excessive methadone is respiratory depression and hypoxia, sometimes accompanied by pulmonary edema and/or aspiration pneumonia.

2. *Accumulated toxicity*: More often, doses accumulate over several days and toxicity develops gradually. (Today's dose is not lethal, tomorrow's dose is not lethal, but the entire third day's dose combined with half of the second day's dose and one quarter of the first day's dose accumulate to a lethal level). Overly aggressive induction protocols often are the cause.

3. *Combining the prescribed methadone with another drug*: Methadone can be lethal when used in combination with other central nervous system (CNS) depressants, including other opioids, sedative or hypnotic drugs, or alcohol. In such cases, none of the agents alone is lethal, but when used in combination, a greater level of toxicity results. Benzodiazepines are the drugs most frequently reported in deaths attributed to combined use of methadone and another agent. Medications prescribed for psychiatric problems (such as . . . quetiapine . . .) also can increase methadone accumulation and risk of toxicity." (p. 379).

"Among patients in [opioid treatment programs], the largest proportion of methadone-associated deaths have occurred during the first 2 weeks (induction phase) of treatment, often because treatment personnel overestimate the patient's tolerance to opioids or the patient used opioids or other [central nervous system] depressants in addition to the methadone dose given as part of addiction treatment." (p.380).

The recommendations in the report are divided into three sections, (1) Methadone Induction (Weeks 1 and 2), (2) Early Stabilization Phase (Weeks 3 and 4), and (3) Late Stabilization Phase (Weeks 5+). As to the Methadone Induction section, the Action Panel begins with the following observation: "Induction begins with the first dose of methadone and extends through the first 2 weeks of methadone treatment. It is during this period that patients are at greatest risk of overdose and death, so safety precautions should be assigned very high priority." (p. 380).

The report observes that determining a patient's tolerance for methadone is difficult to establish and suggests several methods to estimate tolerance. The Action Group, however, states: "Loss of tolerance should be considered in any patient who has abstained from opioids for more than 5 days." (p.380).

The report recommends that the supervising physician determine, on a case-by-case basis, the initial dose of methadone and all subsequent dose adjustments. (p.381). The safety principle of "start low and go slow" applies to the induction dose. "The initial dose of methadone typically is in the range if 10–30 mg per day." (p. 381). The report qualifies this recommendation as follows:

> "In the following high-risk situations, an initial dose of 10-20 mg with careful titration is recommended:
>
> 1. The patient is older than 60 . . .
> 2. The patient recently used benzodiazepines or other sedatives . . .
> 3. The patient has used sedating drugs such as antipsychotics . . .
> 4. The patient is engaged in problem drinking or is alcohol-dependent . . .
> 5. The patient has a respiratory disorder . . .
> 6. The patient has cardiac risk factors . . .
> 7. The patient is taking prescribed medication that inhibits methadone metabolism or otherwise increases methadone's effects, such as . . . quetiapine . . . " (p.381)

After the first dose, the Action Group recommends: "The first dose should be titrated upward every five or more days in increments of 5 mg or less and accompanied by careful assessment throughout the first two weeks of treatment." (p.381).

FINDINGS

The investigation supports the finding of the following material facts.

Ronald Johnson

1. In April 2024, Ronald Johnson was arrested in New York on a Connecticut warrant. He was unable to post bond and was transferred to the Connecticut Department of Correction on May 14, 2024. Johnson was transferred to the Garner Correctional Institution in Newtown on June 20, 2024.

2. Garner C.I. conducted a mental health and substance use assessment of Johnson. He was moderately depressed and anxious. He reported a history of polysubstance use that included marijuana, K2, heroin, methamphetamine, and alcohol.

3. Johnson entered the Garner C.I. methadone program on July 10, 2024. Prior to being approved for the program, he gave a saliva sample that was negative for opioids. His initial dosage of methadone was 30 mgs daily. On July 13, 2024, Johnson's dosage increased to 40 mgs daily. According to Recovery NP records, he received nine doses of methadone over nine consecutive days, with the first on July 11, 2024, and the last on July 19, 2024.

4. On July 19, 2024, at approximately 1:56 p.m., Johnson was discovered in his cell unresponsive. Medical aid was provided but was unsuccessful and Johnson was pronounced deceased at 2:33 p.m.

5. Found in Johnson's pocket was an Inmate Request Form addressed to the Addiction Services Unit. On the form, there was a handwritten note wherein Johnson indicates that he believes that he is having a bad reaction to methadone because his feet are swollen.

6. During two recorded phone calls on July 18, 2024, Johnson complained that his feet were swollen which he attributed to the medication the DOC had him on.

7. The Office of the Chief Medical Examiner (OCME) performed an autopsy of Johnson's body on July 20, 2024. The cause of death was reported to be "Acute intoxication from the combined effects of methadone, olanzapine, and quetiapine." The manner of death was reported to be: "Accidental (Took Drugs)."

8. The OCME also obtained toxicology results for Johnson's blood and urine. The methadone level in the blood was 1000 ng/mL. The toxicology report noted that the range of blood concentrations in methadone-related fatalities was 400 to 1800 ng/mL. The report also indicated that Johnson had Olanzapine (Zyprexa) and Quetiapine (Seroquel) in his blood.

9. Ronald Johnson fit the profile of a non-tolerant (opioid-naïve) user of methadone. He was also receiving antipsychotic medications that had a sedating effect.

10. The DOC contracted with Recovery NP to administer the methadone program at Garner C.I. Recovery NP clinical staff was responsible for the dosage and delivery of methadone to inmates. DOC Health Services advised the OIG that Recovery NP did have access to the medications prescribed for each inmate listed in the DOC's Electronic Health Record (EHR).

11. The DOC Medical Review of the untimely death of Ronald Johnson acknowledged the possibility of a medication interaction with methadone. The review panel, however, made no conclusions as to the cause of his death.

Tyler Cole

1. Tyler Cole was arrested on June 13, 2024. He was unable to post the bond set on his case and was held at the Bridgeport Correctional Center (BCC). During intake screening at BCC, Cole reported long-term daily use of both heroin and hard liquor. He also suffered from schizoaffective disorder. Cole was transferred to the Garner C.I. on June 13, 2024.

2. On July 18, 2024, representatives of the Recovery NP screened Cole for participation in the methadone program at Garner C.I. At that time, he provided a saliva sample that was negative for opioids. He was admitted to the program to start on July 19, 2024, with an initial dose of 30 mgs daily. After his first dose, the dosage was increased to 40 mgs daily.

