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Caught in the Game: Signs of Jersey Finger Every Clinician Should Know

ALSO IN THIS ISSUE

Severe COVID-19 can increase the likelihood of new-onset medical conditions[1,2]

Pfizer

Heart Failure[3,4]

Severe COVID-19 was associated with a **45% higher likelihood[a] of post-discharge incident heart failure[3]** caused by myocardial inflammation and damage[3,4]

Hypertension[5]

20.6% of patients with severe COVID-19 had new-onset, persistent hypertension at 6-month follow-up[b]

Patients with severe COVID-19 were **2.23× more likely to develop persistent hypertension** than patients hospitalized with influenza

Diabetes[6-8]

Severe COVID-19 was associated with **increased risk for developing new-onset diabetes mellitus** 4 weeks after infection, in multiple studies

Mental Health Conditions[9]

Significantly higher rates of new-onset

Depression	Insomnia	Dementia
6.6% vs 4.3%, *P*<0.001	**4.9%** vs 3.2%, *P*<0.001	**3.0%** vs 1.9%, *P*<0.001

occurred in US veterans hospitalized with **severe COVID-19** compared with matched hospitalized COVID-19-negative US veterans[c]

Kidney Disease[10,11]

Acute kidney injury (AKI) that developed in patients with severe COVID-19 was associated with

- **A 43% lower likelihood of kidney recovery** in the 6 months following discharge (*P*<0.05)[10]
- **Significantly greater dialysis requirements** (**3.8%** vs 1.2%, *P*<0.05)[10]

compared with AKI that developed in patients hospitalized due to other causes

Lack of kidney recovery and a greater need for dialysis following severe AKI are both indicators of **new-onset chronic kidney disease (CKD)[10,11]**

Venous Thromboembolism (VTE)[12]

In a large national study (n=546,656), the **VTE event rate was significantly higher** (**4.4%** vs 2.7%, *P*<0.0001) **among patients hospitalized with COVID-19** compared with matched historic controls without COVID-19[d]

Talk to your patients about risk factors for progression to severe COVID-19[13]

 PP-C1D-USA-1883 September 2025

Severe COVID-19: the study methods clearly demonstrate that patients were hospitalized because of/due to COVID-19.
Hospitalized with COVID-19: the study methods indicate that patients were hospitalized and tested positive for COVID-19, however it is unclear whether COVID-19 was the primary diagnosis.

[a]Compared with hospitalized patients without COVID-19 after accounting for age, race/ethnicity, sex, heart failure risk factors, and cardiovascular medications.[3] [b]New-onset hypertension was also observed in 10.85% of nonhospitalized patients with COVID-19.[5] [c]During a follow-up period of 7 days to 3 months after COVID-19 diagnosis.[9] [d]COVID-19 inpatients (n=515,132) who were admitted on April 1, 2020, or later and discharged between April 1, 2020, and March 31, 2021, were matched 1:1 with historical controls who were admitted on April 1, 2018, or later and discharged by March 31, 2019.[12]

1. Centers for Disease Control and Prevention. Accessed June 27, 2024. https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/post-covid-conditions.html **2.** Centers for Disease Control and Prevention. Accessed May 9, 2024. https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects/index.html **3.** Salah HM, et al. *Nat Commun.* 2022;13(1):4117. **4.** Bashir H, et al. *Heart Fail Clin.* 2023;19(2S):e1-e8. **5.** Zhang V, et al. *Hypertension.* 2023;80(10):2135-2148. **6.** Chourasia P, et al. *J Clin Med.* 2023;12(3):1159. **7.** Zhang J, et al. *J Clin Med.* 2022;11(11):3094. **8.** Xie Y, et al. *Lancet Diabetes Endocrinol.* 2022;10(5):311-321. **9.** Patel N, et al. *J Clin Med.* 2022;11(12):3390. **10.** Nugent J, et al. *JAMA Netw Open.* 2021;4(3):e211095. **11.** Vaidya SR, Aeddula NR. Chronic Kidney Disease. [Updated 2022 Oct 24]. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK535404/ **12.** Deitelzweig S, et al. *J Thromb Thrombolysis*. 2022;53(4):766-776. **13.** Centers for Disease Control and Prevention. Accessed February 26, 2024. https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/underlyingconditions.html

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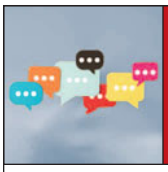


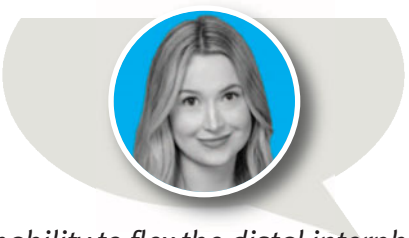
URGENT INTERACTIONS

"I heard this from Dr. Mona Hanna, the pediatrician who advocated for her patients after identifying the Flint, Michigan, water crisis, 'The eyes don't see what the mind doesn't know.' This is a great reminder to always continue to learn and grown in medical knowledge because there is so much we don't know."

— Lindsey E. Fish, MD, FCUCM
JUCM Editor in Chief

"It's important to understand that evaluation of chest pain is not one-size-fits-all."

— Michael Weinstock, MD
JUCM Senior Clinical Editor



"An isolated inability to flex the distal interphalangeal (DIP) joint after injury may seem minor, but it is pathognomonic for flexor digitorum profundus avulsion, which requires prompt surgical repair. Careful assessment of DIP flexion in all patients presenting to urgent care with finger trauma is essential to prevent missed diagnoses and delayed treatment."

— Alyssa Marchman, BS, author of "Diagnosis and Management of Flexor Digitorum Profundus Tendon Avulsion (Jersey Finger)" (page 17)

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Urgent Care Clinician Procedural Benchmarking Survey Results

Patrick O'Malley, MD; Albert Botchway, PhD; Laurel Stoimenoff, PT (ret.); and Lindsey E. Fish, MD, on behalf of the College of Urgent Care Medicine

Over the past 15 years, there have been significant changes in urgent care (UC) medicine. First and foremost, this is a rapidly expanding field of medicine as urgent care centers now provide more than 200 million visits a year performed in more than 14,000 locations. Additionally, urgent care centers have transitioned from 54% physician owners to only 27% physician owners over the same time period.[1] Urgent care clinicians are now comprised of 85% nurse practitioners (NPs) and physician assistants (PAs) and 15% physicians. Meanwhile, billing codes demonstrate decreased complexity of care and lower reimbursement. Procedurally, fewer radiographs are ordered, and fewer lacerations are repaired.[2]

Further, published data does not exist to examine other procedural or medical complexity aspects of care in the urgent care setting, so the underlying reasons for these changes—which are likely multifactorial—have never been specifically investigated. Training programs for physicians who may ultimately practice in the urgent care setting frequently include and evaluate procedures and procedural confidence.[3] Procedures performed by advanced practice clinicians in other settings including emergency departments and intensive care units have been examined[4] and demonstrated that procedural confidence grows with experience and leads to greater independence.[5]

The College of Urgent Care Medicine (CUCM) serves as the professional organization for all designations of urgent care clinicians. CUCM, in collaboration with the Urgent Care College of Physicians, represents and serves the urgent care clinician community through activities focused on advancing the specialty and inspiring excellence through clinical research, clinical education, clinical practice guidelines, and clinician integration into healthcare systems.[6] CUCM has identified specific procedural competencies that are expected of practicing urgent care clinicians.[7]

Patrick O'Malley, MD, is an emergency physician and creator of The Laceration Course and The Abscess Course from EB Medicine.

Albert Botchway, PhD, is a Research Associate Professor and Director of the Division of Statistics and Informatics at Southern Illinois University School of Medicine.

Laurel Stoimenoff, PT, provides administrative support to the College of Urgent Care Medicine and the Urgent Care College of Physicians.

Lindsey E. Fish, MD, is the Medical Director of Denver Health's Peña Urgent Care Clinic in Denver, Colorado, an Associate Professor of Medicine at the University of Colorado School of Medicine, and is Editor in Chief of *JUCM*.

With financial support from an Urgent Care Foundation grant, we aimed to identify the current state of urgent care clinicians' confidence in common urgent care procedures designated by CUCM as essential skills and the factors that impact this confidence. The intention was that this would become the benchmark survey of procedural confidence of current practicing urgent care clinicians.

Not Enough Scientific Power

As this was the first urgent care clinician survey conducted in this area, we encourage you to read, review, and reflect on the findings. Unfortunately, as we only had a response rate of 7.9% of CUCM members, the survey is not powerful enough to draw generalizable conclusions (response rate below 10%). When performing a research survey, researchers generally need a response rate of at least 25-30% to be considered good and ≥50% to be considered excellent. Despite this, we believe these findings

are important to share with the wider urgent care community. We encourage you to participate in research surveys in the future to help grow the body of urgent care original research.

What We Found

We administered this voluntary online survey (from September 22, 2023, through December 19, 2023) in compliance with research guidelines with questions that had a scaled response for confidence (0-10), with 10 being "extremely confident." If a respondent identified their level of confidence as a 7 or less, the survey was triggered to ask for the most relevant reason as to their lower level of confidence. The survey request was sent to the 2,922 CUCM clinicians, specifically; 156 (5%) doctors of osteopathic medicine (DOs); 922 (32%) doctors of medicine (MDs); 839 (29%) NPs; and 1,005 (34%) PAs.

The overall response rate was 7.9% (230/2,922), with responses from 119 (51.7%) MD/DOs; 45 (19.6%) NPs; and 66 (28.7%) PAs. The survey asked about confidence in 24 common urgent care procedures.

When analyzing all respondents collectively, we found that as a group, urgent care clinicians overall said they feel confident in the following procedures:

1. Laboratory test interpretation
2. Pelvic examination, including vaginal foreign body removal
3. Removal of foreign body, ear and nose
4. Fracture splinting or durable medical equipment placement
5. Subungual hematoma trephination
6. Incision and drainage (abscess, hematoma, paronychia)
7. Ingrown nail excision
8. Superficial laceration repair
9. Facial lacerations
10. Subcutaneous sutures
11. Digital blocks
12. Nursemaid's elbow reduction
13. Non-displaced and/or minimally displaced fractures, initial evaluation and care

However, when each clinician degree group (MD/DO, NP, PA) was analyzed discretely, some showed less confidence in certain procedures. The procedures with high confidence that were common among all groups included:

1. Laboratory test interpretation
2. Pelvic examination, including vaginal foreign body removal
3. Removal of foreign body, ear and nose
4. Fracture splinting or application of durable medical equipment
5. Subungual hematoma trephination
6. Incision and drainage (abscess, hematoma, paronychia)
7. Superficial laceration repair
8. Digital blocks
9. Initial evaluation and care of non-displaced and/or minimally displaced fractures

"It is critical that urgent care leaders understand that there appears to be significant variability in procedural confidence based on professional degree."

In comparing participant responses by training degree, there were some significant differences. NPs had increased odds of being less confident than MD/DOs in initial x-ray interpretation, electrocardiogram (ECG) interpretation, removal of corneal foreign body, removal of foreign body (eye), anterior nasal packing, ingrown nail excision, facial lacerations, subcutaneous sutures, digital blocks, nursemaid's elbow reduction, and phalangeal dislocation reduction. NPs had increased odds of being more confident than MD/DOs in placement of an IV, management of an IV, and complication/awareness of IVs. PAs had increased odds of being less confident than MD/DOs in initial x-ray interpretation, ECG interpretation, and ingrown nail excision.

Confidence increased with years of experience in urgent care medicine with the following exceptions: placement of an IV, management of an IV, complication/awareness of an IV, and follow-up of non-displaced and/or minimally displaced fractures. Additionally, confidence increased with years of experience for pelvic examination including removal of vaginal foreign body, subungual hematoma trephination, and digital blocks. The most common reasons for low confidence in all procedures were lack of training/knowledge and that the procedure is not offered in their urgent care center.

Our Interpretation

Among the 230 urgent care clinicians who participated in this survey, we found high confidence in several common procedures with the greatest confidence reported in laboratory test interpretation, incision and drainage, and

superficial laceration repair. Additionally, we identified several common procedures where confidence was lower, including placement of an IV, Morgans Lens irrigation, and removal of corneal foreign body. A contributing factor to these varying levels of confidence was training degree. This may reflect differences in the prerequisites for entering degree programs and the components of the degree programs themselves. For example, NPs are highly confident in IV-related procedures, likely due to their years of experience as nurses prior to entering NP programs, which differs from both MD/DO and PA training programs. It is critical that urgent care leaders understand that there appears to be significant variability in procedural confidence based on professional degree. Understanding common procedures where increased confidence is necessary would be beneficial in the creation of onboarding and training programs for clinicians when they begin their work in urgent care.

Years of practice in urgent care medicine appears to improve confidence in most urgent care procedures, which likely indicates that experience in the field also increases confidence. While confidence does not confer competence, there may be benefits to have experienced urgent care clinicians help train and assist newer urgent care clinicians. This may be challenging as the number of urgent care centers rapidly expands and more clinicians are needed. Of note, our participants had on average more than 10 years of clinical and urgent care experience, which indicates the need for proactive evaluation of procedural skills and continued opportunities for growth in this field even after many years of experience.

While the greatest reason for not having confidence in certain procedures was lack of training, we identified that many of the procedures were not offered at the respondents' urgent care center and/or are out of scope of care established by the organization or medical leadership. Further research is needed to understand the reasons behind why these services are not offered at the centers. Additionally, due to the fast-paced and busy clinical environment, many participants indicated that time and other clinical resources were limitations to performing these procedures. Overall, lack of procedural confidence may be contributing to the decreasing complexity and scope of urgent care medicine.

Conclusion

While our survey did not hold enough power for generalizability to the wider urgent care community, it does indicate several common urgent care procedures in which clinicians are highly confident as well as those procedures in which the clinicians identified lower confidence.[8] This information can help direct the focus for future educational programs for urgent care clinicians as well as future research into procedures performed in urgent care centers. Additionally, for our readers, we place a call to action to actively participate in future surveys to ensure strong original research in urgent care medicine.

"Overall, lack of procedural confidence may be contributing to the decreasing complexity and scope of urgent care medicine."

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References

1. Urgent Care Association. 2023 UCA White Paper: The Essential Nature of Urgent Care in the Healthcare Ecosystem Post-COVID-19. Available at https://urgentcareassociation.org/urgent-care-industry-white-paper/. Accessed May 15, 2024.
2. Barlow B, Sandler M, Ayers A. How urgent care Can Address Its Degrading Scope of Practice. J urgent care Med. 2022: 17(3);21-25
3. Dehmer J, Amos K, Farrell T, Meyer A, Newton W, Meyers M. Competence and Confidence with Basic Procedural Skills; The Experience and Opinions of Fourth-Year Medical Students at a Single Institution. Academic Med. 2013;88:682-687.
4. Katz J, Powers M, Amusina O. A Review of Procedures Performed by Advanced Practice Providers in Emergency Department and Critical Care Settings. Disease-a-Month. 2021;21:e101013.
5. Campo T, McNulty R, Sabatini M, Fitzpatrick J. Nurse Practitioners Performing Procedures with Confidence and Independence in the Emergency Care Setting. Adv Emergency Nursing J. 2008;30;153-170.
6. College of Urgent Care Medicine. Our Role. Available at https://urgentcareassociation.org/college-of-urgent-care-medicine/about-the-college/. Accessed May 15, 2024.
7. College of Urgent Care Medicine. Urgent Care Provider Competencies. Available at https://urgentcareassociation.org/wp-content/uploads/Urgent-Care-Provider-Competencies.pdf. Accessed May 15, 2024.
8. O'Malley P, Botchway A, Stoimenoff L, Fish LE. (On behalf of the College of Urgent Care Medicine). Benchmarking Urgent Care Clinicians' Confidence Level In Common Procedures: A Quantitative Survey Study. Davidoff TQ (ed). Urgent Caring, A Peer Reviewed Publication. June 2025. Vol 9; Issue 2. https://urgentcareassociation.org/college-of-urgent-care-medicine/urgent-caring-publication/

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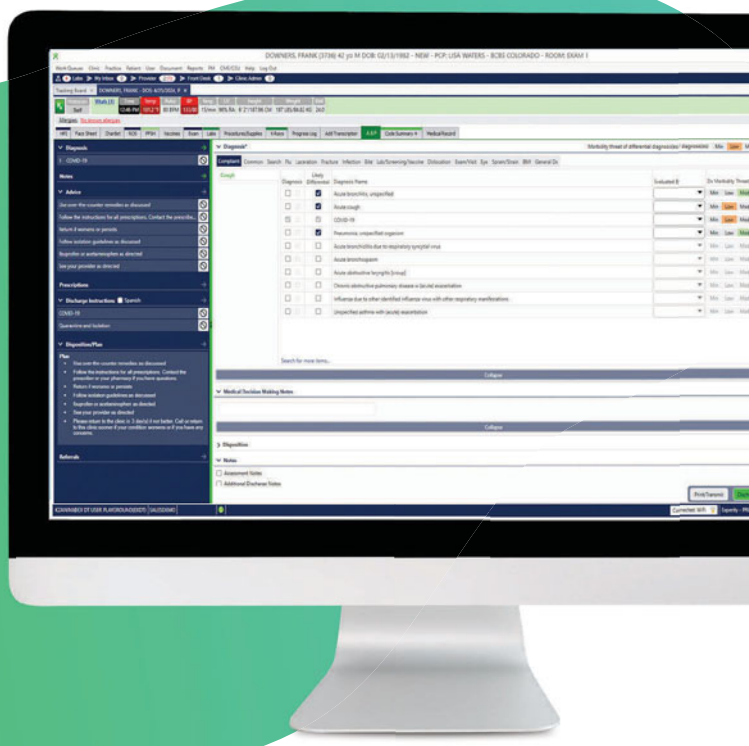

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My AI Journey and Practical Lessons You Can Use Now

Alan A. Ayers, MBA, MAcc

My artificial intelligence (AI) awakening wasn't a lightning bolt but a slow current—a series of small jolts. I kept encountering people who seemingly talked about AI all the time—fluent in the lingo and referred to by others as "AI gurus." From their conversations, it was clear they were putting AI into real operations—analyzing data, streamlining tasks, even building custom AI tools and agents. But it was still as if they were harboring a secret.

I realized these weren't magicians. They simply had been quietly putting in the hours and experimenting with AI the way you'd practice a new language—through immersion and actively conversing with the tool.

Meanwhile, I was still treating AI like an academic topic to speak and write about, not a daily habit I lived. I'd informed the industry on organization-level uses—front desk automation, ambient scribes for charting, revenue cycle intelligence—but when it came to my own leadership habits, the technology wasn't yet "real" to me.

It finally hit me: if my peers can differentiate themselves by their mastery AI and I haven't, then I'm the one falling behind.

Every leader is starved for time. I didn't have hours to wander the internet "playing with prompts." I needed practicality and structure. To jumpstart my skills and put AI straight to work, I enrolled in a professional education program at Rutgers University. The insights gained from the course were far greater than I had imagined.

Why Building AI Skills Is Critical

In business, credibility comes from results. It's results that bring value to organizations. And results are tilting toward those who can work with AI.

In a healthcare context, AI may refer to rules engines, optical character recognition, or machine learning algorithms, for example. When I reference AI here, I mean everyday tools that read and write text—like ChatGPT or Google Gemini. You give them instructions, and they produce drafts, summaries, comparisons, and outlines you can edit.

This type of AI has formed a wedge that's splitting the workplace. The "AI haves" pair their experience and knowledge with AI to deliver smarter, faster results, making themselves indispensable. The "AI have-nots," however, are stuck in the past—less productive, less creative, and ultimately, less relevant. This growing gap is separating people whose careers will soar from those who may stall and eventually fade.

The data mirrors my prediction. Microsoft's 2024 Work Trend Index found that three-quarters of global knowledge workers use generative AI at work, and many are bringing their own tools because they don't want to wait for a corporate plan. At the same time, just over half of employees who use AI say they're reluctant to tell their managers they're applying it to important tasks. If usage is surging and disclosure is lagging, the divide between AI haves and have-nots will widen invisibly—and quickly.[1,2]

There's a performance story here, too. A PricewaterhouseCoopers global analysis reported that industries most exposed to AI are already seeing roughly 3 times higher growth in revenue per employee than the least exposed sectors—a directional signal that capability with AI is translating into business outcomes.[3] Controlled studies echo this at the task level: When call-center agents were given an AI assistant, productivity rose about 14% overall with the largest gains for less-experienced workers. Also, in professional writing tasks, access to ChatGPT cut task time by around 40% and

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improved quality by about 18%.[4,5]

If you lead in urgent care—running center operations, managing throughput, supervising providers, or overseeing revenue cycle—that's the difference between keeping up and quietly slipping behind. Past success doesn't guarantee future relevance.

Quiet Adoption

Quiet adoption is the grassroots trend of employees independently using public AI tools to work faster and smarter without any official company mandate. This is happening for a simple reason: Facing immense pressure to be more productive, employees are using easily accessible AI to speed up their tasks and are no longer waiting for their companies to catch up.

The primary risk of quiet adoption is security vulnerability created when employees input confidential company data or HIPAA-protected patient information into unsecured, public AI platforms without any oversight.

If people are already using AI but not saying so, leaders should do 2 things now:

- **Open a dialogue.** Acknowledge AI is being used. Invite teams to share what tools they're trying and how they're using them, and make it safe to surface both wins and misses.
- **Set guardrails.** Be clear about what data is off-limits, when human review is required, and how to cite or verify sources. Focus on security and ethics—not bans that drive usage underground.

Bring AI to Every Task

There's no user's manual for exactly how AI will help your work. You only discover that by applying it to real tasks—again and again—until you figure out what works and what doesn't. Some days I spent hours trying to make AI deliver, only to realize the task wasn't a fit and moved on. That time isn't wasted. It's how you learn the terrain.

As an emerging technology, AI's capabilities are uneven and unpredictable. It's excellent at some things, shaky at others, and surprisingly helpful in places you don't expect. For instance, every month I would spend over an hour reconciling my credit card statements to my expense reports. I then learned I could upload PDFs to AI, ask the model to list what transactions are common to both (and which are not), and within minutes, identify any errors or omissions that otherwise could cost me hundreds of dollars.

The only way to learn where it helps in *your* job is trial, error, and reflection.[6]

Treat each task on your daily list as an experiment: "Where can AI accelerate the thinking I need to do here?" Keep score. Over weeks, you'll figure out where AI shines—such as idea generation, synthesis, reframing, rewriting—and where it still needs your hands firmly on the wheel—such as exact math and fixed-rule tasks, or anything that requires checking original sources.

> *"I've learned that to work with AI effectively, I must treat it as a 'superintelligent colleague.'"*

AI Is Being Used Incorrectly by Your Peers

Once you start using AI deeply, you may start to realize some of what those "AI gurus" were saying contained a lot of hype. Many treat AI as a search engine with better conversational skills or as a calculator that writes paragraphs. That's not its advantage.

Large language models excel at language: drafting, structuring, summarizing, critiquing, translating across tones and audiences, and keeping a line of reasoning with you. They help you think about your thinking.

