



UHN Canada's
Hospital

Current Review of De-Escalation Techniques Publications

Main Takeaways Messages

Verbal and non-pharmacological de-escalation should be the first-line response to agitation, with physical or chemical restraint reserved as a last resort. Effective practice blends clear, empathetic communication (active listening, validation, concise limits) with environmental and systems adjustments (quieting stimuli, coordinated roles, safety planning). Structured education—including realistic simulation, role-play, and routine debriefing—raises staff confidence and shifts culture away from coercive measures. Specialty modalities (e.g., sensory modulation, music/VR-based calming, decision-aids) and equity-minded QI reduce escalation while addressing bias. Across healthcare (and parallel policing contexts), programs work best when they are interdisciplinary, refresh regularly, and keep patients actively involved in choices..

Literature Reviews

1. Alostaz, Z., Rose, L., Mehta, S., Johnston, L., & Dale, C. (2021). Implementation of nonpharmacologic physical restraint minimization interventions in the adult intensive care unit: A scoping review. *Intensive and Critical Care Nursing*, 103153.

This paper set out to identify what makes the implementation of non-pharmacological physical restraint minimization interventions in adult ICU patients successful. The authors concluded that restraint minimization intervention studies use nurse-facilitated multicomponent interventions and short-term practice changes. They found that you can minimize the use of physical restraint by educating HCP and providing decision aids/protocols and restraint alternatives to staff. As well, they stated that a key to successful change is involving an interprofessional team and patient-family members in the project. This article can provide many beneficial tips for our QI project.

2. Bechtel, T., Ostfeld, M. C., & Shaefer, H. L. (2023). EVIDENCE ON MEASURES TO REDUCE EXCESSIVE USE OF FORCE BY THE POLICE.

The article reviews various strategies and interventions aimed at reducing instances of excessive force by law enforcement officers. Strategies that were explored in the review included de-escalation training, limiting the use of restrictive management techniques, limiting the occurrence of police firearm use and implicit bias training. In relation to de-escalation training, researchers found mixed results among training programs likely due to inconsistencies in training delivery and how training could be applied to real-life situations. It was also found that promoting the use of non-lethal forms of de-escalation such as tasers and verbal forms of management may potentially decrease reliance on lethal forms. Notably, researchers found that the use of body cameras played a significant role in reducing use-of-force rates among law enforcement.

The authors emphasize the importance of comprehensive training programs that focus on de-escalation techniques, cultural sensitivity, and implicit bias awareness as comprehensive measures to reduce use-of-force rates. Many parallels exist between law enforcement and healthcare workers regarding the challenges of implementing successful training programs. Most notably, the importance of effective de-escalation techniques and the elimination of implicit biases in managing conflict. In addition, the article iterated the importance of establishing WPV training in education programs and the need for such training to be refreshed regularly.

3. Block, S. (2023). Workplace violence in emergency departments, education and de-escalation training: A benchmark study. (MSN Capstone Project, Paper 286).
<http://hdl.handle.net/10950/4512>

This publication is a study proposal addressing workplace violence in emergency departments. The study aims to evaluate the effectiveness of verbal de-escalation and self-defence training for emergency department employees at St. Luke's The Woodlands Hospital. The method involves the deployment of eight-hour training sessions combining classroom education with role-play simulations and hands-on self-defence techniques based on the Crisis Prevention Institute (CPI) training guide. The anticipated findings according to the publication include an initial increase in reported incidents due to increased reporting, followed by a marked decrease in violent events, potentially up to 25-75% less than baseline. The literature suggests that consistent training, at least twice a year, can lead to a significant reduction in violent attacks, and a cost-benefit analysis indicates that the training investment is less than the cost of even a couple of employee injuries.

4. Brooke, W., & Wisotzkey, S. (2025). Decreasing workplace violence with-injury in an acute psychiatric setting through brief intentional grounding. *Journal of Holistic Nursing*.
<https://doi.org/10.1177/08980101251330394>

This publication describes a study aimed at evaluating the integration of a holistic mindfulness modality called Brief Intentional Grounding (BIG) into group therapy to decrease workplace violence with-injury. The study was conducted across two adult inpatient psychiatric units within a large academic health system. Researchers used Allied Therapy Services (ATS) staff to implement BIG twice daily in group therapy sessions, then compared six months of post-intervention workplace violence with-injury data to six months of pre-intervention data. Qualitative data from patient and staff surveys were also collected to assess the intervention's benefits. The findings showed a reduction in workplace violence with-injury, with a 57% decrease on one unit and a 100% decrease on the other. Responses from the patient surveys indicated improvements in emotional regulation, stress management, interpersonal connectivity, and gratitude, while staff reported positive impacts on their well-being and ability to de-escalate situations. This study specifically addresses a significant gap in literature concerning the application of mindfulness to reduce workplace violence. Furthermore, the Brief Intentional Grounding modality itself is distinct, having been developed by a psychiatric nurse to be an easy-to-use technique that does not require a quiet or separate space, making it adaptable.

5. Caravella, R. A., Ying, P., Siegel, C., Vaughn, R., Deutch, A. B., Caroff, A., ... & Lewis, C. (2023). Quality Improvement (QI) Framework to Examine Health Care Disparities in Behavioral Emergency Management in the Inpatient Medical Setting: A Consultation-Liaison (CL) Psychiatry Health Equity Project. *Journal of the Academy of Consultation-Liaison Psychiatry*.