3. Per Recovery NP records, Cole received two doses of methadone:

a. Methadone 30mgs given on 7/19/2024 05:08
b. Methadone 40mgs given on 7/20/2024 03:12

4. On July 21, 2024, at approximately 9:16 a.m., Cole's cellmate informed a corrections officer that there was something wrong with Cole. The corrections officer entered the cell and found that Cole was unresponsive. He had foam emanating from his mouth and was cold to the touch. Medical aid was provided but was unsuccessful and Cole was pronounced deceased at 10:03 a.m.

5. The OCME performed an autopsy of Cole's body on July 22, 2024. The autopsy report indicates the cause of death to be, "Acute intoxication by the combined effects of methadone, clonazepam, diphenhydramine, and olanzapine." The manner of death was reported to be, "Accidental (Ingested Medications)."

6. The OCME obtained toxicology results from Cole's blood and urine. The methadone level in his blood was 300 ng/mL. The toxicology report stated that the blood concentrations for methadone-related fatalities was 400 to 1800 ng/mL. The report also noted that, for naïve (non-tolerant) users, postmortem blood concentrations as low as 140 ng/mL had been reported. The report also indicated that Cole had Olanzapine (Zyprexa), Diphenhydramine (Benadryl), and Amino Clonazepam (a benzodiazepine metabolite) in his blood.

7. Tyler Cole fit the profile of a non-tolerant (opioid-naïve) user of methadone. He was also receiving antipsychotic and other medications that had a sedating effect.

8. The DOC contracted with Recovery NP to administer the methadone program at the Garner C.I. Recovery NP clinical staff were responsible for dosage and delivery of methadone to inmates. DOC Health Services advised the OIG that Recovery NP did have access to the medications prescribed for each inmate listed in the DOC's Electronic Health Record (EHR).

9. The DOC Medical Review of the untimely death of Tyler Cole acknowledged the possibility of medication interaction with methadone as a possible circumstance relating to his death. The review panel, however, made no conclusions as to the cause of his death.

LAW

The responsibility of the OIG regarding in-custody deaths at the DOC is governed by General Statutes §51-277(a)(2)(B) which provides, "whenever a person dies in the custody of the Commissioner of Correction, the Inspector General shall investigate and determine whether the deceased person may have died as a result of criminal action and, if so, refer such case to the Chief State's Attorney or state's attorney for potential prosecution."

Neither General Statutes Chapter 886 (that includes Title 51) nor the penal code define "criminal action." For purposes of this report, I will apply such term in accord with its ordinary meaning – namely, conduct that violates the criminal law of Connecticut.

ANALYSIS

Although there does not appear to be any criminal action associated with the deaths of Ronald Johnson or Tyler Cole, their cases raise a serious question as to why two relatively young men would die of methadone overdose while held in a Connecticut correctional institution.

The use of methadone for opioid therapy poses a risk of death due to overdose. Death is usually due to respiratory suppression caused by a toxic level of methadone or enhanced respiratory suppression caused by the interaction of methadone with other drugs. The risk of death is most prevalent during methadone induction – the first two weeks of methadone therapy. Individuals are classified as opioid-naïve (non-tolerant) if they have not used opioids for one to two weeks. Experts recommend that these individuals start with a low dose of methadone that is increased slowly.

Significant medical errors were made in this case. The investigation suggests that both Johnson and Cole received initial doses of methadone that were too high for them, and their doses were increased too rapidly. The investigation further suggests that insufficient attention

was given to the fact that Johnson and Cole were receiving medications that enhanced the respiratory suppression effects of methadone. Both died within the first two weeks of methadone therapy.

At the time that he entered the methadone program at Garner C.I., Johnson had been held in custody in Connecticut for fifty-six days. His saliva test given as part of the methadone program's admission process was negative for opioids. He met the criteria for an opioid naïve patient. In addition, DOC records show that he was receiving the antipsychotic medications Quetiapine (Seroquel) and Olanzapine (Zyprexa) both of which have sedating effects. Recovery NP had access to these records.

These factors should have counseled against starting Johnson on a dosage of methadone of 30 mg per day and quickly increasing the dosage to 40 mg per day. As discussed in the above-referenced scientific literature, methadone has a long and highly variable half-life. In Johnson's case, it is likely that his body could not handle the amount of methadone that he was receiving each day, and it accumulated to a toxic level that (along with the Seroquel and Zyprexa) caused him to stop breathing. His death should have raised immediate red flags in DOC regarding whether other inmates were receiving medically appropriate doses of methadone.

When Cole entered the methadone program at Garner C.I. he had been incarcerated for thirty-seven days. He also tested negative for opioids. He should have been considered an opioid naïve patient. DOC records document that he received Quetiapine, Olanzapine, Diphenhydramine, and Clonazepam. Recovery NP had access to Cole's medication list. All of these risk factors counselled against him receiving a starting methadone dose of 30 mg per day. Certainly, his dose should not have been increased to 40 mg after only one day in the program. It is likely that methadone was starting to accumulate in his system; but the methadone's interaction with the antipsychotic drugs and the Clonazepam (a benzodiazepine) depressed his respiration to the point where he could not breathe.

As the above summary indicates, in several material respects, best practices were not followed:

1. The scientific literature on methadone therapy identifies the early stabilization phase (first two weeks of treatment) as posing the highest risk of overdose. There is no indication in the DOC or Recovery NP records that any special attention was given to Johnson or Cole during this period.

2. It is necessary to consider other medications that the patient is using when making an initial dosing decision. If sedative and/or antipsychotic medications are being used, consultation with an addiction medication specialist is recommended. There is no indication in the DOC or Recovery NP records that consideration was given to the fact that both Johnson and Cole were

taking medications that had a high potential to interact negatively with methadone, nor is there any indication of a consultation with an addiction medication specialist on this issue.

3. Methadone has a highly variable half-life that can result in dose accumulation leading to toxicity if the initial dose is too high or increased too rapidly. This is a particular concern for high-risk patients. High-risk patients should receive an initial daily dose of 5 to 20 mg with careful titration. High-risk patients are those that (a) are using benzodiazepines, (b) are using sedating or psychoactive medications, (c) patients struggling with alcohol use, or (d) patients with low opioid tolerance. Both Johnson and Cole fit the criteria for high-risk patients.