With practice, you can tell the AI how to think through a problem, the role it's playing, the steps to take, and how you'll judge the result. The more explicit you are about how you would approach the problem—"first do X, then check Y against Z, then draft options A/B/C with pros and cons"—the better the model aligns to your intent.

Over time, you start noticing how you think. You ask better questions, give clearer instructions, and catch vague requests sooner. Share a few writing samples, and it can write in your voice. Used that way, AI isn't a toy; it's a thinking partner that lifts the quality of your work by forcing clarity in your process.

AI Is Super-Intelligence on Your Team

What sets the AI wave apart from past tech shifts? EHRs and workflow automation mostly targeted mechanical or transactional work. Generative AI helps you think and write faster.

I've learned that to work with AI effectively, I must treat it as a "superintelligent colleague." That involves telling AI who it is, who I am, defining what I want it to do, how to do it, and what the outcome should look like. The more detailed my instructions, the better AI serves my needs.

In practice, I work with AI in 2 simple ways:

- **Divide and conquer.** I keep the parts that rely on my industry and subject matter expertise and hand off

the parts that benefit from speed and synthesis. For instance, if I need to know the requirements for taking an x-ray in a certain state, AI can far more efficiently conduct research and provide a report than if I had to familiarize myself with individual state statutes.

- **Work back-and-forth.** AI and I iterate on the same task. For instance, after researching x-ray laws, I can ask AI to "act as a compliance officer and draft a 1-page summary of these requirements for training new urgent care staff." I then fact-check, ask it to list objections or opportunities for improvement, then I address each and finalize the draft.

None of this is "letting AI do my job." Used well, AI forces discipline. I've found that it causes me to think more, not less.

Not Everyone Will Share Your Excitement

As I've leaned into AI, reactions from others are split. Some reached out with genuine curiosity—*"can Alan's AI tool help with that?"*—and wanted to apply AI to new problems. Others seemed threatened or dismissive. They'd label outputs "inauthentic," "hallucinated," or "not real work." Some tried to stonewall. How I made something mattered more to them than what I made.

The irony is that people figure out how to use AI to make their jobs easier and better whether their organizations formally bless it or not. Microsoft's global study reported that over half of AI users hesitate to admit they're using AI for important tasks—a quiet, rational response when the culture doesn't feel safe.[2]

In other words, even as usage rises, discussions go underground. That's precisely why leaders should normalize open conversation and set guardrails—so learning spreads instead of hiding in corners.

We've seen this play out. Early in 2023, high-profile employers restricted or banned employee use of ChatGPT over privacy and compliance concerns. Some later pivoted to controlled internal tools. The signal isn't "AI is dangerous," but it's "leadership and governance are catching up to reality."[7,8]

For those of us leading teams in urgent care, the takeaway is simpler: Some colleagues will cheer your progress; others will minimize it. Keep building capability anyway. You don't need everyone's approval to do better work.

Conclusion

If there's a single lesson my journey has reinforced, it's that tools don't transform your leadership—habits do. When I finally stopped treating AI as a subject of interest and started treating it as a colleague, my work changed. I became more analytical and detail-oriented. And I had more time for the parts of leadership only a human can do—choosing what matters, developing people, and earning trust.

"The irony is that people figure out how to use AI to make their jobs easier and better whether their organizations formally bless it or not."

Past success doesn't guarantee future relevance. We're heading toward a workplace where expertise may be defined more in terms of how you apply AI to your role than your tenure and experience in a field.

If you're reading this and thinking, "*I haven't made AI real in my day-to-day yet*," that was me just a few short months ago. Start now. Treat AI as a super-intelligent co-worker. Assign the role. Set the rules. Inspect the work. Keep your name on the line.

Curiosity becomes capability one task at a time. ■

References

1. Microsoft WorkLab. AI at Work Is Here. Now Comes the Hard Part. May 8, 2024. Accessed August 13, 2025. https://www.microsoft.com/en-us/worklab/work-trend-index/ai-at-work-is-here-now-comes-the-hard-part
2. McGregor J. Workers Don't Want Bosses Knowing They Use AI—Even as They BYOAI to Work. Forbes. May 8, 2024. Accessed August 13, 2025. https://www.forbes.com/sites/jenamcgregor/2024/05/08/workers-dont-want-bosses-knowing-they-use-ai-even-as-they-byoai-to-work/
3. PwC. 2025 Global AI Jobs Barometer: AI-linked to a four-fold increase in productivity growth. June 3, 2025. Accessed August 13, 2025. https://www.pwc.com/gx/en/news-room/press-releases/2025/ai-linked-to-a-fourfold-increase-in-productivity-growth.html
4. Brynjolfsson E, Li D, Raymond LR. Generative AI at Work. NBER Working Paper No. 31161; 2023. Accessed August 13, 2025. https://www.nber.org/papers/w31161
5. Noy S, Zhang W. Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence. Science. 2023;381(6654):187-192. doi:10.1126/science.adh2586. Accessed August 13, 2025. https://www.science.org/doi/10.1126/science.adh2586
6. Dell'Acqua F, Korinek A, Korytkowski P, et al. Navigating the Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality. Harvard Business School Working Paper; 2023. Accessed August 13, 2025. https://www.hbs.edu/ris/Publication%20Files/24-013_d9b45b68-9e74-42d6-a1c6-c72fb70c7282.pdf
7. Ray S. JPMorgan restricts staff from using ChatGPT. Axios. February 22, 2023. Accessed August 13, 2025. https://www.axios.com/2023/02/22/chatgpt-jpmorgan-chase-restricts-ai
8. Holmes A. 14 Companies That Issued Bans or Restrictions on ChatGPT. Business Insider. July 11, 2023. Accessed August 13, 2025. https://www.businessinsider.com/chatgpt-companies-issued-bans-restrictions-openai-ai-amazon-apple-2023-7

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It's Time to Tell Our Story

■ Steve Sellars

Over the last few months, I've had the privilege of spending time with Lou Ellen Horwitz, my predecessor and now past CEO of the Urgent Care Association (UCA), as part of my onboarding. She's been generous with her knowledge and perspective, helping me understand the many administrative details that keep UCA and our affiliates running smoothly. That investment of time has been invaluable, and I'm grateful for her continued support during this transition.

At the same time, our external work continues. Advocacy remains a top priority for UCA, and our partnership with McDermott+ is as important as ever. Together, we're working to ensure Urgent Care has a strong and respected voice with policymakers, payers, and other partners. The healthcare landscape is changing quickly, and we're working to ensure Urgent Care is recognized as part of the solution.

Opportunity For Urgent Care

One of the biggest pressures we see across the system today is cost. Consumers and employers are being asked to pay more—higher premiums, larger deductibles, and greater out-of-pocket expenses—yet often feel they're getting less in return. According to the 2025 Milliman Medical Index, the total cost of healthcare, including insurance premiums, out-of-pocket costs, and medications stands at $35,000 a year for the typical family of 4, which is almost triple the cost from 10 years ago.[1] That dynamic creates frustration, but it also creates an opportunity for Urgent Care.

We've already proven our ability to improve access to care that is convenient, reliable, and cost-effective. We're open 7 days a week, with extended hours, providing walk-in access, and we've embraced technology that allows patients to check in before they even leave home. These are some of the reasons millions of patients choose Urgent Care every year. But access and convenience are only part of the story.

Now, it's time to prove our value. And proving value means demonstrating that the care we deliver showcases clinical quality, great outcomes, and provides a positive systemwide impact. To do that, we'll be working closely with our clinical and strategic advisory groups to find ways to tell our story more powerfully. We've always known the value of Urgent Care. Now it's about proving it—and telling that story in a way that resonates beyond our own walls to strengthen our credibility with payers, employers, policymakers, and patients alike.

I'd love to hear from you as we take this next step. What stories are you seeing in your markets that demonstrate Urgent Care's impact? What data would be most useful to highlight? Please reach out to me directly—I'd welcome the chance to learn from you and continue this conversation together.

Chapter Conferences

Our Regional Chapter Conferences happening now are also a great opportunity to advance this conversation. These meetings bring members together for timely updates on state and federal advocacy priorities, continuing education, peer-to-peer member engagement, and networking. They're an important way to stay connected to the broader industry while also focusing on local and regional issues that directly impact operators. I encourage you to participate, share your perspective, and take advantage of the chance to both learn and contribute. I hope to see you there, and as always, UCA will continue to be here to support you along the way. ■

Steve Sellars is Chief Executive Officer of the Urgent Care Association.

Reference

1. Bell D, Clarkson J, Jensen B, Liner D, Man A, Naugle A, Timcheck A. 2025 Milliman Medical Index. Milliman website. Published May 27 2025. Accessed September 5, 2025. https://www.milliman.com/en/insight/2025-milliman-medical-index

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Diagnosis and Management of Flexor Digitorum Profundus Tendon Avulsion (Jersey Finger) (page 17)

1. What is the typical mechanism of injury for flexor digitorum profundus tendon avulsion?
a. Forced hyperextension
b. Severe crush injury
c. Repetitive motion injury
d. None of these

2. What patient complaints are common with flexor digitorum profundus tendon avulsion?
a. Finger pain
b. Localized swelling
c. Difficulty making a fist
d. All of the above

3. What may result from delayed treatment of flexor digitorum profundus tendon avulsion injury?
a. Chronic pain
b. Loss of grip strength
c. Hand deformity
d. All of the above

Back Pain from Vertebral Metastases in Prostate Cancer: A Case Report (page 21)

1. Why are patients with metastatic lesions from prostate cancer susceptible to fractures?
a. Lesions compromise the structural integrity of the vertebrae
b. All cancer patients have balance issues that increase fall risk
c. Lesions cause vitamin deficiencies
d. The cause is not known

2. What imaging is indicated for patients with prostate cancer to detect the degree of metastatic involvement?
a. Computed tomography angiography
b. Plain x-ray
c. Prostate-specific membrane antigen positron emission tomography
d. Point of care ultrasound

3. What is the most time-sensitive and serious condition that presents with back pain in the emergency department?
a. Pregnancy
b. Urinary tract infection
c. Intraspinal abscess
d. Urinary calculi

Severe Iron Deficiency Anemia Presenting with Fever and Gastrointestinal Complaints: A Pediatric Case Report (page 29)

1. Of these, which is a common cause of iron deficiency anemia in pediatric patients?
a. Penicillin allergy
b. Excessive cow's milk consumption
c. Adenovirus infection
d. Down syndrome

2. What percentage of children between 12 to 35 months of age are estimated to have iron deficiency anemia?
a. 0.1%
b. 2%
c. 5%
d. 10%

3. While iron deficiency is the most common etiology of anemia in children, what other important cause should be ruled out?
a. Malignancy
b. Autoimmune disease
c. Lead poisoning
d. All of the above

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See CME Quiz Questions on page 15.

Diagnosis and Management of Flexor Digitorum Profundus Tendon Avulsion (Jersey Finger)

Urgent Message: Forced hyperextension of a flexed digit may strain or rupture the flexor digitorum profundus tendon from the distal phalanx. Prompt diagnosis and treatment of acute injury are key in the prevention of permanent finger dysfunction.

Alyssa Marchman, BS; Sarah Brouwer, BS; William Beauchamp, DO

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Key Words: Flexor Digitorum Profundus, Tendon Avulsion, Jersey Finger, Back Pain

Editor's Note: *While the images presented here are authentic, the patient case scenarios are hypothetical.*

Questions for the Clinician at the Bedside

1. What is a jersey finger, and how does it present clinically?
2. What is the typical mechanism of injury?
3. How is jersey finger diagnosed?
4. When should patients with a jersey finger injury be referred to a specialist for surgery?

Abstract

Flexor digitorum profundus tendon avulsion, or "jersey finger," occurs when a fully flexed distal interphalangeal (DIP) joint is forcefully hyperextended. This injury typically occurs in sports and presents with the isolated inability to flex the affected finger's DIP joint. Jersey finger requires early surgical intervention to avoid long-term finger dysfunction. This hypothetical case of a 17-year-old-male with a jersey finger injury highlights the importance of a thorough physical examination in all finger injuries upon presentation to urgent care.

Introduction

Classically, the mechanism of injury in avulsion of the flexor digitorum profundus (FDP) tendon is via forced hyperextension of a fully flexed distal interphalangeal (DIP) joint, most commonly, the ring finger. This hyperextension can rupture the FDP tendon from its insertion site at the volar distal phalanx and may even avulse a fragment of bone from the insertion site along with it. This injury is most often sustained in sports, typically football or rugby, when a player's finger is tangled in an opponent's jersey, leading to the eponym "jersey/rugby finger" (**Image 1**).

Clinical Scenario

A 17-year-old male presented to urgent care with pain at the distal phalanx of the left ring finger, ongoing since 3 nights prior, when he felt a "popping" sensation while grasping an opponent's jersey during an attempted tackle in a football game. He stated that he had been unable to make a complete fist since the injury.

Physical exam revealed a resting hand with the left ring finger in slight extension at the DIP joint relative to the other fingers. Further examination showed mild edema and ecchymosis over the volar (palmar) distal

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Image 1. Jersey Finger Impact Location

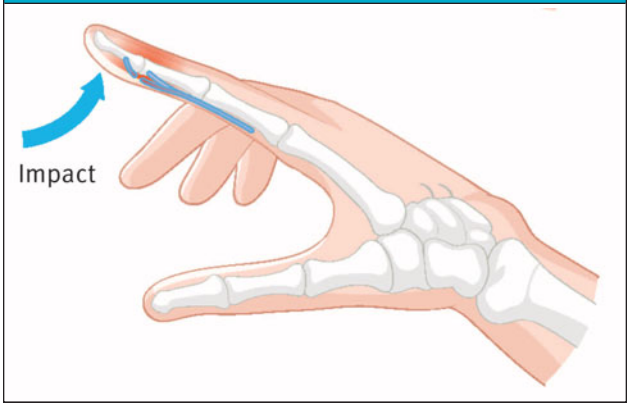
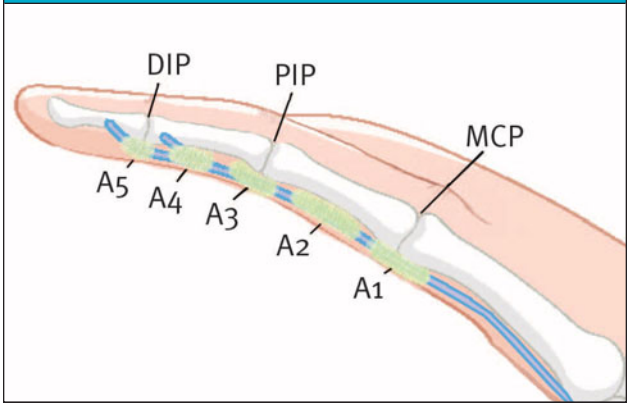


Image 2. Finger Joints and Ligaments



phalanx and positive tenderness to palpation along the DIP joint. When comparing the range of motion between hands, the patient was unable to actively flex the left ring finger at the DIP joint. However, proximal interphalangeal (PIP) joint flexion remained intact. No palpable deformities were noted along the finger. Neurovascular status was intact with capillary refill less than 2 seconds in the affected finger.

Postero-anterior and lateral view radiographs of the left ring finger were obtained, which were negative for acute pathology, including phalanx fracture and/or dislocation. A diagnosis of FDP tendon avulsion, or jersey finger, was made based on the clinical presentation and physical exam findings.

Relevant Anatomy

Finger flexion is controlled by 2 main tendons: the flexor digitorum superficialis (FDS) and the FDP. These flexor tendons travel through a fibro-osseous sheath consisting of synovium and fibrous bands before attaching to their respective insertion sites. The FDS inserts on the middle phalanx to primarily control PIP joint flexion, while the FDP inserts on the base of the distal phalanx to control DIP joint flexion.[1] The fibrous bands of the tendon sheath comprise the flexor tendon pulley system and are termed either annular or cruciate ligaments based on their shape. These ligaments keep the flexor tendons in close proximity to the phalanges, preventing bowstringing of the tendons. Digits 2 through 5 each have 5 annular ligaments (A1-5) **(Image 2)** and 3 cruciate ligaments (C1-3).[2] The A1, A3, and A5 pulleys are located over the metacarpophalangeal joint (MCP), PIP, and DIP joints, respectively. The A2 and A4 pulleys are located over the diaphysis of the proximal phalanx and middle phalanx, respectively.[3]

Clinical History

Patients, most commonly young athletes, present with acute finger injury after grabbing an opponent's jersey during a sports game. However, isolated DIP joint function should be assessed in all finger injuries, regardless of patient population. Patients may complain of finger pain and swelling localized to the palmar DIP joint as well as difficulty making a fist due to DIP joint extension. Clinically, the finger will be observed in an extended position at rest.[4]

Clinicians should have a high index of suspicion for jersey finger injury in any patient with loss of DIP joint flexion, regardless of their endorsed clinical history or mechanism of injury. Various activities have been implicated in jersey finger injury, including karate,[5] weightlifting,[6] and falling.[7] The injury often manifests in a manner that leads to it being misdiagnosed as a sprain, underscoring the importance of healthcare professionals accurately identifying its distinctive clinical presentation.[8]

Physical Exam

The skin will appear intact with swelling and bruising located over the volar DIP joint and distal phalanx.[4] Palpation along the finger generally elicits pain most significantly at the site of the retracted tendon.[4,8] Additional tenderness is often present over the base of the distal phalanx. A palpable mass representing the retracted FDP tendon may be located as proximally as the A1 pulley along the affected digit.[3]

Active range of motion testing is the most critical part of the encounter for diagnosis of jersey finger. To assess FDP integrity, stabilize the patient's PIP joint in full extension while instructing the patient to actively flex their distal phalanx at the DIP joint. This movement should be impaired, leaving the distal phalanx extended

despite attempts at flexion.[8] This can also be assessed by the patient demonstrating an inability to make a complete fist due to isolated distal phalanx extension. PIP joint flexion should remain fully intact. Of note, the exam may be limited due to pain rather than true impairment in motion. If needed, a local digital nerve block can be utilized to evaluate finger range of motion more accurately.[4] Neurovascular status distal to the injury should be assessed and will likely be intact.[5]

Imaging

Diagnosis of jersey finger is typically clinical, based on the loss of isolated DIP joint flexion. However, x-rays, particularly lateral views, are indicated to assess for avulsed bone fragments and phalanx fractures. Ultrasound and magnetic resonance imaging (MRI) can be used to delineate the degree of tendon retraction to evaluate the different types of injuries, if needed.[3]

Urgent Care Management

The injured finger shoulder be placed in a splint, maintaining slight flexion at both the PIP and DIP joints. All acute jersey finger injuries should immediately be referred to an orthopedic/hand surgeon, as quick surgical intervention is recommended.[9]

Discussion of Advanced Management

The degree of injury to the FDP is designated by the Leddy and Packer classification system into 1 of 5 subtypes based on the severity of tendon retraction and absence/presence of bone avulsion. This classification system ultimately guides treatment recommendations. Type I injuries are characterized by tendon retraction to the palm. This damages the vincular system that supplies blood to the FDP tendon and requires surgical repair within 7-10 days of injury. Type II injuries occur when the tendon retracts to the A3 pulley and warrant surgical intervention within 3 weeks.[3] Type II injuries are the most common.[10] Type III injuries involve an avulsed bone fragment connected to the ruptured tendon with retraction to the A4 pulley **(Image 3)**. The bone fragment prevents further retraction of the tendon, allowing for repair up to 6 weeks after injury. Type IV injuries occur when the avulsed bone fragment is no longer attached to the ruptured FDP tendon.[3] Type V injuries have a concomitant bony avulsion and distal phalanx fracture. Type IV and V injuries are less common but should be treated with quick surgical intervention, similar to Type I injuries, because tendon retraction to the palm and vincular disruption is possible.[4]

Image 3. Radiograph of Avulsion Fracture in a Type III or IV Jersey Finger Injury

Unfortunately, prompt treatment of jersey finger may be hindered by initial misdiagnosis or delay of presentation. Clinicians and patients may mistake jersey finger, especially in the absence of an avulsed bone fragment on radiographs, with a jammed or sprained finger.[5,6,8] Patients not treated with appropriate and timely surgical intervention may develop chronic pain, decreased PIP joint range of motion, flexion contracture, loss of grip strength, and/or a notable finger deformity. Management of chronic jersey finger is dependent on several factors—but can be nonoperative or operative based on the degree of finger dysfunction and tendon retraction present.[8,11]

Due to the risk of long-term dysfunction, athletes injured in-season should not delay surgery to finish their season. Depending on the sport, athletes can likely expect to return to play 3 months after repair.[3,12]

Next-Level Urgent Care Pearls

- Isolated PIP and DIP joint range of motion should be evaluated in acute finger injuries
- A digital nerve block can help assess finger range of motion when pain may limit the exam
- Though not required for diagnosis, ultrasound can confirm the presence of a ruptured FDP tendon when x-rays are negative
- Prompt diagnosis and surgical referral of FDP tendon avulsions are critical in preventing long-term dysfunction
- In-season athletes should not delay surgical treatment until the off season

Red Flags and Legal Pitfalls

- FDP avulsion may be misdiagnosed as a finger sprain or jammed finger
- Chronic pain, loss of grip strength, and deformity are possible consequences of delayed treatment

Clinical Scenario Conclusion

Evaluation with ultrasound confirmed the patient had tendon retraction of the FDP to the palm, known as a Type I jersey finger injury. The patient's hand was placed in a splint for digit immobilization, non-steroidal anti-inflammatory drugs and ice were recommended for pain control, and the patient was immediately referred to an orthopedic surgeon. Operative management, along with the associated risks, was discussed with the patient/guardian and ultimately pursued. The surgery was successful, and the patient eventually regained full range of motion of his DIP joint without any complications.