4. During the initial stabilization phase for high-risk patients, doses should be increased by no more than 5 mg every 3 to 5 days or by 10 mg every 7 or more days.

5. Patients who test negative for opioids should be considered opioid naïve, and their initial dose of methadone should be no more than 5 to 10 mg titrated up in increments of 5 mg or less.

Applying these best practices, Johnson and Cole should have been prescribed no more than 20 mg of methadone per day for the first three days of therapy. Perhaps, even a lower dose was more appropriate. Thereafter, the dose should have increased at the rate of no more than 5 mg every 3 to 5 days with careful assessment of their reaction. Instead, they received the typical initial dose of 30 mg that ramped up quickly to 40 mg with fatal consequences.[21]

It would be a mistake to view the tragedy of these deaths as a reason to discontinue the methadone programs at the DOC. This report should not be read to advocate for the cessation of this beneficial program. The evidence demonstrates that the availability of methadone to incarcerated individuals improves their chances of a successful reentry into their communities when they are released. Such persons tend to stay in treatment, avoid street drugs, and are less likely to return to prison than opioid addicted inmates who do not receive methadone.

Nevertheless, the DOC should take immediate and substantial steps to evaluate the on-going management and administration of this methadone program. In particular, greater attention, care and caution must be given to the initial dosing decisions and the possibility of adverse interactions with other medications being prescribed to inmates who are entered into the methadone program. Additionally, inmates receiving methadone should receive face-to-face, hands-on clinical evaluations by clinicians making dosage determinations before any dosage increases are ordered.

[21] In response to an OIG inquiry as to whether the typical starting dose for methadone treatment is still 30 mg daily, Recovery NP responded, “Yes, the typical starting dose for methadone is 30mg, but on day one clients may be given up to 50mg.”

On January 8, 2026, a meeting was held with DOC staff regarding the Johnson/Cole investigation. Prior to this meeting, the DOC was given a draft copy of this report. To their credit, it appears that the DOC has begun and will continue to make significant changes in their Medication Assisted Treatment (MAT) programs to improve their safety and efficacy. Among the changes that the DOC intends to implement are the following:

a. Employment of a medical doctor who is an addiction medicine specialist. This physician will be a resource for all DOC facilities that provide MAT.

b. Close evaluation of all medications that an inmate is taking as part of the evaluation for their participation in MAT. Vendors will be required to sign an attestation that such evaluation has been made.

c. Review of methadone induction protocols across all DOC facilities.

d. Suspension of methadone induction at the Garner C.I. DOC has made the judgment that the antipsychotic medications that many Garner inmates receive pose too high a risk of a negative interaction with methadone.

I commend the DOC for these efforts.

CONCLUSION

The investigation establishes that the deaths of Ronald Johnson and Tyler Cole were the result of acute intoxication caused by the methadone and other medications that both were taking. While tragic, it was not criminal. The Office of Inspector General will take no further action in this matter.

Date: January 12, 2026

ELIOT D. PRESCOTT
INSPECTOR GENERAL

ROBERT J. DEVLIN, JR.
FORMER INSPECTOR GENERAL

APPENDIX

CI. 2024-07-057

Inmate Request Form

Connecticut Department of Correction

CN 9601
REV
04/30/2021

Inmate name: Ronald Johnson		Inmate number: 429460
Facility/Unit:	Housing unit: G Unit	Date: 7/17/24
Submitted to: Addiction Services		

Request: I think I could be having a bad reaction to the methedone because my feet are very swollen till the point that its noticible I dont know for sure its the medicine but Im just now getting swollen feet after Ive been taking it

continue on back if necessary

Previous action taken:

continue on back if necessary

Acted on by (print name):	Title:

Action taken and/or response:

continue on back if necessary

Staff signature:	Date:

NMS LABS

NMS Labs
200 Welsh Road, Horsham, PA 19044-2208
Phone: (215) 657-4900 Fax: (215) 657-2972
e-mail: nms@nmslabs.com
Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director

CONFIDENTIAL

Corrected Report

Report Issued 08/16/2024 15:04
Last Report Issued 07/30/2024 14:17

To: **10049**
Connecticut Office of Chief Medical Examiner
Attn: Dr. James Gill
11 Shuttle Road
Farmington, CT 06032

Patient Name	Not Provided
Patient ID	24-14170 CCB
Chain	NMSCP374189
DOB	Not Given
Sex	Male
Workorder	24297677

Positive Findings:

Analyte	Result	Units	Matrix Source
Naloxone	**Presump Pos**	**ng/mL**	**001 - Femoral Blood**
Methadone	**1000**	**ng/mL**	**001 - Femoral Blood**
EDDP	**35**	**ng/mL**	**001 - Femoral Blood**
Olanzapine	**160**	**ng/mL**	**001 - Femoral Blood**
Quetiapine	**270**	**ng/mL**	**001 - Femoral Blood**
Methadone	**3900**	**ng/mL**	**003 - Urine**
EDDP	**7300**	**ng/mL**	**003 - Urine**

See Detailed Findings section for additional information

Testing Requested:

Test	Test Name
8051U	Postmortem, Basic, Urine (Forensic)
10052B	Postmortem, Expanded w/Vitreous Alcohol Confirmation, Blood (Forensic) (CSA)
9566B	Synthetic Cannabinoids Screen (Add-On), Blood

Specimens Received:

ID	Tube/Container	Volume/ Mass	Collection Date/Time	Matrix Source	Labeled As
001	Gray Stopper Glass Tube	10.75 mL	07/20/2024	Femoral Blood	24-14170
002	Red Stopper Glass Tube	4 mL	07/20/2024	Vitreous Fluid	24-14170
003	White Cap Plastic Container	15 mL	07/20/2024	Urine	24-14170

All sample volumes/weights are approximations.
Specimens received on 07/24/2024.

Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Naloxone	Presump Pos	ng/mL	1.0	001 - Femoral Blood	LC/TOF-MS
This test is an unconfirmed screen. Confirmation by a more definitive technique such as GC/MS is recommended.					
Methadone	1000	ng/mL	20	001 - Femoral Blood	LC-MS/MS
EDDP	35	ng/mL	20	001 - Femoral Blood	LC-MS/MS
Olanzapine	160	ng/mL	3.0	001 - Femoral Blood	LC-MS/MS
Quetiapine	270	ng/mL	50	001 - Femoral Blood	LC-MS/MS
Methadone	3900	ng/mL	200	003 - Urine	LC-MS/MS
EDDP	7300	ng/mL	200	003 - Urine	LC-MS/MS

Other than the above findings, examination of the specimen(s) submitted did not reveal any positive findings of toxicological significance by procedures outlined in the accompanying Analysis Summary.

Reference Comments:

1. EDDP (Methadone Metabolite) - Femoral Blood: 35 ng/mL

   EDDP (2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine) is the primary inactive metabolite of methadone.

   Twelve older adult chronic pain patients receiving 10-100 mg daily methadone had trough EDDP serum concentrations of 12-69 ng/mL.

   The span of methadone concentrations in fatalities overlaps with that of maintenance patients, and it is difficult to distinguish between the two on that basis alone. In some cases, it may be useful to quantitate EDDP, as the presence of the metabolite in substantial amounts may indicate prior usage of methadone and therefore tolerance to its effects.

2. EDDP (Methadone Metabolite) - Urine: 7300 ng/mL

   EDDP (2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine) is the primary inactive metabolite of methadone. Up to 50000 ng of Methadone plus Methadone Metabolites/mL of urine is present in maintenance subjects.

3. Methadone (Dolophine®) - Femoral Blood: 1000

   Methadone is a DEA Schedule II opioid analgesic used in the treatment of opiate addiction, and in the treatment of pain. Methadone is subject to abuse. Major metabolites of methadone include EDDP and EMDP. A single 10 mg oral dose of methadone produced a reported peak plasma concentration of 43 ng/mL at 2.1 hours. Patients with chronic pain who received 10 to 100 mg of methadone daily for 9 months had trough serum concentrations that ranged from 110 to 550 ng/mL. Chronic daily oral doses of 100 to 200 mg in tolerant patients produced reported peak plasma concentrations ranging from 570 to 1100 ng/mL. Methadone has a long elimination half-life, estimated to be between 15 and 55 hours. Adverse effects from methadone are characterized by sedation, dizziness, lethargy, pupillary constriction, constipation, respiratory depression, bradycardia and coma. Patients receiving methadone as part of a maintenance program may take as much as 180 mg daily. For treatment of pain or in abuse situations, the threshold toxic blood concentrations for methadone in the literature range from 100 to 1000 ng/mL. A reported range of blood concentrations in methadone-related fatalities is 400 to 1800 ng/mL. However, in cases of deaths from accidental overdose of methadone, especially in naive (non-tolerant) users, postmortem blood concentrations of methadone as low as 140 ng/mL have been reported. Since the reported blood concentration range for individuals on methadone maintenance overlaps that found in fatalities in non-tolerant individuals, it may be difficult to distinguish between the two. It has been suggested that levels of the EDDP metabolite may be indicative of prior usage of the analyte and, therefore, tolerance. The blood-to-plasma ratio for methadone is approximately 0.6 to 0.7.

Reference Comments:

4. Methadone (Dolophine®) - Urine: 3900

   Methadone is a DEA Schedule II narcotic analgesic used in the treatment of opiate addiction, and in the treatment of pain. Methadone is subject to abuse. Major metabolites of methadone include EDDP and EMDP. Patients receiving methadone as part of a maintenance program may take as much as 180 mg daily. However, doses of less than 50 mg have proven fatal to non-tolerant adults. Adverse effects from methadone are characterized by sedation, dizziness, lethargy, pupillary constriction, constipation, respiratory depression, bradycardia and coma.

5. Olanzapine (Zyprexa®) - Femoral Blood: 160

   Olanzapine is a drug used in the treatment of psychotic disorders (schizophrenia and bipolar mania). It is administered orally (5 to 10 mg daily) or by intramuscular injection (5 to 10 mg) for the relief of symptoms. Plasma concentrations required for effective treatment of psychotic episodes range from 20 to 80 ng/mL in adults. Schizophrenic patients stabilized with olanzapine at an average daily dose of 14 mg had steady-state olanzapine plasma concentrations averaging 37 +/- 26 ng/mL.

   The following side effects have been reported following use of this compound; disturbances of body temperature, cardiovascular complications, altered mental status and tardive dyskinesia (uncontrolled movements of extremities). In 3 reported fatalities involving acute overdoses of the drug, postmortem blood concentrations ranged from 800 - 4900 ng/mL. The blood to plasma ratio of olanzapine is approximately 0.6.

6. Quetiapine (Seroquel®) - Femoral Blood: 270

   Quetiapine is an antipsychotic analyte approved by the FDA for the management of the manifestations of psychotic disorders, including schizophrenia. It is a structural analogue of clozapine that addresses the positive and negative symptoms of schizophrenia, but does so with few of the traditional side effects of conventional or other atypical antipsychotic medications.

   Steady-state peak (1.0 to 1.5 hr) plasma levels following a TID daily regimen:
   225 mg/day - 286 ng/mL
   450 mg/day - 598 ng/mL
   750 mg/day - 828 ng/mL
   The plasma half-life is approximately 6 hr.

   After an apparent quetiapine overdose, a postmortem blood concentration of 170000 ng/mL was reported. In a case of suicide with quetiapine and 4 other drugs, postmortem cardiac blood contained 49000 ng/mL of quetiapine.

Sample Comments:

001 Report re-signed by alternate Toxicologist.

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded one (1) year from the date of this report; and generated data will be discarded five (5) years from the date the analyses were performed.

Workorder 24297677 was electronically signed on 08/16/2024 13:49 by:

Jennifer L. Swatek, M.S.F.S., D-ABFT-FT
Forensic Toxicologist

Analysis Summary and Reporting Limits:

All of the following tests were performed for this case. For each test, the compounds listed were included in the scope. The Reporting Limit listed for each compound represents the lowest concentration of the compound that will be reported as being positive. If the compound is listed as None Detected, it is not present above the Reporting Limit. Please refer to the Positive Findings section of the report for those compounds that were identified as being present.