Takeaway Points

- A typical mechanism of injury for FDP avulsion is forced hyperextension of an actively flexed DIP joint
- The pathognomonic finding is an isolated inability to actively flex the affected finger's DIP joint
- Surgical management of acute FDP avulsion is recommended regardless of whether radiographic imaging displays an associated avulsion fracture of the distal phalanx ■

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References

1. Singh R, Rymer B, Theobald P, Thomas PB. A review of current concepts in flexor tendon repair: physiology, biomechanics, surgical technique and rehabilitation. *Orthop Rev (Pavia).* 2015;7(4):6125. doi:10.4081/or.2015.6125
2. Miro PH, vanSonnenberg E, Sabb DM, Schöffl V. Finger flexor pulley injuries in rock climbers. *Wilderness Environ Med.* 2021;32(2):247-258. doi:10.1016/j.wem.2021.01.011
3. Freilich AM. Evaluation and treatment of jersey finger and pulley injuries in athletes. *Clin Sports Med.* 2014;34(1):151-166. doi:10.1016/j.csm.2014.09.001
4. Ruchelsman DE, Christoforou D, Wasserman B, Lee SK, Rettig ME. Avulsion injuries of the flexor digitorum profundus tendon. *J Am Acad Orthop Surg.* 2011;19(3):152-162. doi:10.5435/00124635-201103000-00004
5. Rizis D, Mahoney J. A rare presentation of flexor digitorum profundus type V avulsion injury with associated intra-articular fracture: a case report. *Can J Plast Surg.* 2011;19(2):62-63. doi:10.1177/229255031101900202
6. Kong AC, Kitto A, Pineda DE, Miki RA, Alfonso DT, Alfonso I. Four anchor repair of jersey finger. *Iowa Orthop J.* 2021;41(2):95-100.
7. Shabat S, Sagiv P, Stern A, Nyska M. Avulsion fracture of the flexor digitorum profundus tendon (jersey finger) type III. *Arch Orthop Trauma Surg.* 2002;122(3):182-183. doi:10.1007/s00402-001-0352-9
8. Whitsell N, Van Demark R Jr. Delayed presentation of a flexor digitorum profundus avulsion injury: a case report. *S D Med.* 2022;75(3):124-128.
9. Childress MA, Olivas J, Crutchfield A. Common finger fractures and dislocations. *Am Fam Physician.* 2022;105(6):631-639.
10. Bachoura A, Ferikes AJ, Lubahn JD. A review of mallet finger and jersey finger injuries in the athlete. *Curr Rev Musculoskelet Med.* 2017;10(1):1-9. doi:10.1007/s12178-017-9395-6
11. Kargar M, Sadeghi A, Montazeri SMH. Surgical treatment of chronic traumatic rupture of the flexor digitorum profundus tendon in a 9-year-old female: a case report. *J Orthop Spine Trauma.* 2022;8(2). doi:10.18502/jost.v8i2.9315
12. Shapiro LM, Kamal RN. Evaluation and treatment of flexor tendon and pulley injuries in athletes. *Clin Sports Med.* 2020;39(2):279-297. doi:10.1016/j.csm.2019.12.004

Case Report

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Back Pain From Vertebral Metastases in Prostate Cancer: A Case Report

Urgent Message: Persistent, non-mechanical back pain should raise suspicion for non-muscular causes, and in this case, such pain in an older man was related to a diagnosis of metastatic prostate cancer with bone involvement.

Rimsha Afzal, MA; Gregory M. Thompson, MD

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Key Words: Vertebral Metastases; Metastatic Prostate Cancer; Urgent Care Diagnosis

Abstract

Introduction: Back pain is a common presentation in the urgent care center. While the majority of diagnoses are self-resolving and of a musculoskeletal nature, consideration of concerning etiologies is necessary based on patient history.

Presentation: A 72-year-old man presented to urgent care with 3 months of progressive, dull, achy thoracic back pain, sometimes waking him at night. Review of his past medical history revealed he had an elevated prostate-specific antigen 6 years ago without follow-up.

Physical Examination: On physical examination, the patient had significant thoracic spine tenderness to palpation, particularly over the midline. Range of motion of the thoracic spine was limited due to pain. Neurological assessment revealed intact motor strength and sensation in the lower extremities with normal reflexes. Gait was steady, and there was no evidence of saddle anesthesia or sphincter dysfunction.

Diagnosis: The patient was referred to the emergency department for further evaluation. Subsequent computed tomography and magnetic resonance imaging of the spine revealed sclerotic lesions in the thoracic spine, suggestive of osteoblastic bone metastases. He was ultimately diagnosed with prostate cancer with bone metastases.

Resolution: Following diagnosis, he was scheduled for outpatient follow-up with his primary care provider to coordinate comprehensive oncology care and ensure

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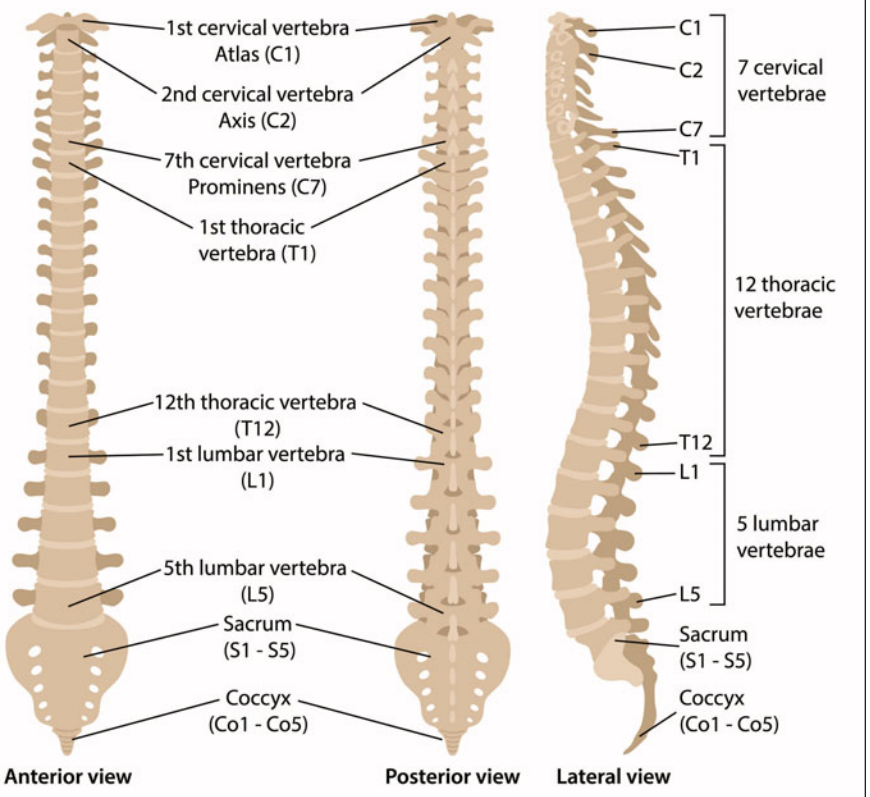
Figure 1. Anatomy of the Spine



appropriate cancer management and support.

Conclusion: In patients with back pain, it is critical that urgent care clinicians recognize concerning elements of history and exam that may indicate the need for advanced imaging.

Introduction

A complaint of back pain is a common presentation in urgent care. While most presentations are caused by non-critical musculoskeletal etiologies, vertebral metastasis from prostate cancer can be a cause of persistent, non-mechanical back pain.

Prostate cancer bone lesions are primarily osteoblastic metastases, leading to abnormal bone formation and increased density. The formation of metastasis is initiated by prostate-specific antigen (PSA), which promotes osteoblastic proliferation. The release of growth factors and cytokines help drive additional bone formation.[1] In addition to pain, approximately 7% of patients with prostate cancer will present with neurological symptoms, such as spinal cord compression.[2] The most common site for spinal cord compression is the thoracic spine.[3] Patients with prostate cancer bone metastases have a 5-year survival of only 33%.[4] In cases of spinal metastases of prostate cancer, the median overall survival is estimated at 24 months.[5]

Case Presentation

A 72-year-old man presented to urgent care with 3 months of progressive, dull, achy thoracic back pain, sometimes waking him at night. The pain was not exacerbated by movement. Over the past year, he also experienced intermittent lower back discomfort, which he attributed to aging. He noted increased urinary frequency, nocturia, and a weaker urinary stream over the past several months. He denied recent trauma but mentioned that his pain had become more persistent and severe despite over-the-counter analgesics. Review of systems was positive for unintentional weight loss of 10 pounds over the past 6 months along with intermittent fatigue and a general sense of decreased stamina. Past medical history revealed an elevated PSA 6 years ago without follow-up since he moved to a new area and had not yet established care with a primary care provider.

Physical Exam

The patient had marked thoracic spine tenderness to palpation over the midline with minimal redness or inflammation. The patient's vital signs were stable: blood pressure of 128/76 mm Hg; heart rate of 78 beats per minute; respiratory rate of 16 breaths per minute; temperature of 36.8°C; and oxygen saturation of 98% on room air. Plain thoracic and lumbar x-rays were obtained in urgent care, which demonstrated subtle sclerotic changes that were equivocal for metastatic disease.

Medical Decision Making

Due to the severity of the patient's symptoms and consideration of a concerning diagnosis, the patient was sent to the emergency department (ED) for further evaluation and management.

Differential Diagnosis and Final Diagnosis

The differential diagnosis in this patient included primary malignancy, metastatic disease, fracture, osteomyelitis, or epidural compression syndrome such as cauda equina syndrome. In the ED, computed tomography (CT) and magnetic resonance imaging (MRI) of the spine revealed sclerotic lesions in the thoracic spine, suggestive of osteoblastic bone metastases. He was ultimately diagnosed with prostate cancer with bone metastases.

Discussion

Utilizing a structured approach for the patient with a complaint of back pain will help reduce the likelihood for missing concerning diagnoses.

Understanding The Anatomy

The spine consists of cervical, thoracic, lumbar, sacral, and coccygeal regions.[6] The lumbar vertebrae (L1-L5) are larger and able to withstand higher pressure and body weight **(Figure 1)**. Vertebral bodies are the primary site of malignant metastasis.[6] Metastatic lesions from prostate cancer tend to be osteoblastic rather than osteolytic, which leads to abnormal bone formation and increased bone density.[6] Despite the sclerotic appearance of bone on imaging, these lesions do not strengthen the bone; rather, they further compromise the structural integrity of the vertebrae making patients susceptible to fractures.

History

In patients presenting with complaints of back pain, it is essential to inquire about relentless, progressive pain especially at night or with weight bearing.[1] Patients should be questioned about new or worsening back pain.[7] Pertinent red flag signs/symptoms include age (>50 years), anticoagulation use, fever, genitourinary symptoms (saddle anesthesia, urinary/stool incontinence or retention), immunosuppressed state, and history of malignancy.[7] Additionally, prior fractures should be noted, as well as any history of osteoporosis or osteopenia. For patients with a history of malignancy, additional questions should include prior oncologic history, previous hormonal treatments, chemotherapy, or radiotherapy. Asking about cancer screening including PSA values/trends, colonoscopy results, and mammogram results may also be indicated.

Physical Exam

On physical examination, the first steps are inspection, palpation, and range of motion examinations. Findings may include swelling or soft tissue masses, tenderness along the vertebral bodies or back musculature, decreased range of motion, or limping.[1]

Assessing for motor strength by testing the bilateral lower extremities for weakness helps exclude spinal cord or nerve root compression.[7] In patients with low back pain that radiates to the lower extremities (radicular symptoms), about 60% to 80% demonstrate muscle weakness due to spinal cord or nerve root compression.[8] It is also essential to assess for gait disturbances in a patient with low back pain to rule out whether the altered gait is due to the back pain itself or an underlying significant pathology.[9]

Additional deficits may be noted on the neurological exam, such as vibratory and position functions, temperature, hyperreflexia, gait, cerebellar testing, and Babinski reflexes. Light touch and pinprick should be assessed to identify spinal compression that may be causing radicular pain or paresthesia.[10] Neurological pathologies, such as cauda equina syndrome can present with saddle anesthesia. Performing a digital rectal exam to test for decreased anal tone can help guide the diagnosis.[11] Palpable lymph nodes in the inguinal regions may indicate nodal metastasis.

Imaging

In urgent care centers, x-ray services are typically available. A study published in 2006 evaluated the accuracy of radiographs compared to MRI in diagnosing vertebral fractures in adults aged 50-96 years old and found that radiographs correctly identified vertebral fractures in only 51.5% of cases—with a 25.8% false positive rate and 6.5% false negative rate.[12]

In patients with prostate cancer, advanced molecular imaging to detect the degree of metastatic involvement includes a prostate-specific membrane antigen positron emission tomography scan (PSMA-PET), which has the highest specificity and sensitivity for early metastatic disease.[13]

Indications For Referral to the Emergency Department

Signs of spinal cord compression, cauda equina syndrome, infection, or spinal hematoma are indications for immediate referral to the ED as they require prompt treatment and neurosurgery consultation.[7] For patients with the above diagnoses due to metastatic prostate cancer, additional consultation to radiation oncology is indicated. Consider the following risk factors, signs, and symptoms for possible ED referral:

- Age >50 years
- Genitourinary issues such as urinary retention
- Constitutional symptoms, such as a fever, malaise, and weight loss

Figure 2. Sclerotic Metastatic Spine, Computed Tomography

Image: James Heilman, MD (https://commons.wikimedia.org/wiki/File:Scleroticmetastaticdiseasespine LCT.png), https://creativecommons.org/licenses/by-sa/4.0/legalcode

- Hyporeflexia or areflexia
- Reduced anal sphincter tone
- Saddle anesthesia
- Lower extremity weakness
- Recent trauma to suggest a fracture

If spinal cord compression is suspected in the ED, dexamethasone would be initiated immediately until specialists evaluate the patient.[14] Pretreatment ambulatory status is the strongest predictor of function post-treatment in these patients, meaning that if a patient is ambulatory at diagnosis, they have the greatest likelihood of retaining mobility.[14] In appropriate cases, the ED can facilitate direct admission to the hospital for medical treatment or to hospice for end-of-life care.[15]

Urgent Care Management

Managing back pain in urgent care primarily focuses on alleviating acute symptoms and identifying clinical features that warrant a prompt referral to the ED. Back pain is a common reason patients seek help from healthcare providers and is a leading cause of disability worldwide.[16] Urgent care providers should be familiar with the indications of referring patients presenting with back pain to the ED.

A 2019 study examined over 2 million ED discharges with nonspecific diagnoses to assess for primary outcomes, and researchers found the most commonly missed condition that presented with back pain was an intraspinal abscess. Additionally, patients with an underlying malignancy were found to have a higher likelihood of experiencing adverse outcomes.[17] Although this study did not evaluate cases in urgent care settings, it underscores the critical importance of a thorough history and physical exam in all clinical environments to avoid missing serious pathologies.

Assessing the risk of fracture is also an essential component to managing these patients in urgent care, especially in weight bearing bones. If a fracture is suspected or confirmed on imaging, an ED referral for surgical evaluation and treatment options is needed.[18]

Next Level Urgent Care Pearls

- Persistent back, hip, or rib pain in a patient with prostate cancer should raise a high suspicion for fracture. Order x-rays and arrange for urgent ED evaluation for a CT/MRI **(Figure 2).**
- Evaluate indications for immediate referral to the ED, including age, genitourinary symptoms, constitutional symptoms, neurological symptoms, saddle anesthesia, and recent trauma.

Management of Metastatic Prostate Cancer

In order to conduct a proper risk assessment, the Mirel scoring system is used to predict pathological fracture risk and whether a patient is likely to benefit from prophylactic fixation. The scoring system is based on 4 factors: site of the lesion; size; type of lesion (lytic, blastic, mixed); and pain, each scored from 1-3 points. A score of ≥8 indicates the need for surgical intervention.[19]

Surgical techniques may include decompression and stabilization for spinal metastases causing cord compression.[20] Fixation methods could include applying prostheses for lesions destroying the articular surfaces.[21] Prostate cancer metastasizes to the spine occur through the venous drainage system known as Batson's plexus.[22] Respectively, the thoracic spine is most commonly affected, followed by lumbar, sacral, and cervical areas.[23]

Case Disposition

In the ED, the patient was further evaluated by orthopedic surgery, oncology, and urology. He was immediately started on an intravenous pain regimen. After ruling out spinal cord compression, he was admitted for on-

cology staging and initiation of therapy. After a complete evaluation, the patient was discharged with an outpatient oncology follow-up recommendation to receive palliative radiation for pain management. He continued to follow up with his primary care physician for additional supportive care.

Ethics Statement

The patient provided consent for the publication of this case.

Red Flags and Legal Pitfalls

- Sending a patient with red flag signs/symptoms including back pain, weakness, and urinary incontinence home instead of an immediate ED transfer can result in a delayed diagnosis and management.
- A delayed diagnosis of a pathological fracture can occur when localized bone pain is dismissed or appropriate imaging is not obtained.
- When considering analgesia, weigh risks and benefits as well as degree of pain. A combination of acetaminophen and nonsteroidal anti-inflammatory drugs (NSAIDs) is appropriate for most with consideration of potential side effects of NSAIDs. A short acting opioid would be appropriate in those with a higher degree of pain caused by metastatic disease.
- A lack of a follow-up plan, including the need for ED transfer and referrals to orthopedics, neurosurgery, and oncology, can compromise timely patient care.

Takeaway Points

- The physical exam is important, and providers should pay close attention to red flag findings such as motor and sensory deficits, including hyporeflexia, muscle weakness, saddle anesthesia, and gait abnormalities.
- Persistent, non-mechanical back pain in an older male with up-trending PSA in the medical history is highly suspicious for metastatic prostate cancer.
- Prevention of pathological fracture, adequate pain management, and immediate transfer to the ED is essential for further evaluation.
- Avoid relying solely on radiographs to rule out underlying pathology, as they have significant lower diagnostic accuracy compared to MRI. ■

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References

1. Weber KL. Evaluation of the adult patient (aged› 40 years) with a destructive bone lesion. *JAAOS-J Am Acad Orthop Surg.* 2010;18(3):169-179.
2. Osborn JL, Getzenberg RH, Trump DL. Spinal cord compression in prostate cancer. *J Neurooncol.* 1995;23(2):135-147. doi:10.1007/BF01053418.
3. Wang J. Characterization of metastatic spinal cord compression from prostate cancer. *J Clin Oncol.* 2020;38(6_suppl):248. doi:10.1200/JCO.2020.38.6_suppl.248.
4. Kingsley, L.A.; Fournier, P.G.J.; Chirgwin, J.M.; Guise, T.A. Molecular Biology of Bone Metastasis. *Mol. Cancer Ther.* 2007, 6, 2609–2617.
5. Drzymalski DM, Oh W, Werner L, Regan MM, Kantoff P, Tuli, S. Predictors of survival in patients with prostate cancer and spinal metastasis: Presented at the 2009 Joint Spine Section Meeting. *J. Neurosurg. Spine* 2010, 13, 789–794.
6. Maccauro G, Spinelli MS, Mauro S, Perisano C, Graci C, Rosa MA. Physiopathology of spine metastasis. *Int J Surg Oncol.* 2011;2011(1):107969.
7. DePalma MG. Red flags of low back pain. *Jaapa.* 2020;33(8):8-11.
8. Yáñez ML, Miller JJ, Batchelor TT. Diagnosis and treatment of epidural metastases. *Cancer.* 2017;123(7):1106-1114.
9. Tsuzuki S, Park SH, Eber MR, Peters CM, Shiozawa Y. Skeletal complications in cancer patients with bone metastases. *Int J Urol.* 2016;23(10):825-832.
10. Bhattacharyya S. Spinal cord disorders: myelopathy. *Am J Med.* 2018;131(11):1293-1297.
11. Todd NV. Quantifying the clinical aspects of the cauda equina syndrome–The Cauda Scale (TCS). *Br J Neurosurg.* 2018;32(3):260-263.
12. Ito Z, Harada A, Matsui Y, et al. Can you diagnose for vertebral fracture correctly by plain X-ray?. *Osteoporos Int.* 2006;17(11):1584-1591. doi:10.1007/s00198-006-0123-0.
13. Thoma C. PSMA PET–CT outperforms conventional imaging in high-risk prostate cancer. *Nat Rev Urol.* 2020;17(6):319-319.
14. Loblaw DA, Laperriere NJ. Emergency treatment of malignant extradural spinal cord compression: an evidence-based guideline. *J Clin Oncol.* 1998;16(4):1613-1624.
15. Gould Rothberg BE, Quest TE, Yeung SJ, et al. Oncologic emergencies and urgencies: A comprehensive review. *CA Cancer J Clin.* 2022;72(6):570-593.
16. Vos T, Allen C, Arora M, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet.* 2016;388(10053):1545-1602.
17. Dubosh NM, Edlow JA, Goto T, Camargo Jr CA, Hasegawa K. Missed serious neurologic conditions in emergency department patients discharged with nonspecific diagnoses of headache or back pain. *Ann Emerg Med.* 2019;74(4):549-561.
18. Malviya A, Gerrand C. Evidence for orthopaedic surgery in the treatment of metastatic bone disease of the extremities: a review article. *Palliat Med.* 2012;26(6):788-796.
19. Agarwal MG, Nayak P. Management of skeletal metastases: an orthopaedic surgeon's guide. *Indian J Orthop.* 2015;49(1):83-100.
20. Archer Goode E, Wang N, Munkley J. Prostate cancer bone metastases biology and clinical management. *Oncol Lett.* 2023;25(4):1-18.
21. Sevimli R, Korkmaz MF. Analysis of orthopedic surgery of patients with metastatic bone tumors and pathological fractures. *J Int Med Res.* 2018;46(8):3262-3267.
22. Benjamin R. Neurologic complications of prostate cancer. *Am Fam Physician.* 2002;65(9):1834-1841.
23. Lee CC, Tey J, Cheo T, et al. Outcomes of patients with spinal metastases from prostate cancer treated with conventionally-fractionated external beam radiation therapy. *Glob Spine J.* 2023;13(2):284-294.