Test 10052B - Postmortem, Expanded w/Vitreous Alcohol Confirmation, Blood (Forensic) (CSA) - Femoral Blood

Analysis Summary and Reporting Limits:

-Analysis by Enzyme-Linked Immunosorbent Assay (ELISA) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Barbiturates	0.040 mcg/mL	Gabapentin	5.0 mcg/mL
Cannabinoids	10 ng/mL	Salicylates	120 mcg/mL

-Analysis by Headspace Gas Chromatography (GC) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	10 mg/dL

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for: The following is a general list of analyte classes included in this screen. The detection of any specific analyte is concentration-dependent. Note, not all known analytes in each specified analyte class are included. Some specific analytes outside of these classes are also included. For a detailed list of all analytes and reporting limits, please contact NMS Labs. Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotics, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hypnosedatives, Muscle Relaxants, Non-Steroidal Anti-Inflammatory Agents, Opiates and Opioids.

Test 50015B - Methadone and Metabolite Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
EDDP	20 ng/mL	Methadone	20 ng/mL

Test 50015U - Methadone and Metabolite Confirmation, Urine - Urine

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
EDDP	200 ng/mL	Methadone	200 ng/mL

Test 52091B - Olanzapine Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Olanzapine	3.0 ng/mL		

Test 52112B - Quetiapine Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Quetiapine	50 ng/mL		

Test 8051U - Postmortem, Basic, Urine (Forensic) - Urine

-Analysis by Enzyme Immunoassay (EIA) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Barbiturates	0.30 mcg/mL	Benzodiazepines	50 ng/mL

Analysis Summary and Reporting Limits:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Cannabinoids	50 ng/mL	Opiates	300 ng/mL
Cocaine / Metabolites	150 ng/mL	Oxycodone / Oxymorphone	100 ng/mL
Methadone / Metabolite	300 ng/mL	Phencyclidine	25 ng/mL

-Analysis by Enzyme Immunoassay (EIA) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Amphetamines	500 ng/mL	Fentanyl / Acetyl Fentanyl	2.0 ng/mL
Buprenorphine / Metabolite	5.0 ng/mL	MDMA	300 ng/mL

-Analysis by Headspace Gas Chromatography (GC) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	10 mg/dL

Test 9566B - Synthetic Cannabinoids Screen (Add-On), Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
4-fluoro-BINACA 3,3-dimethylbutanoic acid	5.0 ng/mL	ADMB-CHMINACA	0.10 ng/mL
4-fluoro-MDMB-BINACA	0.10 ng/mL	ADMB-FUBINACA	1.0 ng/mL
5-fluoro-MDMB-PICA / 5-fluoro-EMB-PICA	0.10 ng/mL	APP-BINACA	0.10 ng/mL
5-fluoro-MDMB-PINACA / 5-fluoro-EMB-PINACA	0.20 ng/mL	FUBINACA 3,3-dimethylbutanoic acid	5.0 ng/mL
5-fluoro-PICA 3,3-dimethylbutanoic acid	5.0 ng/mL	FUBINACA 3-methylbutanoic acid	5.0 ng/mL
5-fluoro-PINACA 3,3-dimethylbutanoic acid	5.0 ng/mL	MDMB-4en-PINACA	0.10 ng/mL
5-fluoro-PINACA 3-methylbutanoic acid	5.0 ng/mL	MMB-FUBINACA	0.10 ng/mL

NMS LABS

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Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director

CONFIDENTIAL

Supplemental Report

Report Issued 08/18/2024 08:00
Last Report Issued 08/04/2024 08:01

To: **10049**
Connecticut Office of Chief Medical Examiner
Attn: Dr. James Gill
11 Shuttle Road
Farmington, CT 06032

Patient Name	Not Provided
Patient ID	24-14240 SS
Chain	NMSCP374527
DOB	Not Given
Sex	Male
Workorder	24298651

Positive Findings:

Analyte	Result	Units	Matrix Source
Naloxone	Presump Pos	ng/mL	001 - Femoral Blood
Methadone	300	ng/mL	001 - Femoral Blood
EDDP	24	ng/mL	001 - Femoral Blood
Olanzapine	200	ng/mL	001 - Femoral Blood
Delta-9 Carboxy THC	9.9	ng/mL	001 - Femoral Blood
Delta-9 THC	>50	ng/mL	001 - Femoral Blood
9-Hydroxyrisperidone	17	ng/mL	001 - Femoral Blood
Diphenhydramine	110	ng/mL	001 - Femoral Blood
7-Amino Clonazepam	66	ng/mL	001 - Femoral Blood
7-Amino Clonazepam	140	ng/mL	003 - Urine
Methadone	4400	ng/mL	003 - Urine
EDDP	3900	ng/mL	003 - Urine

See Detailed Findings section for additional information

Testing Requested:

Test	Test Name
8051U	Postmortem, Basic, Urine (Forensic)
10052B	Postmortem, Expanded w/Vitreous Alcohol Confirmation, Blood (Forensic) (CSA)
9560B	Synthetic Cannabinoids Screen, Blood

Specimens Received:

ID	Tube/Container	Volume/ Mass	Collection Date/Time	Matrix Source	Labeled As
001	Gray Stopper Glass Tube	8.75 mL	07/22/2024	Femoral Blood	24-14240
002	Red Stopper Glass Tube	3 mL	07/22/2024	Vitreous Fluid	24-14240
003	White Cap Plastic Container	45 mL	07/22/2024	Urine	24-14240

All sample volumes/weights are approximations.
Specimens received on 07/24/2024.

Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Naloxone	Presump Pos	ng/mL	1.0	001 - Femoral Blood	LC/TOF-MS
This test is an unconfirmed screen. Confirmation by a more definitive technique such as GC/MS is recommended.					
Methadone	300	ng/mL	20	001 - Femoral Blood	LC-MS/MS
EDDP	24	ng/mL	20	001 - Femoral Blood	LC-MS/MS
Olanzapine	200	ng/mL	3.0	001 - Femoral Blood	LC-MS/MS
Delta-9 Carboxy THC	9.9	ng/mL	5.0	001 - Femoral Blood	LC-MS/MS
Delta-9 THC	>50	ng/mL	0.50	001 - Femoral Blood	LC-MS/MS
9-Hydroxyrisperidone	17	ng/mL	1.0	001 - Femoral Blood	LC-MS/MS
Diphenhydramine	110	ng/mL	50	001 - Femoral Blood	LC-MS/MS
7-Amino Clonazepam	66	ng/mL	5.0	001 - Femoral Blood	LC-MS/MS
7-Amino Clonazepam	140	ng/mL	5.0	003 - Urine	LC-MS/MS
Methadone	4400	ng/mL	200	003 - Urine	LC-MS/MS
EDDP	3900	ng/mL	200	003 - Urine	LC-MS/MS

Other than the above findings, examination of the specimen(s) submitted did not reveal any positive findings of toxicological significance by procedures outlined in the accompanying Analysis Summary.