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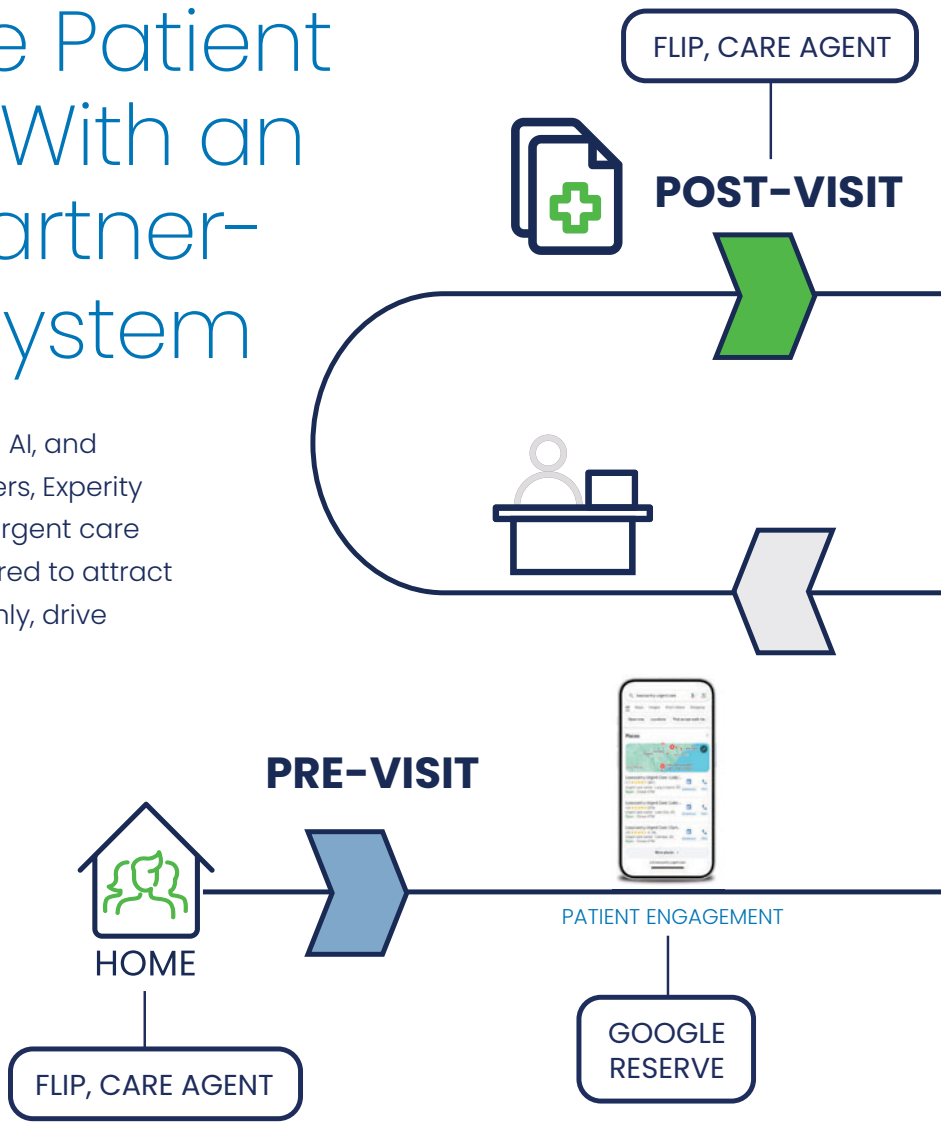

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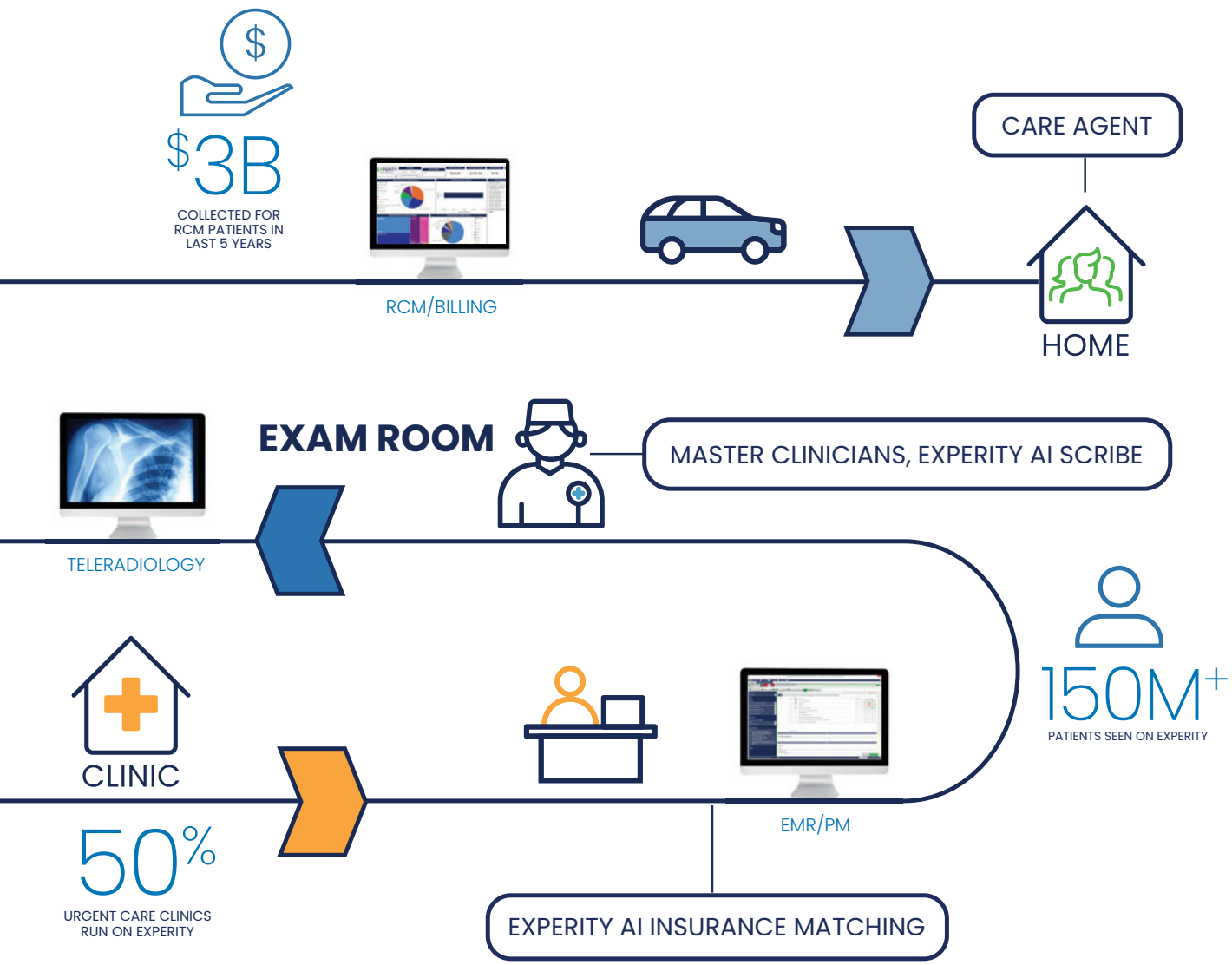

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Case Report

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Severe Iron Deficiency Anemia Presenting with Fever and Gastrointestinal Complaints: A Pediatric Case Report

Urgent Message: While the evaluation of a chief complaint is a priority in urgent care, recognition of chronic disease progression is also critical.

Eliana H. Kim, DO; Aaron J. Maki, MD, PhD

Citation: Kim EH, Maki AJ. Severe Iron Deficiency Anemia Presenting with Fever and Gastrointestinal Complaints: A Pediatric Case Report. *J Urgent Care Med.* 2025; 20(1):29-32

Key Words: Anemia, Iron Deficiency, Down Syndrome, Trisomy 21, Transfusion, Strep Throat, Case Report

Abstract

Introduction: Often the chief complaint is the primary focus of urgent care visits. However, it is important to consider other aspects of the patient's health, especially in pediatric patients with comorbid medical conditions. Worsening of chronic conditions, such as iron-deficiency anemia, may not be the patient's primary complaint but may require emergent care.

Clinical Presentation: A 2-year-old boy with history of Trisomy 21 presented to urgent care with fever and congestion for 4 days, vomiting for 2 days, and mild conjunctival injection with exudate for 1 day. The guardian reported significant fatigue and increased pallor for several weeks. The patient drank cow's milk (50 oz daily) as his primary source of nutrition. Initial lab workup included a positive rapid strep test as well as a complete blood count with results as follows: Hemoglobin 2.8 g/dL; and mean corpuscular volume 53.8 fL.

Case Resolution: The patient was transferred to the emergency department and started on intravenous (IV) fluids and 3 ml/kg packed red blood cells (PRBCs). Following stabilization, the patient was admitted to the pediatric intensive care unit, where he was diagnosed with severe iron-deficiency anemia due to lack of nu-

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tritional intake. Additionally, he was found to be positive for adenovirus. A dose of intramuscular penicillin G was given for strep pharyngitis treatment. The patient received a total of four 3 ml/kg PRBCs until achieving a hemoglobin greater than 5 g/dL, and one 15 mg/kg IV iron replacement. After symptomatic improvement, the patient was discharged home on oral iron therapy and scheduled for follow up with hematology, nutrition, and his primary care pediatrician.

"For children with cognitive impairments presenting with non-specific symptoms, it is especially important to conduct a chart review, obtain an expanded history, and consider a broad differential diagnosis."

Conclusion: For patients with complex medical conditions such as Trisomy 21, it is important to review the medical chart to ensure the patient is receiving adequate preventive care, including frequent primary care provider (PCP) visits. While urgent care cannot fulfill the role of a PCP, it can act as a safety net for patients with worsening of chronic and comorbid conditions.

Introduction

Trisomy 21, also known as Down syndrome, is a genetic disorder caused by an additional copy of chromosome 21, which causes a distinct physical phenotype with a wide range of medical conditions and cognitive impairments.[1] Comorbidities of Trisomy 21, including autism, motor delays, and sensory issues, can cause feeding challenges and inadvertently lead to other conditions such as iron deficiency anemia.[2]

Iron deficiency anemia results in a low hemoglobin (Hgb) concentration due to insufficient dietary intake or absorption of iron. Laboratory findings include low mean corpuscular volume (MCV), serum ferritin and reticulocytes.[3] Increased consumption of cow's milk has a positive correlation with decreased serum ferritin due to its low iron content, calcium's inhibition of iron absorption, and association with occult intestinal blood loss.[4,5]

For children with cognitive impairments presenting with non-specific symptoms, it is especially important to conduct a chart review, obtain an expanded history, and consider a broad differential diagnosis.

Case Presentation

A 2-year-old boy with a past medical history significant for Trisomy 21 and feeding difficulties presented to the urgent care with fever and congestion for 4 days, vomiting for 2 days, and mild conjunctival injection with exudate for 1 day. The patient was directed to urgent care by his PCP on the same day with concern for dehydration.

On arrival to urgent care, the guardian provided additional history of significant fatigue and increased pallor over several weeks. The patient had also had poor oral intake and decreased urine output for several days. Weight was measured at 1st percentile and height was 6th percentile on the Down syndrome-adjusted growth chart. These measurements have been stable at these relative percentiles since birth. The patient's father and sibling had gastrointestinal symptoms the prior week. The patient drank around 50oz of cow's milk daily as his primary source of nutrition.

Prior Recent PCP Visits

The patient was also seen by ears, nose, and throat as well as developmental/behavioral pediatrics providers.

- **12-month well child check:** Hgb 9.8 g/dL, T4/TSH normal. No other concerns.
- **18-month well child check:** Diet of vegetables, fruits and cow's milk. No portions discussed. No known history of anemia or blood transfusions. No other concerns.
- **24-month well child check:** Overdue

Physical Exam Findings

The patient presented febrile with temperature of 38.7°C, tachycardic with heart rate of 140 beats per minute, and had a respiratory rate of 40 breaths per minute with an oxygen saturation of 98%. His features were consistent with Down syndrome. Significant general pallor was noted. He was alert but fatigued and fussy. Eye exam was notable for pallor of bilateral inner eyelids and mild bilateral conjunctival injection. Mouth was dry. Throat was erythematous with soft palate petechiae. Tympanostomy tubes were in place in the bilateral tympanic membranes and were without drainage. Cardiac exam had notable tachycardia without murmur. Abdomen was soft, non-tender, non-distended with normal bowel sounds. Neuro exam revealed no focal deficits. His exam was otherwise benign.

Urgent Care Management

In addition to the chief complaint, the patient's history of chronic medical issues, worsening feeding difficulties and significant pallor on exam warranted diagnostic laboratory tests and imaging. While awaiting results, an oral challenge was attempted and was unsuccessful. Imaging and lab results included the following.

- **Rapid strep:** Positive
- **Chest x-ray:** Negative for focal pneumonia
- **Complete blood count (CBC):** Hgb 2.8 g/dL; MCV 53.8 fL; reticulocytes 1.3%; white blood cell 11.5 x 10^3/uL; platelets 334 x 10^3/uL

Given the critical hemoglobin value, need for resources not available in urgent care, and importance of ongoing monitoring, the patient was transferred to the emergency department (ED).

Therapeutic Intervention

In the ED, the patient immediately received 2 boluses of IV normal saline for rehydration and was started on empiric antibiotics (ceftriaxone and vancomycin) for possible sepsis. The hemoglobin was re-checked and was consistent with the prior result from urgent care. Given the low repeat hemoglobin value (2.7 g/dL) the patient was transfused with 3 ml/kg packed red blood cells (PRBCs) for suspected severe iron deficiency anemia. The early working diagnosis was that the history of high cow's milk intake (50 oz daily) was the likely cause of the iron deficiency anemia. However, more labs were planned to confirm.

Following stabilization, the patient was admitted to the pediatric intensive care unit (PICU) and hematology was consulted for further management. During admission, the patient received maintenance fluids, additional blood transfusions (4 transfusions total), and IV iron replacement. Further workup was obtained while in the PICU.

PICU workup labs included the following.

- **Respiratory infection array:** Adenovirus positive, other viral testing negative
- **Iron deficiency labs:** Low serum iron 21 ug/dL (normal 50-150 ug/dL); low iron saturation 5% (normal 15 - 50%); normal ferritin 14 ng/mL (normal 6 - 70 ng/mL); normal total iron binding capacity 406 ug/dL (normal 250 - 450 ug/dL)
- **Other labs:** Hemolysis, hemoglobin electrophoresis, direct/indirect Coombs, and lead level were all negative
- **Cultures**: Negative blood and urine cultures

Diagnosis

The patient's history of significant cow's milk intake and lab findings were consistent with the final diagnosis of severe iron deficiency anemia. Other potential causes for anemia including hemolysis (parvovirus, cytomegalovirus, autoimmune) or bleeding were ruled out. Strep pharyngitis was treated with intramuscular penicillin G. Adenoviral conjunctivitis self-resolved. Nutrition was consulted for dietary support, and the patient was discharged after 3 days.

"The severity of low-intake iron deficiency anemia can often be alleviated or prevented with adequate patient supervision and dietary counseling."

Follow-Up and Outcomes

At discharge, the patient was instructed to continue iron supplementation with oral ferrous sulfate daily, limit milk/dairy until hemoglobin normalized, and drink nutritional supplement drinks with iron fortification and high calories. At the 2-week follow up with hematology, the patient's acute symptoms had resolved with good tolerance of oral iron and supplement drinks. The patient continued to be a picky eater but had improved appetite and successfully reduced cow's milk intake. Follow up clinic labs showed improving anemia (Hgb 8.6 g/dL and MCV 79.5 fL). Three months later, after completing the course of oral iron, the patient's anemia resolved (Hgb 12.9 g/dL and MCV 85.3 fL) and iron improved (ferritin 26 ng/mL). The patient was permitted to reintroduce dairy (no more than 16 oz a day) and continued to take a multivitamin with iron. The primary care pediatrician continued to monitor growth and diet.

Discussion

Trisomy 21 is a genetic disorder caused by an extra copy of chromosome 21 with an occurrence of 1 in 319-1000 live births.[6] It can be diagnosed through various methods such as prenatal screenings with ultrasound and chorionic villus sampling, or genetic testing with karyotyping and fluorescence in situ hybridization.[7] There are many clinical conditions associated with Trisomy 21 including characteristic facial features, developmental disabilities, and cardiac, gastrointestinal, hematologic, neurologic, endo-

crinologic, musculoskeletal, visual, and otorhinolaryngologic disorders. Trisomy 21 is managed with parental education, therapy, and enhanced monitoring in primary and specialty care, including screening for cardiac, thyroid, and spinal disorders.

Iron deficiency anemia is defined as hemoglobin below 2 standard deviations from the mean for age and sex secondary to insufficient dietary intake or absorption of iron, an essential component of hemoglobin. One common reason, especially in pediatric patients, includes excessive cow's milk consumption, due to milk's low iron content and the presence of calcium, which further inhibits iron absorption from other sources. Approximately 2% of children between 12 to 35 months of age have iron deficiency anemia.[8] Laboratory diagnosis includes hemoglobin and MCV, which can be obtained from a CBC. Iron studies include iron, ferritin, transferrin saturation, and total iron binding capacity. Further evaluation can be obtained by hematoscopy, hemoglobin electrophoresis, and bone marrow aspiration. While iron deficiency is the most common etiology of anemia in children, other important causes to rule out include malignancy, autoimmune disease, lead poisoning, and anemia of chronic disease. The severity of low-intake iron deficiency anemia can often be alleviated or prevented with adequate patient supervision and dietary counseling.

Symptoms of anemia are typically vague and nonspecific, including fatigue or shortness of breath. Unusual behavioral changes, increased irritability, and pica can also be common anemia presentations. Patients may also be asymptomatic, but examination may reveal pallor and tachycardia. Treatment is achieved by treating the underlying cause, use of oral or IV iron supplementation, as well as blood transfusions in severe cases.

For patients with chronic medical conditions, developmental delays, or limited communications skills presenting to the urgent care, it is important to consider investigation beyond the initial chief complaint. Patients who have difficulty communicating their state may also present with non-specific symptoms that are less acutely bothersome to the patient. Medical chart review for prior preventive care visits, frequency of PCP or specialist encounters, and an expanded history for collection of general health aspects, such as dietary history, can sometimes reveal more emergent needs than the chief complaint for the visit. While urgent care cannot fulfill the role of a PCP as a healthcare institution, urgent care can act as a safety net when necessary for patients with worsening of chronic conditions.

Ethics Statement and Guardian Perspective

Informed consent for publication was obtained from the patient's mother. She said she hoped discussion of her son's case would help reduce these events from happening to other children.

Takeaway Points

- Especially for patients with chronic conditions, developmental delays, or poor communications skills, it is important to investigate beyond the chief complaint with chart review and history-taking and consider further workup.
- Labs indicating iron deficiency anemia include low levels of hemoglobin, hematocrit, mean corpuscular volume, serum iron, ferritin, transferrin saturation, and high levels of total iron binding capacity.
- At 12 months of age, pasteurized whole milk may be introduced but should be targeted to 16 oz or less daily and should not exceed 24 oz daily. Above that level, there is no additional nutritional benefit and complications such as iron deficiency anemia can ensue. ■

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References

1. Bull MJ, Trotter T, Santoro SL, Christensen C, Grout RW; Council on Genetics. Health supervision for children and adolescents with Down syndrome. *Pediatrics.* 2022;149(5):e2022057010. doi:10.1542/peds.2022-057010
2. Hielscher L, Irvine K, Ludlow AK, Rogers S, Mengoni SE. A scoping review of the complementary feeding practices and early eating experiences of children with Down syndrome. *J Pediatr Psychol.* 2023;48(11):914-930. doi:10.1093/jpepsy/jsad063
3. Baker RD, Greer FR; Committee on Nutrition. Diagnosis and prevention of iron deficiency and iron-deficiency anemia in infants and young children (0–3 years of age). *Pediatrics.* 2010;126(5):1040-1050. doi:10.1542/peds.2010-2576
4. Maguire JL, Lebovic G, Kandasamy S, et al; TARGet Kids! Collaboration. The relationship between cow's milk and stores of vitamin D and iron in early childhood. *Pediatrics.* 2013;131(1):e144-e151. doi:10.1542/peds.2012-1793
5. Ziegler EE. Consumption of cow's milk as a cause of iron deficiency in infants and toddlers. *Nutr Rev.* 2011;69(suppl 1):S37-S42. doi:10.1111/j.1753-4887.2011.00431.x
6. Asim A, Kumar A, Muthuswamy S, Jain S, Agarwal S. Down syndrome: an insight of the disease. *J Biomed Sci.* 2015;22(1):41. doi:10.1186/s12929-015-0138-y
7. Renna MD, Pisani P, Conversano F, et al. Sonographic markers for early diagnosis of fetal malformations. *World J Radiol.* 2013;5(10):356-371. doi:10.4329/wjr.v5.i10.356
8. Centers for Disease Control and Prevention (CDC). Iron deficiency—United States, 1999-2000. *MMWR Morb Mortal Wkly Rep.* 2002;51(40):897-899. PMID:12418542

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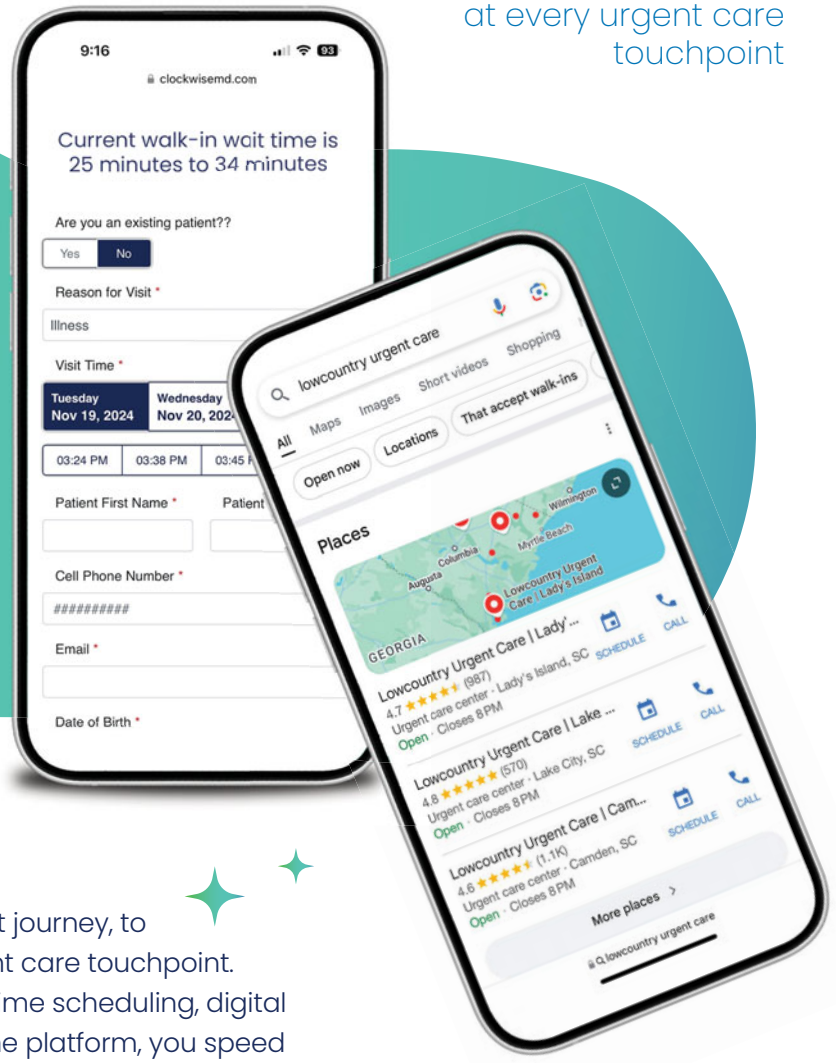

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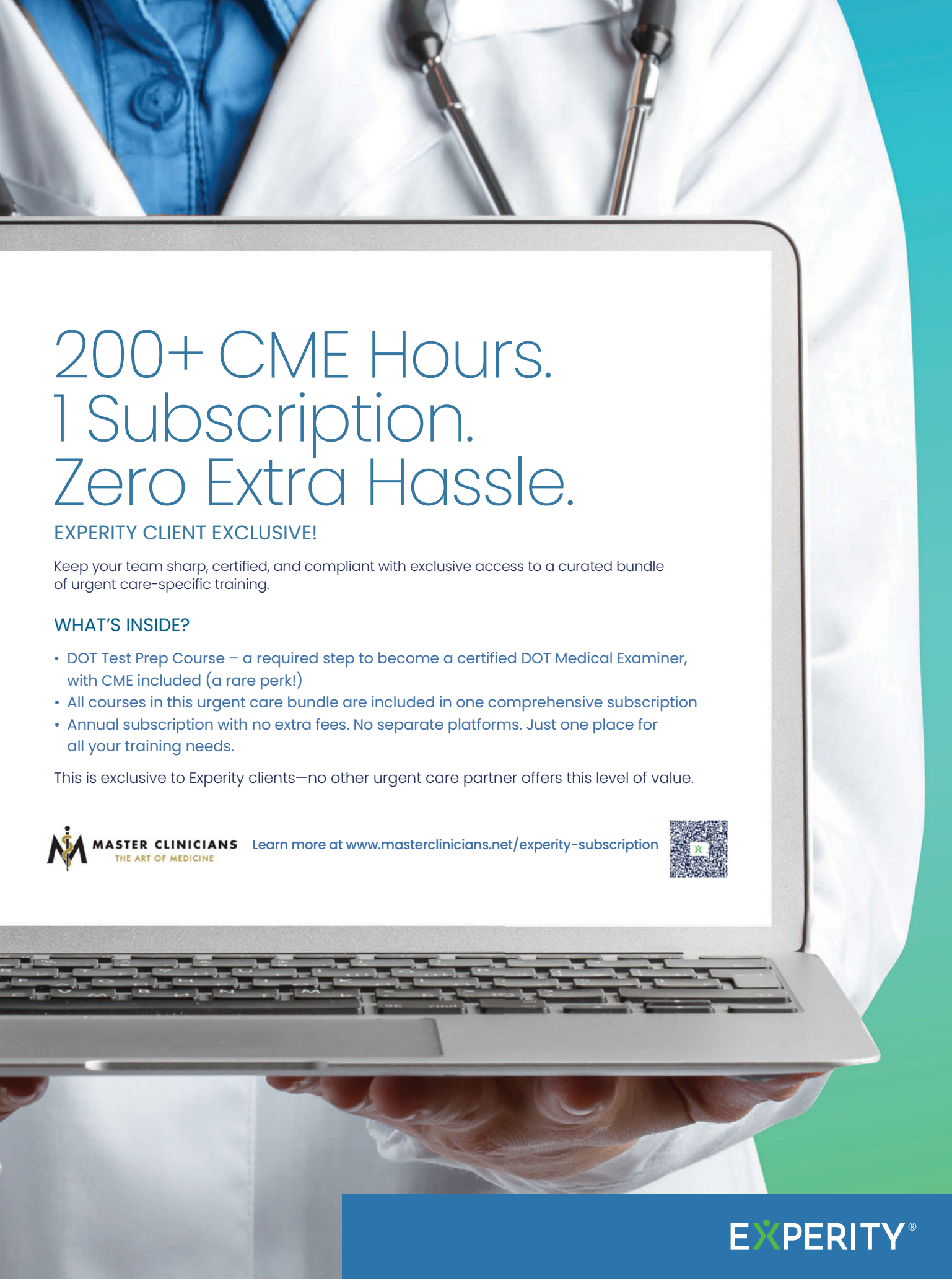

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Original Research

COVID-19 Antiviral Prescribing In Urgent Care By Patient Ethnicity

Urgent Message: This study confirms variable prescription rates among different ethnicities in Aotearoa, New Zealand, for COVID-19 antiviral medication despite efforts to reduce health inequities.