Reference Comments:

1. 7-Amino Clonazepam (Clonazepam Metabolite) - Femoral Blood:

   7-Amino clonazepam is a major metabolite of clonazepam. Clonazepam is an intermediate to long-acting benzodiazepine hypnotic used in the treatment of insomnia and in the prevention and treatment of various seizure disorders. It also possesses anxiolytic, and muscle relaxant properties. It shares the actions and adverse reactions of other CNS-depressants including drowsiness, sedation, impairment of cognition, judgment and memory, confusion and disorientation.

   Steady-state plasma concentrations at a daily dose of 6 mg are about 29-75 ng/mL for clonazepam and 23-137 ng/mL for 7-amino clonazepam.

2. 7-Amino Clonazepam (Clonazepam Metabolite) - Urine:

   7-Amino clonazepam is a major metabolite of clonazepam. Clonazepam is an intermediate to long-acting benzodiazepine hypnotic used in the treatment of insomnia and in the prevention and treatment of various seizure disorders. It also possesses anxiolytic, and muscle relaxant properties. It shares the actions and adverse reactions of other CNS-depressants including drowsiness, sedation, impairment of cognition, judgment and memory, confusion and disorientation.

3. 9-Hydroxyrisperidone (Risperidone Metabolite) - Femoral Blood:

   9-Hydroxyrisperidone is an atypically-structured antipsychotic agent and the main pharmacologically active metabolite of Risperidone. When administered directly it is commonly referred to as Paliperidone. Risperidone and 9-Hydroxyrisperidone are approximately equally active. Consequently, the clinical effect of the drug results from the combined concentrations of Risperidone plus 9-Hydroxyrisperidone. The rate of metabolism to 9-Hydroxyrisperidone is subject to genetic predisposition, meaning that extensive metabolizers (approximately 92% of the population) convert Risperidone rapidly to 9-Hydroxyrisperidone, while poor metabolizers convert at a much slower rate. The pharmacokinetics of the sum of Risperidone plus 9-Hydroxyrisperidone is similar for both extensive and poor metabolizers with an overall mean elimination half-life of approximately 24 hr.

   Adverse effects of 9-Hydroxyrisperidone include dizziness, drowsiness, nausea, orthostatic hypotension, anxiety, extrapyramidal symptoms such as dystonia and neuroleptic malignant syndrome. Combining with serotonin reuptake inhibitors may lead to serotonin syndrome. Acute overdose may cause tachycardia, EKG changes, confusion and seizures.

Reference Comments:

Plasma/Serum concentrations of 20 to 60 ng/mL for Risperidone plus 9-Hydroxyrisperidone are approximate therapeutic ranges reported in the literature.

Acute overdoses with Paliperidone typically have no or minimal adverse effects. Acute ingestion of 180 and 504 mg extended release Paliperidone resulted is serum concentrations of 170 and 883 ng/mL, respectively, approximately 40 hours after ingestion and the reported serum concentration following acute ingestion of 270 mg was 100 ng/mL 16 hours post-ingestion. A femoral blood concentration of 240 ng/mL was the only finding in an individual who died 2 weeks after a 525 depot IM injection of Paliperidone.

The blood to serum or plasma ratio is 0.7-0.8.

4. Delta-9 Carboxy THC (Inactive Metabolite) - Femoral Blood:

Delta-9 THC is the principle psychoactive ingredient of marijuana/hashish. Delta-9 carboxy THC (THCC) is the inactive metabolite of THC. The usual peak concentrations in serum for 1.75% or 3.55% THC marijuana cigarettes are 10-101 ng/mL attained 32 to 240 minutes after beginning smoking, with a slow decline thereafter. The ratio of whole blood concentration to plasma concentration is unknown for this analyte. THCC may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users. THCC is usually not detectable after passive inhalation.

5. Delta-9 THC (Active Ingredient of Marijuana) - Femoral Blood:

Delta-9 THC is the principle psychoactive ingredient of marijuana (cannabis, hashish). It is also the active component of the prescription medication Marinol®. Marijuana use causes relaxation, distorted perception, euphoria and feelings of well being, along with confusion, dizziness, somnolence, ataxia, speech difficulties, lethargy and muscular weakness.

After smoking a user-preferred 300 mcg/kg dose average plasma THC concentrations at 35 minutes were reported at 16.1 (range 4.7-30.9) ng/mL, and had declined to 1.5 (range 0.4-3.2) ng/mL after 190 minutes. Usual peak levels in serum for 1.75% or 3.55% THC marijuana cigarettes: 50-270 ng/mL at 6 to 9 minutes after beginning smoking, decreasing to less than 5 ng/mL by 2 hrs. Whole blood THC concentrations are typically half those in a corresponding plasma sample.

6. Diphenhydramine (Benadryl®; Ingredient of Benylin and Panadol; Nytol; Unisom) - Femoral Blood:

Diphenhydramine is an antihistamine with sedative and anti-emetic effects. It is rapidly absorbed following oral administration; however, it is frequently given IV. Patients taking this medication are usually warned against the operation of complicated machinery, because of its strong sedative effects.
Following a single 50 mg oral dose of diphenhydramine, peak plasma concentrations at 2.3 hr averaged 66 ng/mL.
Signs and symptoms of acute diphenhydramine toxicity include tremor, seizures, fever, respiratory depression and cardiac arrhythmias. The average blood diphenhydramine concentrations reported in fatal overdoses were 1400 ng/mL in infants, 4400 ng/mL in children and 15000 ng/mL in adults.
The blood to plasma concentration ratio for diphenhydramine is approximately 0.80.

7. EDDP (Methadone Metabolite) - Femoral Blood:

EDDP (2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine) is the primary inactive metabolite of methadone.

Twelve older adult chronic pain patients receiving 10-100 mg daily methadone had trough EDDP serum concentrations of 12-69 ng/mL.

The span of methadone concentrations in fatalities overlaps with that of maintenance patients, and it is difficult to distinguish between the two on that basis alone. In some cases, it may be useful to quantitate EDDP, as the presence of the metabolite in substantial amounts may indicate prior usage of methadone and therefore tolerance to its effects.

8. EDDP (Methadone Metabolite) - Urine:

EDDP (2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine) is the primary inactive metabolite of methadone. Up to 50000 ng of Methadone plus Methadone Metabolites/mL of urine is present in maintenance subjects.

Reference Comments:

9. Methadone (Dolophine®) - Femoral Blood:

   Methadone is a DEA Schedule II opioid analgesic used in the treatment of opiate addiction, and in the treatment of pain. Methadone is subject to abuse. Major metabolites of methadone include EDDP and EMDP. A single 10 mg oral dose of methadone produced a reported peak plasma concentration of 43 ng/mL at 2.1 hours. Patients with chronic pain who received 10 to 100 mg of methadone daily for 9 months had trough serum concentrations that ranged from 110 to 550 ng/mL. Chronic daily oral doses of 100 to 200 mg in tolerant patients produced reported peak plasma concentrations ranging from 570 to 1100 ng/mL. Methadone has a long elimination half-life, estimated to be between 15 and 55 hours. Adverse effects from methadone are characterized by sedation, dizziness, lethargy, pupillary constriction, constipation, respiratory depression, bradycardia and coma. Patients receiving methadone as part of a maintenance program may take as much as 180 mg daily. For treatment of pain or in abuse situations, the threshold toxic blood concentrations for methadone in the literature range from 100 to 1000 ng/mL. A reported range of blood concentrations in methadone-related fatalities is 400 to 1800 ng/mL. However, in cases of deaths from accidental overdose of methadone, especially in naive (non-tolerant) users, postmortem blood concentrations of methadone as low as 140 ng/mL have been reported. Since the reported blood concentration range for individuals on methadone maintenance overlaps that found in fatalities in non-tolerant individuals, it may be difficult to distinguish between the two. It has been suggested that levels of the EDDP metabolite may be indicative of prior usage of the analyte and, therefore, tolerance. The blood-to-plasma ratio for methadone is approximately 0.6 to 0.7.

10. Methadone (Dolophine®) - Urine:

    Methadone is a DEA Schedule II narcotic analgesic used in the treatment of opiate addiction, and in the treatment of pain. Methadone is subject to abuse. Major metabolites of methadone include EDDP and EMDP. Patients receiving methadone as part of a maintenance program may take as much as 180 mg daily. However, doses of less than 50 mg have proven fatal to non-tolerant adults. Adverse effects from methadone are characterized by sedation, dizziness, lethargy, pupillary constriction, constipation, respiratory depression, bradycardia and coma.

11. Olanzapine (Zyprexa®) - Femoral Blood:

    Olanzapine is a drug used in the treatment of psychotic disorders (schizophrenia and bipolar mania). It is administered orally (5 to 10 mg daily) or by intramuscular injection (5 to 10 mg) for the relief of symptoms. Plasma concentrations required for effective treatment of psychotic episodes range from 20 to 80 ng/mL in adults. Schizophrenic patients stabilized with olanzapine at an average daily dose of 14 mg had steady-state olanzapine plasma concentrations averaging 37 +/- 26 ng/mL.

    The following side effects have been reported following use of this compound; disturbances of body temperature, cardiovascular complications, altered mental status and tardive dyskinesia (uncontrolled movements of extremities). In 3 reported fatalities involving acute overdoses of the drug, postmortem blood concentrations ranged from 800 - 4900 ng/mL. The blood to plasma ratio of olanzapine is approximately 0.6.

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded one (1) year from the date of this report; and generated data will be discarded five (5) years from the date the analyses were performed.

Workorder 24298651 was electronically signed on 08/18/2024 06:56 by:

Daniel T. Anderson, M.S., D-ABFT-FT, ABC-GKE
Forensic Toxicologist

Analysis Summary and Reporting Limits:

All of the following tests were performed for this case. For each test, the compounds listed were included in the scope. The Reporting Limit listed for each compound represents the lowest concentration of the compound that will be reported as being positive. If the compound is listed as None Detected, it is not present above the Reporting Limit. Please refer to the Positive Findings section of the report for those compounds that were identified as being present.

Test 10052B - Postmortem, Expanded w/Vitreous Alcohol Confirmation, Blood (Forensic) (CSA) - Femoral Blood

Analysis Summary and Reporting Limits:

-Analysis by Enzyme-Linked Immunosorbent Assay (ELISA) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Barbiturates	0.040 mcg/mL	Gabapentin	5.0 mcg/mL
Cannabinoids	10 ng/mL	Salicylates	120 mcg/mL

-Analysis by Headspace Gas Chromatography (GC) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	10 mg/dL

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for: The following is a general list of analyte classes included in this screen. The detection of any specific analyte is concentration-dependent. Note, not all known analytes in each specified analyte class are included. Some specific analytes outside of these classes are also included. For a detailed list of all analytes and reporting limits, please contact NMS Labs. Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotics, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hypnosedatives, Muscle Relaxants, Non-Steroidal Anti-Inflammatory Agents, Opiates and Opioids.

Test 50012U - Benzodiazepines Confirmation, Urine - Urine

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
1-Hydroxymidazolam	5.0 ng/mL	Estazolam	5.0 ng/mL
7-Amino Clonazepam	5.0 ng/mL	Hydroxyethylflurazepam	5.0 ng/mL
Alpha-Hydroxyalprazolam	10 ng/mL	Hydroxytriazolam	5.0 ng/mL
Alprazolam	5.0 ng/mL	Lorazepam	10 ng/mL
Chlordiazepoxide	20 ng/mL	Nordiazepam	20 ng/mL
Clobazam	20 ng/mL	Oxazepam	20 ng/mL
Desalkylflurazepam	5.0 ng/mL	Temazepam	20 ng/mL
Diazepam	20 ng/mL		

Test 50015B - Methadone and Metabolite Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
EDDP	20 ng/mL	Methadone	20 ng/mL

Test 50015U - Methadone and Metabolite Confirmation, Urine - Urine

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
EDDP	200 ng/mL	Methadone	200 ng/mL

Test 52091B - Olanzapine Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analysis Summary and Reporting Limits:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Olanzapine	3.0 ng/mL		

Test 52198B - Cannabinoids Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
11-Hydroxy Delta-9 THC	1.0 ng/mL	Delta-9 THC	0.50 ng/mL
Delta-9 Carboxy THC	5.0 ng/mL		

Test 52436B - Risperidone and Metabolite Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
9-Hydroxyrisperidone	1.0 ng/mL	Risperidone	1.0 ng/mL