M. Adrianne Pimentel, MBChB, MHlthLd, FRNZCUC

Citation: Pimentel MA. COVID-19 Antiviral Prescribing In Urgent Care By Patient Ethnicity. *J Urgent Care Med.* 2025; 20(1):35-42

Key Words: Antiviral Prescribing, COVID-19, Comorbidity

Abstract

Introduction: In Aotearoa, New Zealand, COVID-19 disproportionately increased mortality and morbidity outcomes in Māori and Pacific patients. In an effort to counteract these health inequities, the government aimed to increase access to COVID-19 antiviral medication for Māori and Pacific patients with COVID-19 by changing the age threshold among ethnicities for those who would otherwise not be eligible based on medical comorbidity or vaccination status (age ≥50 years old for Māori and Pacific patients compared to ≥65 years old for other ethnicities). This study looked at whether prescribing for COVID-19 antivirals in an urgent care setting had any prescribing differences among patient ethnicities.

Methods: A retrospective review was performed for all consultations for patients with confirmed or probable COVID-19 with a first presentation to White Cross Urgent Care Clinics in Auckland, New Zealand, between September 14, 2022, and March 6, 2023. Demographic data was collected along with eligibility status for COVID-19 antiviral medication and whether a COVID-19 prescription was provided. Statistical analysis was performed using Fisher's exact test.

Results: A total of 571 patient records were reviewed; 175 patients were excluded, leaving a final sample of 396 patients. Only 37.5% of eligible Māori patients with COVID-19 received a COVID-19 antiviral prescription in this study, and this was statistically significantly lower than all other ethnicities (p=0.017). Other ethnicity patients had the next lowest prescription receipt rate (61.5%), followed by Pacific (61.9%), New Zealand (NZ) European (71.0%), and Asian (100.0%) ethnicities.

Discussion: This study confirms variable prescription rates among different ethnicities for COVID-19 antiviral medication despite efforts to reduce health inequities for these groups. Further studies are needed to understand the underlying causes of these differential prescribing practices.

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Introduction and Aims

During the COVID-19 pandemic outbreak in Aotearoa, New Zealand (Ao/NZ), beginning February 2020, Māori and Pacific people were shown to have a higher risk of clinically severe outcomes from COVID-19, including risks of hospitalization and death.[1,2,3] Hospitalizations early in the pandemic demonstrated that Europeans and those with higher socioeconomic status were mainly affected (likely due to the majority of cases being associated with overseas travellers rather than community transmission at this stage). However, Māori and Pacific patients that were hospitalized tended to be younger and with longer lengths of hospital stay, despite making up under 40% of the cases.[4,5] During the Omicron wave in 2022, cases were highest per capita and occurred earliest in age among Māori and Pacific people.[3] At that time, Māori people also had the highest risk of hospitalization.[3] This is similar to historical inequitable health outcomes for Māori during the 1918 influenza and 2009 H1N1 outbreaks.[1,6,7,8,9,10,11,12,13,14,15,16] Ao/NZ data reflected similar patterns to other countries, with multiple countries showing that either indigeneity or ethnic minority were both individual risk factors for more severe disease in COVID-19.[1,6-16]

As well as disparities in mortality and morbidity outcomes, studies have also shown that Māori and Pacific patients tend to receive lower prescription rates than other ethnicities for a wide range of diseases.[17,18,19,20] While no studies in Ao/NZ have looked at COVID-19 antiviral prescribing by ethnicity, studies overseas have shown that there have been ethnic disparities for medications given for COVID-19.[21] In the Unites States, Black, Asian and Hispanic ethnicities were less likely to receive outpatient medication for COVID-19 than White patients.[22] Potential reasons given were limited access to care, lack of a primary care provider, potential biases in prescribing practices, and lack of communication to certain communities regarding the COVID-19 antivirals.[22]

Ao/NZ's response to COVID-19 always prioritized the aim of equitable outcomes, unfortunately, the burden of COVID-19 continued to disproportionately affect Māori and Pacific people.[23] One strategy involved how COVID-19 antiviral medication was distributed after its initial introduction to the country in 2022. In Ao/NZ, patients have access to medications that are chosen by Te Pātaka Whaioranga (Pharmac), a government agency that decides which medicines and therapeutic products are government-funded so patients can access them at no (or heavily subsidized) cost.[24] In March 2022, protection against the risk of severe outcomes from COVID-19 was expanded from purely a vaccination and elimination strategy, to include therapeutic medication with nirmatrelvir/ritonavir.[25] Initial eligibility criteria for patients with COVID-19 included an immunocompromised status, or having a minimum of at least 5 risk factors for poor outcomes (risk factors included a high risk ethnicity such as Māori or Pacific, age thresholds determined by COVID-19 vaccination status, or comorbidities as defined by the Ministry of Health).[24]

In light of growing concerns about the emerging disproportionate burden of COVID-19 on Māori and Pacific people, particularly given historical inequities across other diseases affecting Māori particularly, Pharmac made the decision to amend their access criteria to COVID-19 antivirals in September 2022.[26] The key change made was lowering the age threshold for Māori and Pacific patients (regardless of vaccination status or comorbidities) to those aged 50 years or above, as compared to other ethnicities that still required a minimum age of 65 years.[26] Access to COVID-19 antivirals at the time required a prescription from a relevant healthcare practitioner or select pharmacists, though pharmacist-only prescriptions accounted for only 5% of antivirals dispensed.[26,27] As most COVID-19 cases in Ao/NZ were not hospitalized, medical physicians were a major source of COVID-19 antiviral prescriptions.[28,29,30]

During the COVID-19 pandemic in Ao/NZ, urgent care (UC) played a key role in both the assessment and management of COVID-19 patients, particularly as general practitioners (GPs) moved to telehealth early in the pandemic.[31,32] Many UC clinics continued face-to-face patient consultations, including initial assessment and management of COVID-19 patients, with some clinics completely converted into community testing centers for COVID-19 polymerase chain reaction (PCR) testing, prior to the availability of COVID-19 rapid antigen tests (RATs).[33,34]

As key providers for COVID-19 patients, particularly those requiring in-person assessment, it is imperative that UC does not perpetuate the health inequities that have and continue to affect the Māori and Pacific people.[1,3] Ideally, UC should be a driver for reducing these inequities, particularly considering that Māori and Pacific people have the lowest enrollment in primary care.[35] This means that UC may see higher levels of Māori and Pacific patients, as unenrolled patients make up a significant proportion of the UC patient base.[35] Furthermore, equitable health outcomes for Māori are a commitment under the obligations of Te Tiriti o Waitangi (the Treaty of Waitangi)—the foundational legal document which protects the rights of Māori as tangata whenua (indigenous people) of Ao/NZ. [36] This is a responsibility for all

Table 1. Demographic Characteristics and Method of Diagnosis

Median Age (Years, IQR)	35 (38)
Gender - n (%)	
Male	190 (48.0%)
Female	206 (52.0%)
Ethnicity - n (%)	
NZ European	70 (17.7%)
NZ Māori	28 (7.1%)
Pacific	83 (21.0%)
Asian	144 (36.4%)
Other	57 (14.4%)
Not Stated	14 (3.5%)
Case Diagnosis - n (%)	
Confirmed	389 (98.2%)
Probable	7 (1.8%)

Abbreviations: IQR – interquartile range; NZ – New Zealand

healthcare providers in Ao/NZ.[29]

White Cross is a network of urgent care clinics (UCCs) that treat acute illnesses and injuries in the community. There are a total of 8 White Cross clinics spread across Auckland – Ao/NZ's largest city—comprising a mix of either dedicated UCCs or hybrid clinics with a mix of urgent care and general practice.[37,38] The geographic spread of this network serves an ethnically and age diverse population of patients.[38]

The primary aim of this study was to examine rates of COVID-19 antiviral prescribing to eligible patients in an urgent care setting. A secondary aim was to identify any differences in COVID-19 antiviral prescription rates for Māori and Pacific patients in an urgent care setting.

Methods

A Health and Disability Ethics Committee screening application was submitted for this project, and it was considered out of scope and therefore, not requiring ethics approval. White Cross organizational approval was also obtained prior to any data collection.

Data was collected using a retrospective review. Records were only included in the final sample if they met all the following inclusion criteria:

- Patients presenting to any White Cross clinic in Auckland between September 14, 2022, and March 6, 2023
- Presentation was for a current COVID-19 illness
- Presentation was the first consultation with a doctor for this episode of COVID-19
- The consultation was a face-to-face consultation with an urgent care doctor

Diagnosis of COVID-19 was based on Medtech Evolution READ codes of "Probable" or "Confirmed" COVID-19 disease, and the consultation notes were manually cross-checked to ensure diagnosis was met based on the following definitions at the time of patient presentation:

Confirmed case

- A patient with symptoms consistent with COVID-19 as per the NZ Ministry of Health symptom criteria (at least 1 of: new or worsening cough, sneezing and runny nose, fever, anosmia/altered sense of taste, sore throat, shortness of breath, fatigue)[34]
- AND a positive PCR test OR a positive supervised or unsupervised COVID-19 RAT

Probable case

- Symptoms in keeping with COVID-19 case criteria as for confirmed case
- Patient reported a household contact that was positive for COVID-19 in the last 2 weeks

Patient level data collected included age, ethnicity, method of diagnosis, eligibility status for COVID-19 antivirals during the study period, whether an antiviral was prescribed during the urgent care consultation, and if so, which antiviral was prescribed. In cases where patients were eligible, but antivirals were not prescribed, the reason for not prescribing was also collected if documented in the clinical notes.

Statistical significance was checked with a Fisher's exact test using SPSS Statistics software.

Results

A total of 571 patient records were reviewed with 175 patients excluded, leaving a final sample of 396 patients.

Table 2. Demographic Characteristics By Ethnicity

	NZ European	NZ Māori	Pacific	Asian	Other	Not Stated
Total - n	70	28	83	144	57	14
Median Age (years, IQR)	58 (44)	41.5 (24)	28 (49)	33 (32.5)	41 (39.5)	22 (56)
Male - n (%)	27 (38.6%)	14 (50.0%)	35 (42.2%)	75 (52.1%)	31 (54.4%)	8 (57.1%)

Abbreviations: IQR – interquartile range; NZ – New Zealand

Table 3. COVID-19 Antiviral Prescribing By Ethnicity

	NZ European	Māori	Pacific	Asian	Other	Not Stated
Total (n)	70	28	83	144	57	14
Median age (years, IQR)	58 (44)	41.5 (24)	28 (49)	33 (32.5)	41 (39.5)	22 (56)
Eligible for COVID-19 antivirals	31	8	21	14	13	2
Median age of eligible patients (years, IQR)	75 (9)	58 (11)	60 (13)	63 (17)	73.5 (8)	73 (N/A)
Prescribed COVID-19 antivirals (n)	23	4	13	17	9	2
Proportion of eligible patients who received an antiviral prescription (n,%)	22 (71.0%)	3 (37.5%)	13 (61.9%)	14 (100.0%)	8 (61.5%)	1 (50.0%)
Total antiviral prescriptions (n) and proportion relative to number of eligible patients (%)	23 (74.2%)	4 (50.0%)	13 (61.9%)	17 (121.4%)	9 (69.2%)	2 (100.0%)
Eligible patients that meet at least one other access criteria for COVID-19 antivirals*	9	0	7	8	3	0

Abbreviations: IQR – interquartile range; NZ – New Zealand
*Additional criteria include a variety of conditions relating to comorbidities, mental health, COVID-19 vaccine status and risk factors for severe COVID-19 disease as defined by the Pharmac website.[50] In this sample, 7 patients met additional access criteria based on having at least 3 pre-existing high-risk factors for severe illness from COVID-19 and 1 patient met criteria based on having a health condition expected to impair an adequate immune response to COVID-19.

Reasons for exclusion were: incorrect READ code diagnoses; duplicate records; negative RAT; phone consultations; and asymptomatic patients (for example, private screening for fitness to fly). A summary of the final sample including demographic characteristics are shown in **Tables 1-2**. Fourteen patients did not have ethnicity documented. For this study, these patients were counted in the "Other" ethnicity sample and were considered ineligible for COVID-19 antiviral medication.

Analysis by ethnicity demonstrated that patients of Māori ethnicity were prescribed COVID-19 antivirals at a lower rate compared to all non-Māori ethnicities, including Pacific **(Table 3)**. Analysis using Fisher's exact test confirmed this difference was statistically significant (p=0.017, 2-tailed).

Of the 396 patients seen with their first presentation of COVID-19, 89 patients met eligibility criteria for COVID-19 antiviral medication. If eligibility was uncertain based on lack of documented co-morbidities or ethnicity, these patients were considered "Not eligible" (n=1). Of the 89 patients who were eligible for COVID-19 antivirals, 61 (68.5%) received prescriptions, which were mostly nirmatrelvir/ritonavir **(Table 4).** Reasons for a lack of prescription are shown in **Table 4 and Figure 1.**

Reasons for not prescribing COVID-19 antivirals varied, but in most cases, were not documented **(Figure 1)**. However, this was only seen in non-NZ European patients as all eligible NZ European patients who did not have a COVID-19 antiviral prescribed had reasons documented.

Of note, 7 patients who did not meet Pharmac eligibility criteria had antivirals prescribed. Three of these patients requested the prescription to self-fund, while 4 patients had no reason documented. Of note, those did have some medical co-morbidities including cardiac disease and diabetes; however, their co-morbidities did not meet the threshold for antiviral eligibility. The ethnicity breakdown of patients who received an antiviral prescription without meeting eligibility were: Māori; NZ European; Asian; Other; and Not Stated.

Discussion

This study demonstrated that in Ao/NZ, Māori patients had the lowest rates of COVID-19 antiviral prescriptions given. This finding provides valuable insight into prescribing patterns in urgent care. It shows inequitable prescribing practices in Ao/NZ are potentially present which may result in inequitable COVID-19 antiviral access in a population which is already vulnerable to severe outcomes from COVID-19.[1-3]

Another study based in the United States showed

that Black, Asian and Hispanic ethnicities were less likely to receive outpatient medication (monoclonal antibodies such as bamlanivimab) for COVID-19 compared to White patients.[22] In this same study, potential reasons given were limited access to care, lack of a primary care provider, potential biases in prescribing practices, and lack of communication to certain communities regarding the COVID-19 antivirals.[22] My study only looked at patients who presented to an urgent care clinician, suggesting that access to care is likely not a contributing factor. Instead, this suggests that potential biases in prescribing practices may be a more significant contributing factor.

My study suggests that lower COVID-19 antiviral prescribing rates may be contributing to Māori patients' inequitable health outcomes for COVID-19. Factors impacting the prescribing behavior of physicians may be a potential target to improve prescribing rates. In the treatment of other respiratory infectious diseases, 1 study showed that physician attitude was the dominant factor in the decision to prescribe antibiotics, specifically fear of disease complications, patient reactions, and patient expectations for antibiotics.[39] In order to change prescribing behavior, education for physicians and tools which reflect a physician's own practice have been proposed as potential solutions.[39,40] These may be potential targets to influence COVID-19 antiviral prescribing practices for urgent care physicians to ensure equitable care.

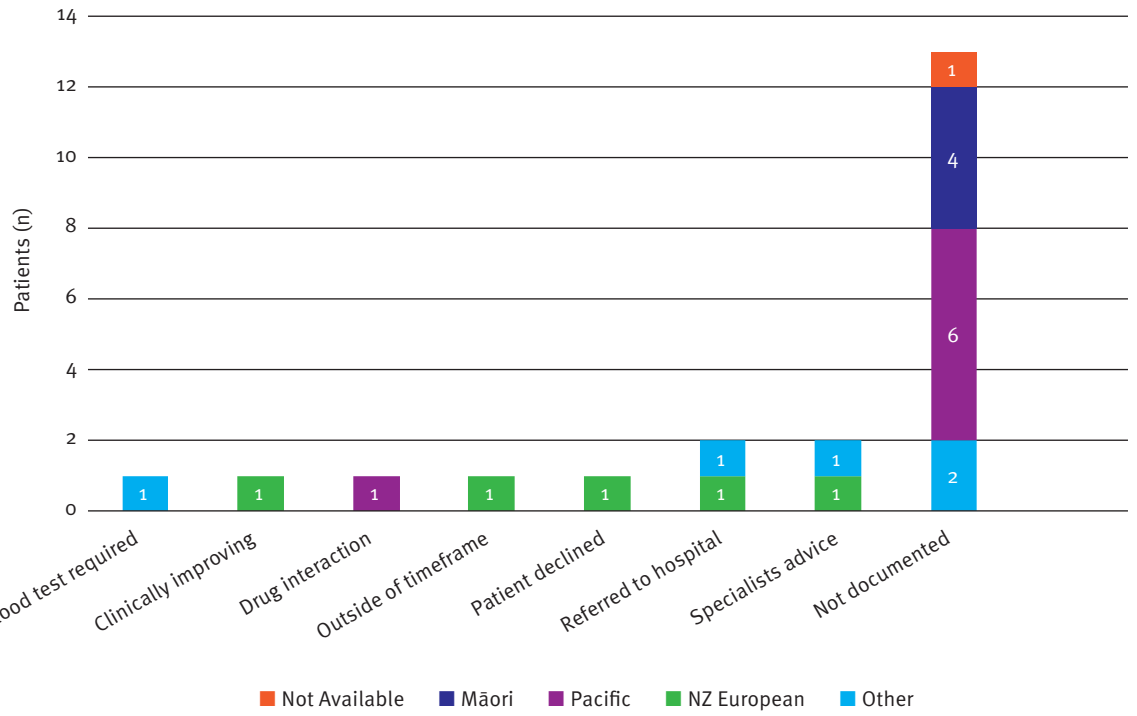
Other potential contributing factors for disparities in ethnic health outcomes across a range of infectious disease pandemics in the literature also include financial barriers to medications and patient health literacy.[12] However, financial barriers to medications are unlikely to be contributing as Ao/NZ has a publicly funded healthcare system, and COVID-19 antiviral medication was free for eligible patients at the time.[24] Patient health literacy may play a role, as perhaps patients who received prescriptions in this study requested them from the clinician, which

Table 4. Patients Eligible for COVID-19 Antivirals, Antivirals Prescribed, Reasons For Not Prescribing

Eligible for COVID-19 Antivirals (n)	89
Prescribed COVID-19 Antivirals (n, %)	61 (68.5%)
Antiviral Prescribed (n)	
nirmatrelvir/ritonavir	45
molnupiravir	16
Reason Documented For Not Prescribing (n)	
Patient declined	1
Clinically improving	1
Referred acutely to hospital	2
Recommended by hospital specialist*	2
Uncertain symptom onset/time frame	1
Drug interaction	1
Blood test required	1
No documented reason	13

*Documentation showed phone consultation from acute hospital specialist who advised COVID-19 antivirals were not recommended based on patient and/or clinical case factors (eg, drug interactions, patient co-morbidities)

Figure 1. Reasons Documented for Not Prescribing COVID-19 Antivirals in Eligible Patients by Ethnicity



could increase the likelihood of a COVID-19 antiviral being prescribed for eligible patients. However, which patients requested a prescription was not included in the data collected in this study. Regardless, clinicians still have the responsibility of being aware of the eligibility criteria and correctly applying it rather than relying on patients requesting these medications.

Given the findings in the literature, there are additional areas which may need to be addressed to correct the identified gaps in prescribing. Lack of clinician knowledge regarding eligibility criteria for community access to COVID-19 antivirals may be a potential contributing factor. During the pandemic, particularly the early waves, Ao/NZ was a country with very frequent communication updates from the central health agency.[22,34] Given the sheer volume of information, in combination with rapidly evolving guidelines, it may have been difficult for clinicians to be aware of the most current recommendations.[34] Another area to address particularly when looking at the lower prescribing rates of Māori to non-Māori patients, may be clinician implicit bias as has been theorized in other studies.[17,18,19,20,39,40,41,42]

While health and prescribing disparities affecting Māori are seen in the literature, there are a few conditions where Māori patients have received higher prescription rates than non-Māori patients.[42,43] This includes prescriptions for antipsychotics and antibiotics for pharyngitis.[42,43] For antibiotics for pharyngitis, a driving factor may be that acute rheumatic fever affects a disproportionate number of Māori and Pacific people in Ao/NZ and guidelines for pharyngitis management reflect this increased risk based on ethnicity.[44] Consequently, antibiotics are more likely to be commenced in these at-risk groups based on Ao/NZ's pharyngitis guidelines.[43,44] It is surprising therefore, that this study did not show similarly higher rates of COVID-19 antiviral prescriptions compared to other ethnicities, given the role of ethnicity in the Pharmac eligibility criteria. As such, physician prescribing behavior may contribute more to this disparity.

An interesting result from this current study was that Pacific patients had higher rates of prescriptions than Māori, which were comparable to other ethnicities such as NZ European. One possible reason may be that Pacific patients had similar eligibility rates based on multiple comorbidities to NZ European and Asian patients. Therefore, prescribing could have been based on medical comorbidities, rather than the different age thresholds based on ethnicity. Ao/NZ also tried to mitigate

the effects of COVID-19 on Pacific people early on in the pandemic with specific strategies to engage with these communities, which were largely Pacific- and community-led.[45] This may have resulted in an increase in health literacy, and consequently a higher likelihood of requesting COVID-19 antivirals by the patients themselves, which could impact physician prescribing behavior as previously discussed.[39]

However, the Māori also took a similar community led strategic approach early in the pandemic.[36] This may suggest that indigenous peoples suffer more from implicit bias even compared with other ethnic minorities. Previous studies have shown that Māori patients experience alienation, micro-aggression, and discriminatory behavior from a wide range of healthcare services.[46] While it is possible that clinicians may have been more aware of the co-morbidities part of the COVID-19 antivirals eligibility, the "Other Ethnicities" group also had the same proportion of patients who met additional COVID-19 therapeutic access criteria compared with Māori, yet COVID-19 antiviral prescribing rates for Māori were still lower. This suggests that co-morbidities may not be the key factor in prescribing decisions. These initial findings show a significant need for further studies on COVID-19 antiviral and other prescribing rates by ethnicity to better understand potential disparities in an effort to develop interventions to minimize inequities.

To date, there have been no published studies in Ao/NZ looking at prescribing patterns for COVID-19 antivirals either in the outpatient or inpatient setting and specifically regarding whether there have been any ethnic disparities. Globally, literature is also limited for research in prescribing patterns based on ethnicity for COVID-19 specifically. This study, though small, provides preliminary insight into potential ethnic inequities in Ao/NZ, particularly involving populations that have already had historical inequities from a range of diseases.[16,36,47] Larger studies across primary healthcare, such as multi-center UCC studies, GP prescribing practices, and direct pharmacist supply to patients of COVID-19 antivirals, would be useful in confirming whether the findings in this study are present more broadly. Next steps should also include what may be potential contributing factors. Future work to address barriers to achieve equitable care for patients, such as addressing clinician implicit bias and physician prescribing behavior, is also needed.

Limitations

The largest limitation of this study is the small sample size. Additionally, this study was limited to UCCs in a single large urban city. However, when comparing both Auckland region and Ao/NZ 2018 census data, the sample in this study is still mostly representative.[37,38,48] Key differences in the sample size include a lower proportion of Māori, and higher proportion of Pacific, Asian and Other ethnicities, compared to Census data.[37,38,48] It should also be noted that ethnicity data in the 2018 Census was counted differently to this study. In the census, multiple ethnicities resulted in a count for every different ethnicity whereas in this study, each patient could only report a single ethnicity.[37,48,49] Census data also grouped European and NZ European in the same category of "European" in contrast to this study which grouped non-NZ European ethnicities under "Other."[37]

Another limitation is ethnicity data was not obtained for all patients, and the ethnicity was self-reported. Lastly, this study did not examine a relationship between COVID-19 antiviral prescribing and COVID-19 illness outcomes.

Conclusion

This study showed that Māori patients a significantly lower proportion of COVID-19 antiviral prescriptions given, compared to all other ethnicities. These results show further work is required to improve prescribing practices in urgent care, and further research needed to identify the causes of variable prescribing practices.■

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References

1. Steyn N, Binny RN, Hannah K, Hendy SC, James A, Lustig A, et al. Māori and Pacific People in New Zealand have higher risk of hospitalisation for COVID-19. *NZ Med J.* 2020;134(1538).
2. Steyn N, Binny RN, Hannah K, Hendy SC, James A, Kukutai T, et al. Estimated inequities in COVID-19 infection fatality rates by ethnicity for Aotearoa New Zealand. *NZ Med J.* 2020;133(1521).
3. Whitehead J, Gan H, Heerikhuisen J, Gray G, Richardson T, Brown P, et al. Inequities in COVID-19 Omicron infections and hospitalisations for Māori and Pacific people in Te Manawa Taki Midland region, New Zealand. *Epidemiology & Infection.* 2023;151:e74.
4. Bryce A, Foley L, Phillipson J, Slow S, Storer M, Williman J, et al. Clinical features of patients hospitalised with COVID-19 from February to October 2020, during the early waves of the pandemic in New Zealand. *The New Zealand Medical Journal* (Online). 2022;135(1552):120-7.
5. Hammond V, Butchard M, Stablein H, Jack S. COVID 19 in one region of New Zealand: a descriptive epidemiological study. *Australian and New Zealand Journal of Public Health.* 2022;46(6):745-50.
6. Ayoubkhani D, Nafilyan V, White C, Goldblatt P, Gaughan C, Blackwell L, et al. Ethnic-minority groups in England and Wales—factors associated with the size and timing of elevated COVID-19 mortality: a retrospective cohort study linking census and death records. *International Journal Of Epidemiology.* 2020;49(6):1951-62.
7. Urdiales T, Dernie F, Català M, Prats-Uribe A, Prats C, Prieto-Alhambra D. Association between ethnic background and COVID-19 morbidity, mortality and vaccination in England: a multistate cohort analysis using the UK Biobank. *BMJ Open.* 2023;13(9):e074367.
8. Aldridge RW, Lewer D, Katikireddi SV, Mathur R, Pathak N, Burns R, et al. Black,

Asian and Minority Ethnic groups in England are at increased risk of death from COVID-19: indirect standardisation of NHS mortality data. Wellcome Open Research. 2020;5:88.
9. Amele S, Kibuchi E, McCabe R, Pearce A, Henery P, Hainey K, et al. Ethnic inequalities in positive SARS-CoV-2 tests, infection prognosis, COVID-19 hospitalisations and deaths: analysis of 2 years of a record linked national cohort study in Scotland. *J Epidemiol Community Health*. 2023;77(10):641-8.
10. Duong KN, Le LM, Wannaadisai W, Jones BE, Chaiyakunapruk N. Disparities in COVID-19 related outcomes in the United States by race and ethnicity pre-vaccination era: an umbrella review of meta-analyses. *Frontiers in Public Health*. 2023;11:1206988.
11. Diaz AA, Thakur N, Celedón JC. Lessons learned from health disparities in coronavirus disease-2019 in the United States. *Clinics in Chest Medicine*. 2023;44(2):425-34.
12. Kondo KK, Williams BE, Ayers CK, Kansagara D, Smith M, Advani SM, et al. Factors associated with health inequalities in infectious disease pandemics predating COVID-19 in the United States: a systematic review. *Health Equity*. 2022;6(1):254-69.
13. Feldman JM, Bassett MT. Variation in COVID-19 mortality in the US by race and ethnicity and educational attainment. *JAMA Netw Open*. 2021;4(11):e2135967-e.
14. Newton S, Zollinger B, Freeman J, Moran S, Helfand A, Authelet K, et al. Factors associated with clinical severity in emergency department patients presenting with symptomatic SARS CoV 2 infection. *J Am Coll of Emerg Phys Open*. 2021;2(4):e12453.
15. Berchet C, Bijlholt J, Ando M. Socio-economic and ethnic health inequalities in COVID-19 outcomes across OECD countries. 2023. Available from: https://www.oecd.org/en/publications/socio-economic-and-ethnic-health-inequalities-in-covid-19-outcomes-across-oecd-countries_6c2a96c9-en.html
16. Wilson N, Barnard LT, Summers JA, Shanks GD, Baker MG. Differential mortality rates by ethnicity in 3 influenza pandemics over a century, New Zealand. *Emerg Infec Dis*. 2012;18(1):71.
17. Williams JC, Harowitz J, Glover J, Tek C, Srihari V. Systematic review of racial disparities in clozapine prescribing. *Schizophrenia Research*. 2020;224:11-8.
18. Ryan C, Teh R, Moyes S, Wilkinson T, Connolly M, Rolleston A, et al. Quality of prescribing predicts hospitalisation in octogenarians: life and living in advanced age: a cohort study in New Zealand (LiLACS NZ). *BMC Geriatrics*. 2019;19:1-10.
19. Metcalfe S, Vallabh M, Murray P, Proffitt C, Williams G. Over and under? Ethnic inequities in community antibacterial prescribing. *NZ Med J* (Online). 2019;132(1488):65-8.
20. Raghunandan R, Marra CA, Tordoff J, Smith A. Examining non-medical prescribing trends in New Zealand: 2016–2020. *BMC Health Services Research*. 2021;21:1-13.
21. Wiltz JL. Racial and ethnic disparities in receipt of medications for treatment of COVID-19—United States, March 2020–August 2021. MMWR Morbidity and Mortality Weekly Report. 2022;71.
22. Proactive release: Timeline of Aotearoa New Zealand's signficant events and key All-of-Government activities Wellington: New Zealand Government; 2023 [cited 2024 02 Apr]. Available from: https://www.dpmc.govt.nz/sites/default/files/2023-10/pr-timeline-significant-events-activities.pdf.
23. Verrall A. Future of the COVID-19 Protection Framework and Moving to the New Approach Department of the Prime Minister and Cabinet: Department of the Prime Minister and Cabinet; 2022 [cited 2024 20 March]. 6]. Available from: https://www.dpmc.govt.nz/sites/default/files/2022-12/SWC-22-SUB-0159-future-c19-protection-framework.pdf.
24. Pharmac. Decision on access criteria for oral COVID-19 treatments: Pharmac Te Pātaka Whaioranga; 2022 [updated 31 March 2022; cited 2024 01 March]. Available from: https://pharmac.govt.nz/news-and-resources/news/2022-03-31-media-release-pfizers-oral-covid-19-treatment-arrives-in-new-zealand.
25. Pharmac. Pfizer's oral COVID-19 treatment arrives in New Zealand: Pharmac Te Pātaka Whaioranga; 2022 [updated 31 March 2022; cited 2024 01 March]. Available from: https://pharmac.govt.nz/news-and-resources/news/2022-03-31-media-release-pfizers-oral-covid-19-treatment-arrives-in-new-zealand.
26. Pharmac. Decision to simplify access for antiviral COVID-19 treatments: Pharmac Te Pātaka Whaioranga; 2022 [updated 12 September 2022; cited 2024 01 March]. Available from: https://pharmac.govt.nz/news-and-resources/consultations-and-decisions/2022-09-12-decision-to-simplify-access-for-antiviral-covid-19-treatments.
27. O'Neill J, White M, Tuki M, Machirori T, Copeland K, Sivanantham S, et al. COVID-19 Winter Surge Package 2022: Rapid Review: Allen + Clarke; 2023 [cited 2024 01 March]. Available from: https://www.health.govt.nz/system/files/documents/publications/rapid_review_of_covid-19_winter_surge_package_final_report_jr.pdf.
28. Imlach F, McKinlay E, Kennedy J, Morris C, Pledger M, Cumming J, et al. E-prescribing and access to prescription medicines during lockdown: experience of patients in Aotearoa/New Zealand. *BMC Fam Pract*. 2021;22:1-12.
29. Russell L, Jeffreys M, Churchward M, Cumming J, McKenzie F, O'Loughlin C, et al. Cohort profile: Ngā Kawekawe o Mate Korona| Impacts of COVID-19 in Aotearoa–a prospective, national cohort study of people with COVID-19 in New Zealand. *BMJ Open*. 2023;13(7):e071083.
30. Agency PH. COVID-19 Trends and Insights Report Wellington: Ministry of Health; 2022 [cited 2024 01 March]. Available from: https://www.tewhatuora.govt.nz/assets/Our-health-system/Data-and-statistics/Covid-19/Covid-trends/COVID-19-Trends-and-Insights-Report-23-December-2022-PDF-2.0-MB.pdf.
31. Wilson G, Windner Z, Dowell A, Toop L, Savage R, Hudson B. Navigating the health system during COVID-19: primary care perspectives on delayed patient care. *NZ Med J*. 2021;134(1546):17-27.
32. Wilson G, Currie O, Bidwell S, Saeed B, Dowell A, Halim AA, et al. Empty waiting rooms: the New Zealand general practice experience with telehealth during the COVID-19 pandemic. *NZ Med J*. 2021;134(1538):89-101.
33. Undoctored+. COVID-19 community testing network expands in Auckland, with five additional centres 2020 [cited 2024 02 Apr]. Available from: https://www.nzdoctor.co.nz/article/undoctored/covid-19-community-testing-network-expands-auckland-five-additional-centres.
34. Aotearoa New Zealand's COVID-19 Testing Plan Wellington: Ministry of Health; 2021 [cited 2024 01 March]. Available from: https://www.mcguinnessinstitute.org/wp-content/uploads/2021/03/202101-Aotearoa-New-Zealands-COVID-19-Testing-Plan.pdf.
35. Pledger M, Mohan N, Silwal P, Irurzun-Lopez M. The enrolment gap and the COVID-19 pandemic: an exploration of routinely collected primary care enrolment data from 2016 to 2023 in Aotearoa New Zealand. *Journal of Primary Health Care*. 2023;15(4):316-23.
36. Russell L, Levy M, Barnao E, Parore N, Smiler K, Boulton A. Enacting Mana Māori Motuhake during COVID-19 in Aotearoa (New Zealand): "We Weren't Waiting to Be Told What to Do". *International Journal of Environmental Research and Public Health*. 2023;20(8):5581.
37. StatsNZ. 2018 Census place summaries: Auckland region: Stats NZ; 2018 [cited 2024 03 April]. Available from: https://www.stats.govt.nz/tools/2018-census-place-summaries/auckland-region.
38. 2018 Census results: Henderson-Massey Local Board: Auckland Council; 2019 [cited 2024 03 April]. Available from: https://knowledgeauckland.org.nz/media/1188/henderson-massey-lb-2018-census-info-sheet.pdf.
39. Rodrigues AT, Roque F, Falcão A, Figueiras A, Herdeiro MT. Understanding physician antibiotic prescribing behaviour: a systematic review of qualitative studies. *International Journal Of Antimicrobial Agents*. 2013;41(3):203-12.
40. McKay R, Mah A, Law MR, McGrail K, Patrick DM. Systematic review of factors associated with antibiotic prescribing for respiratory tract infections. *Antimicrobial Agents And Chemotherapy*. 2016;60(7):4106-18.
41. Hull SA, McKibben S, Homer K, Taylor SJ, Pike K, Griffiths C. Asthma prescribing, ethnicity and risk of hospital admission: an analysis of 35,864 linked primary and secondary care records in East London. *NPJ Primary Care Respiratory Medicine*. 2016;26(1):1-7.
42. Wilkinson S, Mulder RT. Antipsychotic prescribing in New Zealand between 2008 and 2015. *NZ Med J* (Online). 2018;131(1480):61-7.
43. Whyler N, Tomlin A, Tilyard M, Thomas M. Ethnic disparities in community antibacterial dispensing in New Zealand, 2015. *NZ Med J*. 2018;131(1480):50-60.
44. Kerdemelidis M, Lennon D, Arroll B, Peat B. Guidelines for sore throat management in New Zealand. *NZ Med J* (Online). 2009;122(1301).
45. Ioane J, Percival T, Laban W, Lambie I. All of community by all-of-government: reaching Pacific people in Aotearoa New Zealand during the Covid-19 pandemic. *NZ Med J*. 2021;134(1533):96-103.
46. Talamaivao N, Harris R, Cormack D, Paine S-J, King P. Racism and health in Aotearoa New Zealand: a systematic review of quantitative studies. *NZ Med J* (Online). 2020;133(1521):55-5.
47. Betts JM, Weinman AL, Oliver J, Braddick M, Huang S, Nguyen M, et al. Influenza-associated hospitalisation and mortality rates among global Indigenous populations; a systematic review and meta-analysis. *PLOS Global Public Health*. 2023;3(4):e0001294.
48. StatsNZ. 2018 Census place summaries: New Zealand: Stats NZ Tatauranga Aotearoa; [cited 2024 10 April]. Available from: https://www.stats.govt.nz/tools/2018-census-place-summaries/new-zealand.
49. Unit RaE. Auckland Counts: Auckland's census data: Auckland Council; 2020 [cited 2024 10 April]. Available from: https://cloud.statsilk.com/l/acouncil/local-board-data-viewer/StatPlanet_Cloud.html.
50. Pharmac. Covid-19 antivirals: Access Criteria: Pharmac Te Pataka Whaioranga; 2023 [updated 5 February 2024; cited 2024 27 March]. Available from: https://pharmac.govt.nz/news-and-resources/covid19/access-criteria-for-covid-19-medicines/covid-antivirals.

Cannabis Use and Cardiovascular Outcomes in Adults

Take Home Point: This study suggests that cannabis use has a strong, statistically significant association with adverse cardiovascular outcomes independent of tobacco use.

Citation: Jeffers A, Glantz S, Byers A, et. al. Association of Cannabis Use With Cardiovascular Outcomes Among US Adults. *J Am Heart Assoc.* 2024 5;13(5):e030178. doi: 10.1161/JAHA.123.030178

Relevance: Animal studies have previously shown endothelial cell dysfunction, a precursor to endovascular disease, occurs with cannabis use. However, with increased cannabis use in recent years, it is unknown if a correlation exists between cannabis use and cardiovascular outcomes.

Study Summary: This was a population- based, cross-sectional study of data from the Behavioral Risk Factor Surveillance Survey from 27 American states and 2 territories. The authors quantified cannabis use as a continuous variable, (days of cannabis use in the previous 30 days divided by 30). Analysis included multiple demographic variables, socioeconomic variables, and cardiovascular risk factors. Multivariable logistic analyses examined use of cannabis with lifetime occurrence of coronary heart disease (CHD), myocardial infarction (MI), stroke, and the composite of the 3 with cannabis use.

The authors identified 434,104 respondents who answered the cannabis module questions and found prevalence of daily cannabis use was 4.0%, nondaily use was 7.1% (median: 5 days per month; interquartile range, 2–14), and nonuse was 88.9%. They found 30-day cannabis use was statistically significantly associated with MI, stroke, and composite outcomes of CHD, MI, and stroke; controlling for tobacco use status, age, sex, race and ethnicity, body mass index, diabetes, alcohol use, educational attainment, and physical activity. Additionally, there was a dose-response relationship with more days of use associated with higher risks.

Editor's Comments: The study was limited by its cross-sectional design, which provides only a snapshot of the timeframe studied, making it difficult to track change in behavior and long-term effects. Participant self-reporting makes the results susceptible to recall bias. However, the large number of participants allowed the authors to provide a subset analysis of participants who never used tobacco—indicating that cannabis use is potentially an independent risk factor for poor cardiovascular outcomes. Although further research is necessary to substantiate this association, this study represents the first instance in which such conclusions have been drawn. For urgent care (UC) clinicians, regular screening questions regarding cannabis use might be appropriate when assessing patients presenting with symptoms concerning for acute coronary syndrome or stroke. ■

Do All Facial Fractures Require Emergency Department Transfers? Defining Criteria for Referrals

Take Home Point: In this study, more than half of patients with isolated facial fractures did not require immediately surgical intervention or hospitalization.

Citation: Castillo Diaz F, Anand T, Khurshid M, et. al. Look me in the face and tell me that I needed to be transferred: Defining the criteria for transferring patients with isolated facial injuries. *J Trauma Acute Care Surg.* 2025 May 9. doi: 10.1097/TA.0000000000004651.

Relevance: Facial trauma is a common presentation to both emergency department (ED) and UC settings with a large proportion of patients referred on for specialist evaluation. However, many of these patients do not have further intervention, and the authors of this study reviewed facial trauma cases and outcomes to develop facial injury guidelines to help clinicians determine transfer needs.

Study Summary: This was a retrospective analysis of data from patients transferred to a level 1 trauma center in Ari-

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zona, USA, with craniomaxillofacial trauma over a 5-year period. Data for patients ≥18 years of age who were transferred to the facility for evaluation and/or management of isolated facial injuries were reviewed based on outcome and by a panel of experts. The primary objective of this study was to develop the facial injury guidelines (FIG), an evidence-based algorithm to standardize interfacility transfers for facial trauma.

The authors identified 511 patients for review. They noted that 252 (49%) were classified as appropriate transfers, while 259 (51%) were potentially inappropriate transfers. The FIG that the authors developed suggests that patients with isolated zygomatic arch fractures, nasal bone fractures, maxillary sinus fractures, Le Fort type 1 injuries, hard palate fractures, and maxillary alveolus fractures do not require transfer. None of the 247 patients with these injuries required intervention at the time of transfer, and all were discharged home. Although, 26 patients subsequently did require surgical intervention indicating that outpatient follow-up is still recomended. None of the patients with delayed intervention had significant complications due to the delay in management.

Editor's Comments: Limitations of this study include the authors' inability to assess those patients who required transfer but were not and the exclusion of patients who were transferred for cosmetic and aesthetic reasons. Local guidelines and specialist preferences may also vary and therefore incorporating the Facial Injury Guidelines into urgent care practice need to be tailored accordingly. ■

Does a Negative Chest X-Ray Rule Out Pneumonia in Children?

Take Home Point: In pediatric patients with suspected pneumonia, the development of pneumonia following a negative chest x-ray (CXR) was rare. However, the authors do recommend caution on performing CXR for all children.

Citation: Hirsch A, Wagner A, Lipsett S, et. al. Risk of Subsequent Pneumonia After a Negative Chest Radiograph in the ED. *Pediatrics*. 2025;155(5):e2024069829

Relevance: There has been concern that radiographic features of pneumonia lag behind clinical findings; therefore, raising doubt on the reliance of plain chest x-rays (CXR) to diagnose pneumonia in children presenting to emergency departments (ED).

Study Summary: This was a retrospective cohort study in a large US tertiary pediatric ED over a 10-year period (2012-2021) to determine the percentage of children with suspected pneumonia who developed radiographic pneumonia after an initial negative CXR. The authors reviewed medical records of patients presenting with fever or respiratory symptoms who had CXR to evaluate for pneumonia with repeat imaging within 14 days of the initial visit.

The authors identified 9,957 children with negative initial CXRs, among whom 240 (2.4%) underwent a repeat CXR within 14 days. Of the 240 children with a follow-up CXR, only 27 children (11.3%) developed radiographic pneumonia. This equated to 0.27% of all children with an initially negative CXR. The children that subsequently developed pneumonia after initial negative CXR were more likely to have tachypnea on initial presentation. There were no other differences in clinical or demographic characteristics. As such, CXR during the initial visit had a negative predictive value of 99.7%.