Test 52441B - Diphenhydramine Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Diphenhydramine	50 ng/mL		

Test 53588B - Benzodiazepines Confirmation, Blood (Forensic) - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
7-Amino Clonazepam	5.0 ng/mL	Diazepam	20 ng/mL
Alpha-Hydroxyalprazolam	5.0 ng/mL	Lorazepam	5.0 ng/mL
Alprazolam	5.0 ng/mL	Midazolam	5.0 ng/mL
Chlordiazepoxide	20 ng/mL	Nordiazepam	20 ng/mL
Clobazam	20 ng/mL	Oxazepam	20 ng/mL
Clonazepam	4.0 ng/mL	Temazepam	20 ng/mL
Desalkylflurazepam	5.0 ng/mL	Triazolam	2.0 ng/mL

Test 8051U - Postmortem, Basic, Urine (Forensic) - Urine

-Analysis by Enzyme Immunoassay (EIA) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Barbiturates	0.30 mcg/mL	Methadone / Metabolite	300 ng/mL
Benzodiazepines	50 ng/mL	Opiates	300 ng/mL
Cannabinoids	50 ng/mL	Oxycodone / Oxymorphone	100 ng/mL
Cocaine / Metabolites	150 ng/mL	Phencyclidine	25 ng/mL

-Analysis by Enzyme Immunoassay (EIA) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Amphetamines	500 ng/mL	Buprenorphine / Metabolite	5.0 ng/mL

Analysis Summary and Reporting Limits:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Fentanyl / Acetyl Fentanyl	2.0 ng/mL	MDMA	300 ng/mL

-Analysis by Headspace Gas Chromatography (GC) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	10 mg/dL

Test 9560B - Synthetic Cannabinoids Screen, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
4-fluoro-BINACA 3,3-dimethylbutanoic acid	5.0 ng/mL	ADMB-CHMINACA	0.10 ng/mL
4-fluoro-MDMB-BINACA	0.20 ng/mL	ADMB-FUBINACA	1.0 ng/mL
5-fluoro-MDMB-PICA / 5-fluoro-EMB-PICA	0.10 ng/mL	APP-BINACA	0.10 ng/mL
5-fluoro-MDMB-PINACA / 5-fluoro-EMB-PINACA	0.40 ng/mL	FUBINACA 3,3-dimethylbutanoic acid	5.0 ng/mL
5-fluoro-PICA 3,3-dimethylbutanoic acid	5.0 ng/mL	FUBINACA 3-methylbutanoic acid	5.0 ng/mL
5-fluoro-PINACA 3,3-dimethylbutanoic acid	5.0 ng/mL	MDMB-4en-PINACA	0.20 ng/mL
5-fluoro-PINACA 3-methylbutanoic acid	5.0 ng/mL	MMB-FUBINACA	0.20 ng/mL

HSU Medical Review- Untimely Death
Johnson, Ronald 429460

July 19/2024

Johnson, Ronald 429460, DOB 3/4/1994
30 year-old African American Male
Facility: GCI, G 102. M-2, MH-4

Code White: 7/19/20 at 1356 hours
Pronouncement of Death: 7/19/24 1431 hours (by Dr. Rengas EMS Medical Control Physician)
CT DME notified

It is noted in the Medical Incident Report that an empty capsule of illicit medicine fell from the offender's bunk when being removed to perform CPR. This medication is identified as Vraylar (by Nursing report). Thus the possibility of medication overdose or suicide are possible circumstances leading to this death event.

HSU Central Office review of the available EHR documents indicates that this Offender was being treated for serious psychiatric illness, and he had recently been inducted into MAT, receiving Methadone. There are no overt indicators of medical illness, acute or chronic, found in the recent EHR that would pre-dispose this offender to sudden death.

However, it is noted that the current list of psychiatric medicines does have some interaction and caution to the use of Methadone.

On 7/11/24 the offender received MAT induction of Methadone 30 MG (low dose). The EHR indicates that some documents were sent to the MAT vendor as part of the induction protocol, but the EHR does not contain a physical exam or an EKG for induction. Although it is noted that an EKG is not explicitly required for low dose Methadone use, but a physical exam is required.

PMH: PSA (Opiate/Stimulant/EtOH, THC), Tobacco abuse, Asthma, MDD-recurrent, PTSD

Meds: Methadone 40mg 7/19/24, Zyprexa, Seroquel, Buspirone, (noted absence of asthma HFA inhaler)

Newly placed on the MD Sick Call list.
Last medical contact: MH Programs 7/18/24, Discharged MH IPU 6/17/24.

HSU Medical Review- Untimely Death
Cole, Tyler 385184

July 22, 2024

Cole, Tyler 385184, DOB 4/12/1992
32 year-old African American Male
Facility: GCI, G-Block. M-2, MH-4

Code White: 7/21/20 at 0918 hours
Pronouncement of Death: 7/21/24 1003 hours (by Dr. Glen Blondstrum EMS Medical Control Physician)
CT DME notified

HSU Central Office review of the available EHR documents indicates that this Offender was being treated for serious psychiatric illness, and he had recently been inducted into MAT on 7/19/24, receiving Methadone. There are no overt indicators of medical illness, acute or chronic, found in the recent EHR that would pre-dispose this offender to sudden death. A completed health maintenance physical exam was conducted on 6/24/24.

It is noted that the current list of psychiatric medicines does have some interaction and precaution to the use of Methadone. And this patient was on two of the same psychiatric medications as a recent prior deceased offender, in combination with methadone. However, this offender also had several other psychiatric medications prescribed that carry interaction risks to methadone. Thus the possibility of medication interaction or overt overdose, or even suicide are possible circumstances related to this death.

The patient did not appear for DOT medications 7/20/24 afternoon or late PM, and he was not seen on 7/20/24 for MH therapy due to lockdown. He was seen by MH-APRN on 7/17/24. He was seen for the system-wide wellness evaluation on 7/18/24, citing no complaints. The extensive urine drug test was negative on 7/18/24.

On 7/19/24 the offender received MAT induction of Methadone 30 MG. An induction EKG is not seen, however a slightly abnormal EKG was done on 12/17/23.

PMH: PSA (Opiate/EtOH), Tobacco abuse, Asthma,

Meds: Methadone 40mg 7/20/24, Clonazepam 1mg BID, Zyprexa, Seroquel Depakote, Diphenhydramine, Hyoscyamine, Albuterol