Editor's Comments: It is critical to remember that the Infectious Diseases Society of America (IDSA) recommends against the routine use of CXR to diagnose pneumonia in pediatric patients in the outpatient setting. This is due to concerns with radiation exposure and the difficulty in distinguishing viral from bacterial infections. For many urgent care clinics, the lack of radiography technicians may also limit availability. However, this study was based in an institution that utilized CXR as part of the diagnostic pathway for suspected pneumonia with very few patients not receiving a CXR. Therefore, UC clinicians who choose to perform a CXR on a pediatric patient with suspected pneumonia can feel confident with a negative CXR. ■

Safer Treatment of Urinary Tract Infections in the First Trimester of Pregnancy

Take Home Point: First trimester of pregnancy exposure to trimethoprim-sulfamethoxazole (TMP-SMX) is associated with increased risk of any congenital malformation, severe cardiac malformation, other cardiac malformation, and cleft lip and palate compared with β-lactam exposure.

Citation: Osmundson S, Nickel K, Shortreed S, et. al. First-Trimester Antibiotic Use for Urinary Tract Infection and Risk of Congenital Malformations. *JAMA Netw Open*. 2025 Jul 1;8(7):e2519544. doi: 10.1001/jamanetworkopen.2025.19544.

Relevance: Urinary tract infections (UTI) are common in pregnancy and treatment is indicated to prevent negative maternal and neonatal outcomes. However present guidance regarding appropriate antibiotics is vague due to uncertainty regarding risks of congenital malformations associated with the most commonly prescribed antibiotics.

Study Summary: This was a population-based cohort study of commercially insured pregnant individuals who were treated for UTI in the Merative Market Scan Commercial Database. Congenital malformations were identified using the Kharbanda algorithm to review inpatient and outpatient diagnosis codes on birthing parent claims for the first month after delivery and infant claims up to 365 days after birth.

The authors identified 71,604 pregnancies to review. Of these, 42,402 individuals (59.2%) had first-trimester exposure to nitrofurantoin; 3,494 (4.9%) had first-trimester exposure to TMP-SMX; 3,663 (5.1%) had first-trimester exposure to fluoroquinolones, and 22,045 (30.8%) had first-trimester exposure to β-lactams. They found 1,518 infants with any congenital malformation, including 729 with cardiac malformations. In the analysis, first-trimester exposure to TMP-SMX was associated with increased risk of any congenital malformation (weighted RR, 1.35; 95%CI, 1.04 to1.75, indicating 1 additional malformation per 145 pregnant individuals treated with TMP-SMX vs β-lactams). No elevated risk was found with nitrofurantoin.

Editor's Comments: The study design was subject to other potential confounders which were not factored into any of the results namely, genetic factors, obesity, tobacco use, alcohol use, substance use, and severity of infection. Additionally, the study's data was limited to only live births which has the potential of introducing selection bias. This study has also limited generalizability to Medicaid and uninsured populations. The findings point to preferred antibiotic choices in the treatment for UTI for patients in their first trimester of pregnancy. ■

Saline Irrigation for Acute Sinusitis

Take Home Point: In this pilot study, the use of hypertonic saline nasal irrigation with a delayed antibiotic prescription is deemed an acceptable management plan for patients presenting with acute sinusitis.

Citation: Venekamp R, Ainsworth B, Thomas T, et. al. Saline nasal irrigation for acute sinusitis (SNIFS II): a randomised controlled pilot trial with nested process evaluation. *BJGP Open*. 2025 Mar 31:BJGPO.2024.0307. doi: 10.3399/BJGPO.2024.0307

Relevance: Acute sinusitis is a very common presentation to urgent care, where many patients have the expectation of treatment with antibiotics. Evidence shows antibiotics do not change recovery time, so finding alternative treatments can help both clinicians and patients.

Study Summary: This was an open label, individually randomized (1:1) controlled pilot trial with a nested process evaluation at 24 English general practices. Participants included those with sinus discomfort, and at least 2 of the following: patient-reported nasal obstruction, patient reported purulent nasal discharge, or pus seen in the nasal cavity by the clinician. Those in the intervention group were asked to irrigate the nose (150 ml through each nostril) using a SinuCleanse 19 nasal cup ("Netipot") daily for up to 21 days or until symptoms had resolved. Those in the control group were given usual care. Delayed prescriptions of penicillin V 500mg 4 times a day or alternatively amoxicillin 500mg 3 times a day for 1 week, or clarithromycin 500mg 2 times a day for 1 week (for penicillin allergy) were provided to all patients. The main clinical outcome of interest was patient-reported antibiotic consumption during 4-weeks follow-up.

In total, 81 participants were randomized: 42 to saline nasal irrigation; and 39 to usual care. Antibiotic use during 4-week follow-up was reported in 58% (19/33) of the saline group vs. 40% (12/30) of the usual care group and did not statistically significantly differ between groups in adjusted analysis (adjusted odds ratio: 0.81, 95% confidence interval [CI] 0.23 to 2.87). The mean symptom score on days 2-4 was 2.7 (standard deviation [SD] 1.3) in the saline nasal irrigation group and 3.0 (SD 1.1) in the usual care group. Repeat consultations with new, non-resolving, or worsening illness within 4 weeks occurred in 31% of the saline group vs. 50% of the usual care group (adjust odds ratio: 1.64, 95% CI 0.47 to 5.74). Semi-structured interviews with trial participants revealed that most were positive about trial participation and viewed saline nasal irrigation as acceptable, noting it as an alternative to antibiotics.

Editor's Comments: The study was not sufficiently powered to assess the clinical effectiveness of the intervention compared with usual care in terms of antibiotic use, duration and severity of symptoms, and associated cost. In patients presenting to urgent care with acute sinusitis and other upper respiratory tract illnesses, there are patient expectations regarding antibiotics that need to be ac-

knowledged. Effectively communicating findings from this and similar studies demonstrating the non-antibiotic treatments for these diagnoses support antibiotic stewardship efforts. ■

Screening for Intimate Partner Violence and Caregiver Abuse

Take Home Point: The US Preventive Services Task Force (USPSTF) continues to recommend screening for intimate partner violence (IPV) in all women of reproductive age and provide interventions for women who screen positive either directly or via a referral process.

Citation: Feltner C, Peat C, Asher GN, et. al. Screening for Intimate Partner Violence and for Caregiver Abuse of Older or Vulnerable Adults: An Evidence Report and Systematic Review for the US Preventive Services Task Force. *JAMA*. 2025 Jul 22;334(4):339-355. doi: 10.1001/jama.2025.2449

Relevance: IPV is an unrecognized issue which affects many worldwide. Nearly half of all U.S. adult women and men report experiencing sexual violence, physical violence, or stalking in their lifetime.

Study Summary: This was a literature review performed by the USPSTF to evaluate the benefits and harms of screening for IPV, older adult abuse, and vulnerable adult abuse. The objective was to produce an updated recommendation statement. Screening for IPV generally involves a short questionnaire that assesses current or recent abuse. Included screening tools include the Humiliation, Afraid, Rape, Kick (HARK); the Hurt, Insult, Threaten, Scream (HITS); and the Woman Abuse Screening Tools (WAST).

The authors found no evidence on appropriate intervals for screening. The authors noted that effective interventions generally address the multiple factors related to IPV, involve ongoing support services, and provide a range of emotional support with behavioral and social services. In line with previous guidance, the authors recommend screening for IPV in all women of reproductive age, along with ongoing support for affected women where appropriate. Further work is required to ascertain the accuracy of current older and vulnerable adult abuse screening tools including the benefits and harms of screening as well as interventions to reduce this abuse.

Editor's Comments: This remains a complex issue for UC clinicians. However, this should not deter them from asking relevant questions when appropriate. In situations involving IPV, every encounter is significant, and UC engagement may bring previously unrecognized concerns to light. Even a brief screening can play a critical role in safeguarding patient well-being. ■

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What is an Urgent Care Operator's Liability Concerning Trash Disposal?

Urgent Message: Medical and non-medical waste produced by urgent care centers must be handled in accordance with federal, state, and local regulations.

Alan A. Ayers, MBA, MAcc

Citation: Ayers A. What is an Urgent Care Operator's Liability Concerning Trash Disposal? *J Urgent Care Med.* 2025; 20(1):49-51

Key Words: Urgent Care, Practice Management, Ancillary Services, Business Operations

The United States Supreme Court has ruled that garbage is public property once it is set on the curb.[1] The Supreme Court opined that "[i]t is common knowledge that plastic garbage bags left on or at the side of a public street are readily accessible to animals, children, scavengers, snoops, and other members of the public."[2] If you set your trash out for collection, it's believed that you have given up any "reasonable expectation of privacy."[3]

However, the question remains who can be found liable if that trash is not disposed of properly and in accordance with federal, state, and municipal law. This article will examine what urgent care owners should know about trash disposal at their locations.

Federal regulations play a major part in molding waste management practices in the U.S. The Resource Conservation and Recovery Act (RCRA)[4] is one of the most significant federal laws that regulates hazardous waste management. The RCRA provides the Environmental Protection Agency (EPA) with the authority to control hazardous waste at all stages, including generation, transportation, treatment, and storage. Most of the compliance monitoring responsibility under the RCRA has been delegated to the states and local authorities.

The EPA regulates household, industrial, and manufacturing solid and hazardous waste under the RCRA. The Act's goals include protecting the public from the hazards of waste disposal.[5]

Analysis

In an urgent care center, waste is generally categorized based on its origin and composition, which determines the appropriate method of disposal. There are 3 types of waste to be considered:

- Personal health information (PHI) displayed on documents
- Non-regulated waste such as general trash or food
- Regulated waste, such as pharmaceutical products and medical waste

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Regulated medical waste includes:[6]

- Human blood and blood products
- Needles and syringes (sharps)
- Laboratory waste
- Human pathological waste
- Material contaminated with blood, body fluids, or other infectious waste

An urgent care center typically has processes for the following:

- Segregating and shredding paperwork containing PHI (either shredder on-site or a shred bin serviced by a third party)
- Disposal of biohazard materials via sharps containers or biohazard containers/bags/boxes serviced by a third party, stored in an enclosed biohazard space with a warning sign
- Emptying of trash cans for dry and wet waste by janitor services
- Recycling locally specified waste

Legal Issues

Federal Regulations for the Destruction of PHI

The HIPAA Privacy Rule requires that covered entities apply appropriate administrative, technical, and physical safeguards to protect the privacy of PHI, in any form.[7] As such, covered entities—like urgent care centers—must implement reasonable safeguards to limit incidental, and avoid prohibited, uses and disclosures of PHI, including in connection with the disposal of this information. In addition, the HIPAA Security Rule requires that covered entities implement policies and procedures to address the final disposition of electronic PHI and/or the hardware or electronic media on which it is stored, as well as to implement procedures for removal of electronic PHI from electronic media before the media are made available for reuse.[8]

As such, urgent cares aren't allowed to just abandon or dispose of PHI in dumpsters or other containers that are accessible by the public. However, the Privacy and Security Rules don't require a particular disposal method. Covered entities must review their own circumstances to determine what steps are reasonable to safeguard PHI through disposal and develop and implement policies and procedures to carry out those steps.[9]

A covered entity may, but isn't required to, hire a business associate[10] to appropriately dispose of PHI on its behalf.[11] Thus, for example, an urgent care may hire an outside vendor to pick up paper records or electronic media from its premises, shred, burn, pulp, or pulverize the PHI, or purge or destroy the electronic media, and deposit the deconstructed material in a landfill or other appropriate area.

Failing to follow HIPAA can result in civil monetary penalties ranging from $141 to $2,134,831 per violation, depending on the level of culpability. In addition, criminal penalties can also be imposed for intentional HIPAA violations, leading to fines and potential imprisonment.[12]

State Laws Governing Regulated Waste

Each state has specific laws concerning the disposal of biohazards, along with penalties for failure to comply with state regulations. State agencies are usually tasked with overseeing local waste management authorities and programs, which include the collection, transportation, processing, and disposal of waste.

For example, New York State has strict requirements on the storage, transport, and disposal of certain biological or healthcare-related materials. It is illegal to dispose of these materials with household trash or recycling. Fines for biohazard waste violations can range from $5,000 to $70,000 per violation, depending on the severity of the infraction.[13]

A violator of the Colorado Hazardous Waste Act or of a related compliance order may be subject to an administrative penalty of up to $15,000 per violation per day. Moreover, violators may also be subject to a civil penalty of up to $25,000 per violation per day.[14]

In Minnesota, a person who knowingly disposes of or arranges for the disposal of infectious waste as defined in Minnesota state law is guilty of a gross misdemeanor and may be sentenced to imprisonment for not more than 364 days or assessed a fine of not more than $10,000, or both.[15]

Municipal Regulations Governing Ordinary Trash

Large and small communities across the country have rules for the collection of "ordinary trash." Some provide trash collection as a part of city services, and others contract with 1 or multiple waste management companies to complete the task.[16]

For example, the city and county of Los Angeles (California) prohibit disposal of household hazardous waste in the trash and instead provide designated centers for residents to properly dispose of such waste.[17] Cincinnati (Ohio) considers these items to be hazardous and therefore unacceptable for regular trash collection: hazardous or infections waste; propane or other pressurized gas tanks; liquid paint; acids; household chemicals; and more.[18]

Recycling

According to EPA, the total generation of municipal

solid waste equals 292.4 million tons or 4.9 pounds per person per day. Of the municipal solid waste generated, approximately 69 million tons are recycled, and 25 million tons are composted. Together, almost 94 million tons of waste are recycled and composted, equivalent to a 32.1% recycling and composting rate.[19] Many communities have recycling services, but whether an urgent care would have access to local recycling may depend on how the locality regards recycling from commercial businesses. Statistics show that 73% of all U.S. households have recycling access, however.[20]

The State of California enacted mandatory recycling laws, for example. Since January 1, 2022, all businesses and multifamily complexes are required to subscribe to organics collection, which includes food waste and yard trimmings. In addition, because the commercial sector generates nearly three-fourths of the solid waste in California, the passage of Assembly Bill 341 in 2011 requires all businesses that generate 4 cubic yards or more of trash per week to arrange for recycling services. The law leaves enforcement to be "consistent with a jurisdiction's authority, including a structure for fines and penalties."[21]

Other Trash Considerations

Finally, consider some of the common questions about trash.

- **Stealing your trash:** Commonly referred to as "dumpster diving," stealing trash set out for collection is not against the law. That's because the owner of the trash loses any expectation of privacy by placing it in public.
- **Unauthorized use of your dumpster:** This constitutes illegal dumping, and throwing trash in someone else's dumpster without their permission is a crime, the severity of which depends on where this occurs. In New Jersey, a perpetrator could be faced with $50,000 in fines and arrest as well as the confiscation of the vehicle used to transport the waste. The vehicle will be forfeited to the state.[22] In California, fines can be imposed up to $20,000.[23]
- **Trespassing:** This is knowingly entering another's property or land without permission, which encroaches on the owners' privacy or property interest. If an individual enters the property and dumpster dives or dumps trash, he or she would be guilty of trespass. The consequences would depend on the specific jurisdiction.
- **Injury sustained in dumping or stealing:** If someone is injured by waste while going through your dumpster, he or she may have a claim for damages. However, the success of an injured party's claim will depend on many factors. Primarily, a facility may be able to show the person was contributorily negligent—that the injured person contributed to their injury and that negligence is a bar to recovering damages. For example, a dumpster diver may be trespassing when the injury occurs.

Conclusion

Urgent care owners and managers should educate themselves on the laws and regulations concerning trash. Consult a local attorney to be certain you are in compliance with federal, state, and local laws. ■

References

1. California v Greenwood, 486 US 35, 41; 108 S Ct 1625; 100 L Ed 2d 30 (1988).
2. Greenwood, 486 US at 40. St. Charles County, Missouri. Recycle Works – Central. https://www.sccmo.org/892/Recycle-Works—-Central. Accessed August 14, 2025.
3. Greenwood, supra; United States v Shelby, 573 F2d 971, 973 (7th Cir 1978).
4. 42 USC § 6901 et seq.
5. US Environmental Protection Agency. Regulatory and guidance information by topic: waste. Updated May 23, 2024. https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-waste. Accessed August 14, 2025.
6. New York City Department of Sanitation. Medical and healthcare waste. https://www.nyc.gov/site/dsny/businesses/materials-handling/medical-healthcare-waste.page. Accessed August 14, 2025.
7. 45 CFR § 164.530(c); 45 CFR § 160.103; 45 CFR § 164.514; Planned Parenthood of the St. Louis Region & Sw Mo v Bailey, No. ED112842, 2025 Mo App LEXIS 316, at *41 (Ct App May 6, 2025).
8. 45 CFR § 164.310(d)(2)(i)-(ii).
9. US Environmental Protection Agency. Disposal of protected health information. https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-waste. Accessed August 14, 2025.
10. US Department of Health and Human Services. Business associates. https://www.hhs.gov/sites/default/files/ocr/privacy/hipaa/understanding/coveredentities/businessassociates.pdf. Accessed August 14, 2025.
11. 45 CFR §§ 164.308(b), 164.314(a), 164.502(e), 164.504(e).
12. HIPAA Journal. What are the penalties for HIPAA violations? https://www.hipaajournal.com/what-are-the-penalties-for-hipaa-violations-7096/. Accessed August 14, 2025.
13. New York City Sanitation Penalty Schedule § 3-122.
14. 6 CCR 1007-3, Part 1.
15. Minn Stat § 609.671(11).
16. Missouri Division of Environmental Health and Protection. Solid waste management. https://www.sccmo.org/852/Solid-Waste-Management. Accessed August 14, 2025.
17. City of Los Angeles. Hazardous waste. https://sanitation.lacity.gov/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-c/s-lsh-wwd-s-c-hw?_adf.ctrl-state=7x2ejke61_5&_afrLoop=16472776346095972#!. Accessed August 14, 2025.
18. City of Cincinnati Department of Public Services. Garbage collection guidelines. https://www.cincinnati-oh.gov/public-services/garbage-collection/. Accessed August 14, 2025.
19. US Environmental Protection Agency. National overview: facts and figures on materials, wastes and recycling. https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials. Accessed August 14, 2025.
20. The Recycling Partnership. Report shows only 21% of US residential recyclables are captured, points to policy and investment as immediate solutions. January 10, 2024. https://recyclingpartnership.org/report-shows-only-21-of-u-s-residential-recyclables-are-captured-points-to-policy-and-investment-as-immediate-solutions/. Accessed August 14, 2025.
21. State of California. AB 341. February 10, 2011. http://www.leginfo.ca.gov/pub/11-12/bill/asm/ab_0301-0350/ab_341_bill_20111006_chaptered.html. Accessed August 14, 2025.
22. New Jersey Department of Environmental Protection. Enforcement. https://www.nj.gov/dep/stopdumping/enforcement.htm. Accessed August 14, 2025.
23. Cal Penal Code § 374.3.

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CLINICAL IMAGE CHALLENGE
X-RAY

Editor's Note: While the images presented here are authentic, the patient cases are hypothetical.

24-Year-Old Male With Hand Pain After a Golf Game

A 24-year-old male patient presents to urgent care with right wrist pain that started while playing golf 2 days ago. The patient recalls swinging the club and hitting the ground rather than the ball, after which he felt a sharp pain in his hand which has been constant since the incident. He has not tried any treatments at home.

The provider notes increased pain when the patient flexes his hand, along with a weakened grip compared to the left side. Tenderness is noted to the hypothenar eminence of the palm. Allen's test is negative; sensation is normal to fingertips. There is slightly decreased strength with flexion and extension to ring and little fingers.

View the image taken and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

Acknowledgment: Images and case provided by Experity Teleradiology (www.experityhealth.com/teleradiology).

Differential Diagnosis

- Hamate fracture
- Fractures and/or dislocations of other carpal bones
- Distal radial fracture
- Metacarpal fracture
- Wrist sprain
- Hypothenar hammer syndrome

Diagnosis

The correct diagnosis is a hamate fracture, which is the third most common type of hand fracture. Among these, fractures of the hook of the hamate are more frequent than those involving the body of the bone. This injury often occurs either from a fall onto an outstretched hand or during sports activities when the end of a club, racquet, or bat is driven into the palm, applying direct pressure to the hypothenar eminence. It can affect either the dominant or non-dominant hand. Chronic, high-tension gripping may also contribute to the development of this fracture.

What to Look For

- High suspicion in athletes using bats, clubs, or racquets.
- Symptoms include ulnar-sided wrist pain, pain with gripping, and decreased grip strength.
- On examination, pain and tenderness is either localized over the hypothenar eminence or diffusely over the volar surface of the wrist and hand; swelling may be minimal or absent.
- On x-ray imaging, you may see subtle hypodensity and cortical indistinctness of the hamate bone, but plain films have poor sensitivity and specificity for hamate fracture.

Pearls for Urgent Care Management

- Often misdiagnosed as a soft tissue injury given sometimes subtle findings on presentation.
- If high clinical suspicion and indeterminate imaging, send for a computed tomography scan of the wrist for definitive diagnosis.
- Immobilize in short arm volar splint and provide basic fracture care including rest, ice, elevation, and analgesia.
- Avoid overuse or weight-bearing on hand.
- Refer to orthopedic hand specialist. Hook of the hamate fractures may require surgical excision if non-union develops.
- Provide anticipatory guidance about ulnar nerve irritation which may feel like numbness in 4th/5th digits.

75-Year-Old Male With Facial Lesion

A 75-year-old male presents to the walk-in clinic with the chief complaint of an asymptomatic rash on the left temple of his face that developed over the past 2 months. On examination, a shiny deep red papule is visible with scaly macules (actinic keratoses) surrounding. The patient is on rituximab for chronic lymphocytic leukemia (CLL).

View the image taken and consider what your diagnosis and next steps would be. Resolution of the case is described on the following page.

Acknowledgment: Image and case presented by VisualDx (www.VisualDx.com/jucm).

Differential Diagnosis

- Atypical fibroxanthoma
- Merkel cell carcinoma
- Pyogenic granuloma
- Keratoacanthoma
- Amelonatic melanoma
- Squamous cell carcinoma
- Microcystic adnexal carcinoma
- Nodular basal cell carcinoma

Diagnosis

This patient is diagnosed with Merkel cell carcinoma (MCC), also known as cutaneous neuroendocrine carcinoma. MCC is a rare aggressive skin malignancy that typically appears on the face, head or neck of adults between the age of 75-80 years. MCC most commonly arises in fair-skinned males and often appears on the head and face, upper extremities, and torso. Lower extremity presentation is more common for darker skinned individuals with erythema appearing more subtle. Key risk factors include older age, ultraviolet light exposure, immunosuppression, concurrent hematologic malignancy and infection with the Merkel cell polyomavirus (MCPyV). Even with aggressive treatment, reoccurrence probability is high with metastases common. The 5-year relative survival is approximately 60% in the United States.

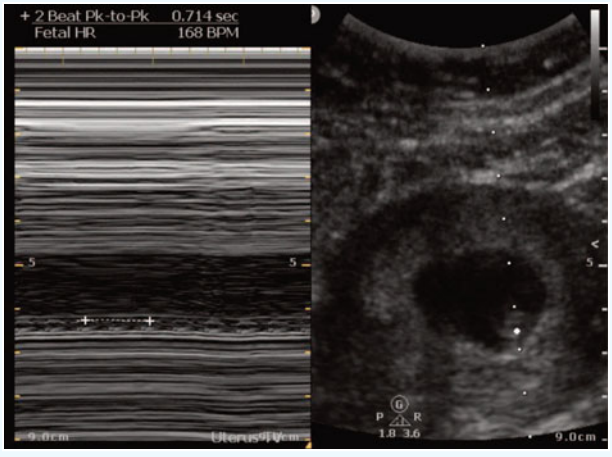
What to Look For

- Presents as an asymptomatic, flesh-colored or bluish-red, firm, non-tender, shiny, solitary, rapidly growing nodule, usually between 0.5-5.0 cm in size. Ulceration and crusting are relatively infrequent.
- Neurologic symptoms such as ataxia, weakness, and confusion may be present.

Pearls for Urgent Care Management

- MCC is often misdiagnosed as a benign skin lesion, therefore a high clinical suspicion is required to diagnose it in its early stages.
- Remember AEIOU when considering history and exam findings: Asymptomatic/lack of tenderness, Expanding rapidly (doubling in <3 months), Immunosuppression, Older than 50 years, Ultraviolet exposed skin site.
- Prompt biopsy is indicated for definitive diagnosis; either narrow-margin punch biopsy in clinic or urgent referral to dermatology is appropriate.

28-Year-Old With Abdominal Pain



A 28-year-old female presents to urgent care with mild left lower quadrant (LLQ) abdominal pain that began earlier in the day. The discomfort is dull, intermittent, and non-radiating. She denies vaginal bleeding, fever, nausea, vomiting, or urinary symptoms. Her last menstrual period was approximately 2 months ago, although she reports a history of irregular cycles.

She appears well and is hemodynamically stable. An abdominal exam reveals mild LLQ tenderness without rebound or guarding. A pelvic exam shows no discharge, bleeding, adnexal tenderness, or cervical motion tenderness. No masses are appreciated. A urine pregnancy test performed in the clinic returns positive. Given concern for ectopic pregnancy, a transabdominal point-of-care ultrasound (POCUS) is performed.

View the POCUS images above and consider the likely diagnosis and next steps. The resolution of the case is described on the following page.

Case provided by Tatiana Havryliuk, MD, emergency physician in New York, New York, and founder of Hello Sono.

Differential Diagnosis

- Normal early intrauterine pregnancy
- Ectopic pregnancy
- Heterotopic pregnancy
- Gastrointestinal causes (eg, constipation, diverticulitis)
- Urinary tract infection
- Ureterolithiasis
- Ovarian cyst or mass

Diagnosis

Transabdominal POCUS revealed an intrauterine gestational sac containing a fetal pole with a crown-rump length (CRL) measurement of 1.61 cm, consistent with an 8 week and 0 day gestation. M-mode (motion mode) imaging confirmed fetal cardiac activity with a fetal heart rate (FHR) of 168 beats per minute (bpm). No adnexal masses or free fluid were seen. The POCUS findings confirmed a live intrauterine pregnancy. Based on this, the provider was able to safely exclude ectopic pregnancy, avoiding an emergency department (ED) referral, and instead provided outpatient obstetrics-and-gynecology follow-up.

Discussion

Abdominal pain in early pregnancy, even if mild and without bleeding, warrants evaluation for ectopic pregnancy. Visualization of an intrauterine pregnancy (IUP) essentially excludes ectopic pregnancy in patients without risk factors for heterotopic pregnancy, which is the simultaneous occurrence of an intrauterine and an ectopic pregnancy.[1,2] IUP is confirmed when the intrauterine gestation sac contains either a yolk sac or a fetal pole.[3] Heterotopic pregnancy, while rare (incidence of 1 in 30,000 spontaneous pregnancies), must be considered in patients with the following characteristics:

- Actively receiving assisted reproductive technologies (ART)
- Prior ectopic pregnancy
- Pelvic inflammatory disease
- Tubal surgery or pathology
- Endometriosis

The incidence increases to 0.9 to 1% in patients undergoing ART.[4] POCUS was critical in confirming an IUP and thus excluding ectopic pregnancy in our patient without any heterotopic pregnancy risk factors.

On transabdominal ultrasound, a yolk sac, the earliest definitive sign of an IUP, is typically visible around 6.5-7 weeks of gestation when the mean gestational sac diameter is at least 20 mm. A fetal pole and cardiac activity usually become visible after 7 weeks on transabdominal ultrasound, and at 6 weeks on transvaginal ultrasound.[4]

In our patient, fetal pole and cardiac activity were both seen, placing the pregnancy at a minimum of 7 weeks of gestation. CRL measurement dated the pregnancy to approximately 8 weeks and 0 days of gestation. FHR of 168 bpm was measured using M-Mode and fell within the normal range for an 8-week gestation.[5] The normal range of fetal heart rate during the first trimester is approximately 110–180 bpm, with the lower end seen at the earliest detection and the upper end peaking around 8–9 weeks of gestation.[5,6] In this case, POCUS was used to confirm an IUP, thus essentially ruling out an ectopic pregnancy and avoiding ED referral.

What to Look For

- Intrauterine gestational sac containing a yolk sac or a fetal pole confirms an IUP.
- Measurement of CRL estimates the gestation age.
- The presence of free fluid in the pelvis or an adnexal mass should raise suspicion for ectopic pregnancy.

Pearls for Urgent Care Management

- Evaluate all reproductive-age women with abdominal pain for pregnancy.
- Patients undergoing fertility treatment are at increased risk for heterotopic pregnancy and should be evaluated with same-day transvaginal ultrasound and referred for gynecologic follow-up if they present with abdominal pain, even when an IUP is identified.
- In well-appearing patients with a confirmed IUP on transabdominal POCUS and no risk factors for heterotopic pregnancy, ED transfer is often unnecessary.

References

1. American College of Emergency Physicians. Emergency ultrasound guidelines. *Ann Emerg Med*. 2009;53(4):550-570. doi:10.1016/j.annemergmed.2008.12.013
2. American College of Emergency Physicians Clinical Policies Subcommittee (Writing Committee) on Early Pregnancy:, Hahn SA, Promes SB, Brown MD. Clinical Policy: Critical Issues in the Initial Evaluation and Management of Patients Presenting to the Emergency Department in Early Pregnancy [published correction appears in Ann Emerg Med. 2017 Nov;70(5):758. doi:10.1016/j.annemergmed.2017.03.035.]. *Ann Emerg Med*. 2017;69(2):241-250.e20. doi:10.1016/j.annemergmed.2016.11.002
3. Doubilet PM, Benson CB, Bourne T, et al. Diagnostic criteria for nonviable pregnancy early in the first trimester. *N Engl J Med*. 2013;369(15):1443–1451. doi:10.1056/NEJMra1302417
4. Rowling SE, Langer JE, Coleman BG, Nisenbaum HL, Horii SC, Arger PH. Sonography during early pregnancy: dependence of threshold and discriminatory values on transvaginal transducer frequency. *AJR Am J Roentgenol*. 1999;172(4):983-988. doi:10.2214/ajr.172.4.10587132
5. Ouyang Y, Qin J, Lin G, Xiang S, Li X. Reference intervals of gestational sac, yolk sac, embryonic length, embryonic heart rate at 6-10 weeks after in vitro fertilization-embryo transfer. *BMC Pregnancy Childbirth*. 2020;20(1):533. Published 2020 Sep 14. doi:10.1186/s12884-020-03186-2
6. Araujo Júnior E, Costa RS, Fonseca BC, Martins WP, Pires CR, Zanforlin Filho SM. Reference intervals of embryos/fetuses heart rate between 6 and 14 weeks of pregnancy. *J Matern Fetal Neonatal Med*. 2014;27(13):1385-1388. doi:10.3109/14767058.2013.856416

CLINICAL IMAGE CHALLENGE
ECG

60-Year-Old With 2 Weeks of Dyspnea

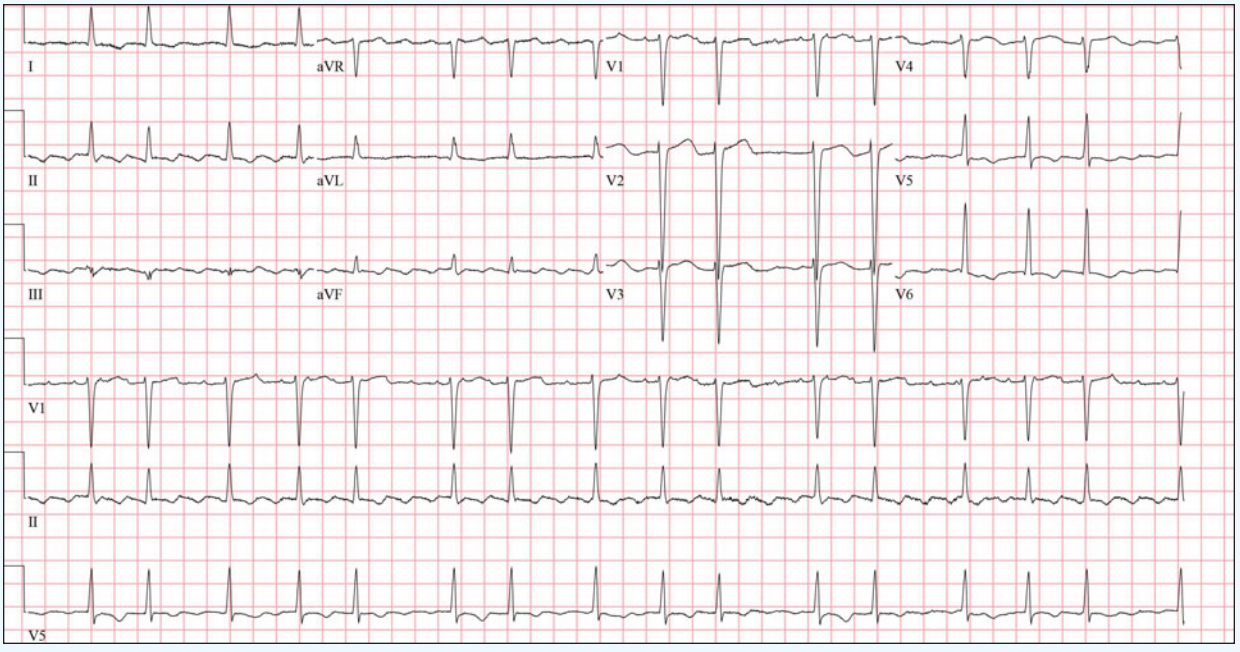


Figure 1: Initial ECG

A 60-year-old male presents to urgent care with progressive dyspnea for 2 weeks associated with lower extremity edema. The patient is afebrile and slightly tachypneic with rales at the bilateral bases. An ECG is obtained.

View the ECG and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

Case presented by Benjamin Cooper, MD, MEd, FACEP, McGovern Medical School at the University of Texas Health Science Center at Houston

Case courtesy of ECG Stampede (www.ecgstampede.com).

ECG STAMPEDE

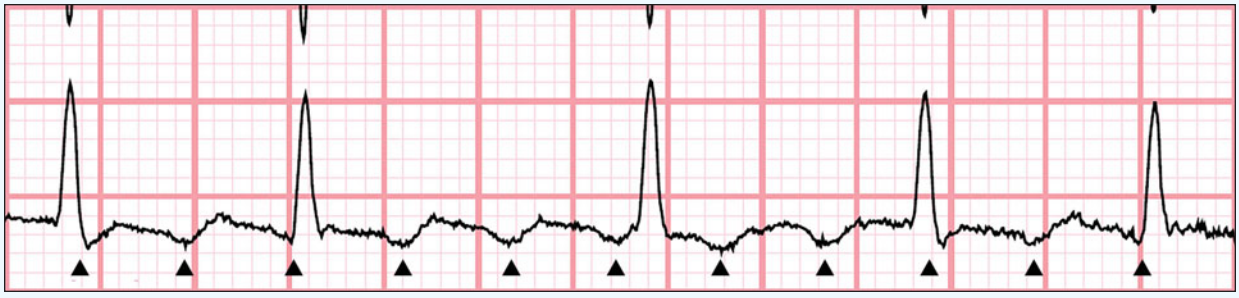


Figure 2: Lead II rhythm strip showing the "sawtooth" appearance of the atrial flutter waves (▲).

Differential Diagnosis

- Atrial fibrillation
- Atrial flutter with 2:1 conduction
- Atrial flutter with variable conduction
- ST-elevation myocardial infarction
- Ventricular pre-excitation

Diagnosis

The diagnosis in this case is atrial flutter with variable conduction. The ECG reveals an irregularly irregular rhythm with atrial flutter waves best seen in lead II and in the lead II rhythm strip. There is variable ventricular conduction with a ventricular rate of 96. There are T-wave inversions in the lateral leads (I, aVL, V5, and V6) that were present on prior ECGs but no signs of significant ST-elevation or ventricular pre-excitation.

Discussion

The differential for an irregularly irregular rhythm includes: atrial fibrillation; atrial flutter with variable conduction; and multifocal atrial tachycardia. Atrial fibrillation lacks organized atrial activity (ie, no P waves), whereas atrial flutter is an organized rhythm that occurs when a re-entrant circuit forms in the right atrium, usually in a counterclockwise fashion, leading to inverted flutter waves in the inferior leads (II, II, and aVF, **[Figure 2]**).[1]

It is characterized by an atrial rate of approximately 300 beats per minute (bpm). In the absence of treatment or atrioventricular block, the most common atrial to ventricular response is 2:1.[1,2] This patient had known atrial flutter and was on carvedilol for blood pressure and rate control.

The presence of atrial flutter itself does not warrant any acute intervention if appropriately rate controlled (heart rate < 110 bpm),[3] but this patient's clinical presentation is concerning for heart failure exacerbation. An emergency department transfer is indicated. Other indications include non-rate controlled or symptomatic atrial flutter. In unstable patients, synchronized cardioversion is indicated.

What to Look For

- "Sawtooth" appearing P waves that tend to be negatively deflected and best seen in the inferior leads.
- The atrial rate tends to approximate 300 bpm.
- 2:1 conduction is the most common type of atrial flutter, and the ventricular rate tends to be around 150 bpm.

Pearls For Initial Management, Considerations For Transfer

- Refer to an emergency department for heart rates > 110 bpm, if symptomatic, or with signs/symptoms of heart failure.
- If able, synchronized cardioversion is indicated when unstable while arranging for emergency referral via ambulance.

References

1. Surawicz B, Knilans TK. *Chou's Electrocardiography in Clinical Practice*. 6th ed. Elsevier; 2008.
2. Link MS. Evaluation and Initial Treatment of Supraventricular Tachycardia. *NEJM*. 2012;367(15):1438-1448. doi:10.1056/NEJMcp1111259
3. Van Gelder IC, Groenveld HF, Crijns HJGM, et al. Lenient versus Strict Rate Control in Patients with Atrial Fibrillation. *NEJM*. 2010;362(15):1363-1373.

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ICD-10 Changes Impacting Urgent Care

Tricia Krueger, CPC

ICD-10 has been ever changing since it was first adopted 10 years ago. Each year, changes reflect advances in clinical understanding and the need for more precise documentation in fast-paced care settings.

While ICD-10 changes can happen semi-annually, most changes happen in October. For the upcoming 2025-2026 update, there are 487 new codes, 38 code revisions, and 28 deleted codes, all of which will take effect October 1, 2025. This update includes several additions that will impact urgent care specifically. Centers that are trained and ready will experience smoother claim submissions and fewer rejections.

1. Pain-and Tenderness Codes

The old "pelvic and perineal pain" code (R10.2) has been replaced with multiple newer, more detailed codes specifying site and laterality. Providers must now capture laterality and exact pain location in the clinical note for proper coding.

- R10.20 - *Pelvic and perineal pain, unspecified side*
- R10.21 - *Pelvic and perineal pain, right side*
- R10.22 - *Pelvic and perineal pain, left side*
- R10.23 - *Pelvic and perineal pain, bilateral*
- R10.24 - *Suprapubic pain (subpubic region)*

2. Laterality For Eyelid Inflammation

The single code H01.8 for eyelid inflammation is being eliminated. In its place are 9 distinct codes differentiating upper vs. lower eyelid and right vs. left eye. Clear documentation from clinicians about eyelid site will be essential.

- H01.81 - *Other specified inflammation of right upper eyelid*
- H01.82 - *Other specified inflammation of right lower eyelid*
- H01.83 – *Other inflammation of right eye, unspecified eyelid*
- H01.84 – *Other specified inflammation of left upper eyelid*
- H01.85 - *Other specified inflammation of left lower eyelid*
- H01.86 - *Other specified inflammation of left eye, unspecified eyelid*
- H01.89 - *Other specified inflammation of unspecified eye, unspecified eyelid*
- H01.8A - *Other specified inflammation of right eye, upper and lower eyelids*
- H01.8B - *Other specified inflammation of left eye, upper and lower eyelids*

3. New Allergy Codes

Urgent care clinics occasionally see presentations concerning food allergies. The 2026 coding update introduces many new codes for adverse reactions and anaphylactic responses to foods such as eggs and milk/dairy.

Eggs

The update includes several new codes related to eggs, including codes to capture adverse reactions, anaphylactic reactions, and allergies to eggs. For example:

- T78.120A - Other adverse food reaction due to egg with tolerance to baked egg, initial encounter
- T78.129A - Other adverse food reaction due to egg with baked egg tolerance/reactivity, unspecified, initial encounter
- T78.080A - Anaphylactic reaction due to egg with tolerance to baked egg, initial encounter
- T78.081A - Anaphylactic reaction due to egg with reactivity to baked egg, initial encounter
- T78.089A - Anaphylactic reaction due to eggs, unspecified, initial encounter
- Z91.0120 - Allergy to eggs, unspecified

Milk and Dairy Products

Like eggs, the update also includes several new codes related to milk and dairy products, including new codes re-

Tricia Krueger, CPC, is RCM Coding Supervisor for Experity.

lated to adverse reactions, anaphylaxis and allergies. Some examples are:

- T78.110A - Other adverse food reactions due to milk and dairy products with tolerance to baked milk, initial encounter
- T78.111A - Other adverse food reaction due to milk and dairy products with reactivity to baked milk, initial encounter
- T78.119A - Other adverse food reaction due to milk and dairy products with baked milk tolerance/reactivity, unspecified, initial encounter
- T78.070A - Anaphylactic reaction due to milk and dairy products with tolerance to baked milk, initial encounter
- T78.071A - Anaphylactic reaction due to milk and dairy products with reactivity to baked milk, initial encounter
- T78.079A - Anaphylactic reaction due to milk and dairy products, unspecified, initial encounter
- Z91.0110 - Allergy to milk products, unspecified

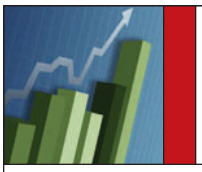
ICD 10 Denial Trends in Urgent Cares

When documenting visits, it is always important to be as specific as possible. Each year, we see an increase in denials for unspecified codes. Insurance companies will not reimburse a service such as an x-ray, for example, if the laterality is unspecified. Providers need to keep this in mind when it comes to selecting the proper codes.

- **Code Specificity:** Always select the most specific and appropriate code based on documentation.
- **Combination Coding:** Recognize instances where multiple codes are required, such as complications or associated conditions.
- **Documentation Quality:** Ensure clinical staff document with precise detail, clearly indicating anatomical sites, severity, and associated health conditions.

Another common denial can occur with ancillary tests. We have found that payers do not want a definitive diagnosis for testing. Instead, payers want to see the symptoms the patient presented with that led to the decision to test. For example, a patient presents with fever, cough, and a sore throat. The provider orders an influenza A&B test and a strep test. The patient tests positive for influenza B, so the patient is thus diagnosed. Providers also need to diagnose the patient with fever, cough, and sore throat to ensure those ancillary tests are properly paid.

Providers should be aware of updates in advance and continue to practice documentation skills to increase the chances of billing clean claims. ■

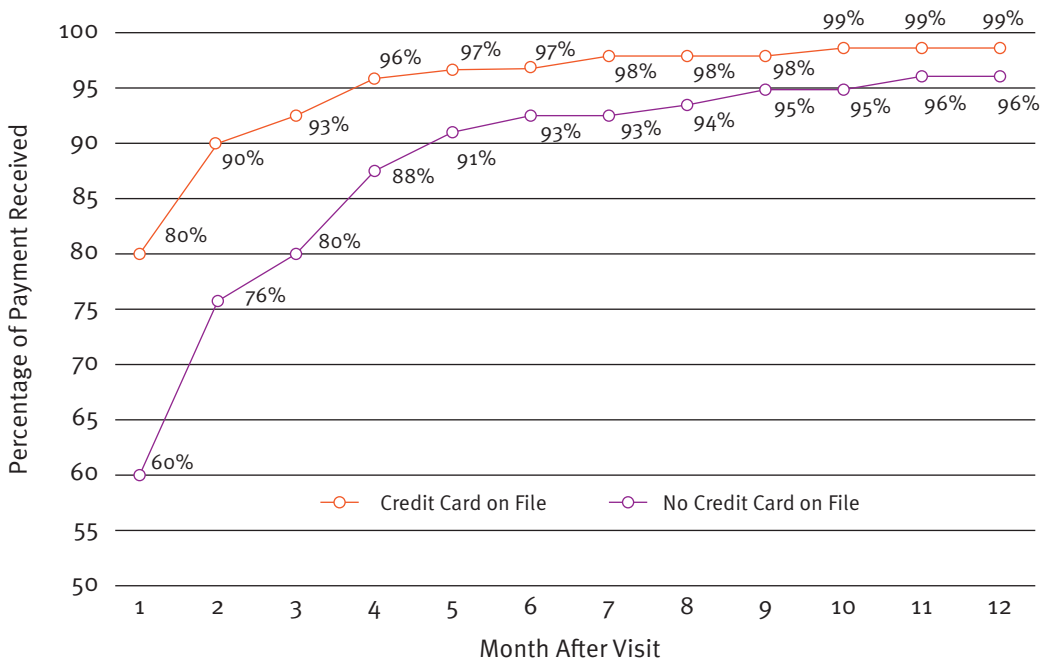


DEVELOPING DATA

Credit Card on File Speeds Collections, Decreases Bad Debt

Alan A. Ayers, MBA, MAcc

PERCENTAGE OF PATIENT RESPONSIBILITY RECEIVED, BY MONTH



The credit-card-on-file practice requires a patient's credit card at the time of service, which is used to cover balances after an insurance claim adjudicates. In addition to increasing total collections, charging the card on file also enables an urgent care to capture payments more quickly than time-consuming and costly collection efforts, such as mailing statements.

In an Experity analysis of 392,699 comparable Blue Cross Blue Shield urgent care visits in 2024, 80% of patient responsibility on CPT 99204 (new patient office or other outpatient visit, 45-59 minutes) was paid in the first month when a credit card was on file versus only 60% being paid in the first month when no credit card was on file. Patient balances included here are those remaining after the date of service, excluding co-pays.

Without a credit card on file, it takes 5 months to collect at least 90% of the balance vs only 2 months with a credit card on file.

Moreover, after 12 months, bad debt write-offs with a credit card on file are only 1% versus 4% without a credit card. ■

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