The article introduces a quality improvement framework designed to address healthcare disparities in the management of behavioral emergencies within inpatient medical settings and explores potential racial biases in WPV management techniques. The study attempted to understand where biases lay in urgent medical response to WPV and any existing patterns in behavioral emergency strategy. Researchers followed a BERT (behavioral emergency

response team) at a tertiary-care medical center in an urban area for 3 years and collected evidence on intervention techniques used and patient's racial category. It was found that verbal de-escalation was the most frequently used intervention while 4-point restraints were the least used. In addition, it was found that individuals categorized in the black racial category and unknown racial were more likely to have 4-point restraints used than all other groups. Overall, the study found biases in restrictive de-escalation technique use in black and asian racial categories, such as increased use of IM medications and 4-point restraints. It was mentioned that improvements in emergency response management should be considered and behavioral response teams should be educated on the currently existing biases within emergency response.

6. Castro-Pacheco, M. (2022). Handling Crises on Inpatient Mental Health Units: How Music Therapy Influences the Process of De-escalation (Doctoral dissertation).

The article is a thesis dissertation regarding the influence of music therapy on the de-escalation of conflict in hospital mental health units. Music therapy has been identified as an effective non-pharmacological method of supporting agitated patients. Patients have reported feeling joyful and displaying a greater sense of self-expression and autonomy after therapy. The researcher recruited three music therapists and interviewed them on their experiences using music therapy, pattern they have identified in patients and success of the implementation of music therapy. 4 main themes identified in the article were the creation of a safe therapy space, formation of a trusting relationship with the therapist, identifying and understanding a patient's current emotions and allowing patients to openly express themselves. Overall, it was mentioned that music therapy is an approach that allows patients to play an active role in the de-escalation process and was suggested as a potential alternative to the use of physical restraints. Additionally, music therapy could be used in conjunction with other forms of de-escalation techniques to add to the benefits current non-pharmacological interventions.

7. Congress, U. D. Thirty-six simple ways to de-escalate 'behaviours that challenge': Helping carers know what they already know by improving 'Dementia Care Literacy'.

The article provides practical strategies for de-escalating challenging behaviors in individuals with dementia. The authors present thirty-six strategies for de-escalating challenging behaviors, providing practical examples and explanations for each. These strategies include techniques such as offering reassurance, validating emotions, simplifying communication, providing distraction from the conflict, modifying the care environment, and promoting a sense of security. It was also mentioned that while caregivers do have valuable knowledge regarding managing challenging behaviors, they may not have the necessary terminology to effectively articulate their methods. By enhancing their knowledge in dementia care and symptoms recognition, caregivers can better understand and respond to the needs of individuals with dementia and improve their methods of managing behavioral challenges. The article emphasizes personalized approaches, positive relationships, and continuous education to support caregivers in providing effective care for individuals with dementia.

8. Dezutti, G. (2024). Inpatient Staff Perspective on Verbal De-escalation within a High Inpatient Staff Perspective on Verbal De-escalation within a High Acuity Population Acuity Population. <https://digitalcommons.nl.edu/cgi/viewcontent.cgi?article=1904&context=diss>

This study aimed to explore the experiences of inpatient staff using verbal de-escalation, and to determine if successful or unsuccessful techniques were related to formal training, personal contributions (like personality and attitude), or education outside of work requirements. Conducted in inpatient psychiatric settings, researchers used semi-structured interviews with five staff members identified by their colleagues as being skilled at verbal de-escalation¹. Participants were recruited through snowball sampling and interviewed on Zoom. The findings

indicated that the participants unanimously felt that their Crisis Prevention Institute (CPI) training alone was not sufficient for effectively de-escalating patients. Instead, they reported that specific personality traits and behaviours were more impactful than the taught techniques. Key factors for successful de-escalation included making positive human connections with patients, providing choices, expressing empathy, validating patient experiences, being self-aware, and avoiding directives. The study highlighted that negative staff personality traits such as ego, "machoness," and rigidity often created power struggles and hindered de-escalation efforts. Furthermore, techniques like using threatening language or "If-Then" statements, challenging patient beliefs or delusions, and being overly directive were found to be ineffective and often led to further escalation.

9. Edgeston-Jones, D. (2023). Therapeutic Intervention: An Initiative to Improve Early Recognition and Response to Patients in Escalating Behavioral Crises.

The article highlighted a study conducted by researchers at a hospital in North Carolina, USA which aimed to identify changes in HCWs skills and knowledge of de-escalation and early recognition of escalation behaviors. The goal of the study was to increase nursing staff knowledge and skills in early recognition of escalating behaviors, appropriate de-escalation techniques and identifying correct response levels through the implementation of educational tip forms and a de-escalation education program. Researchers collected preliminary survey data relating to staff de-escalation knowledge and crisis management. In addition to survey data, researchers also handed out educational tip forms to hospital workers which described fundamental strategies to care for a patient when they are escalating and included information relating to changes in the organization's behavioral response policy and hospital workers could volunteer to attend a de-escalation training module provided by the research team. Results from follow-up surveys stated that all respondents found the tip forms beneficial and 79% of respondents stated increase in appropriate security responses after the interventions. The article supported the notion of collect quality indicators to report the success and progress of an education program along with the statistics that prove the success of the program.

10. Endriyani, S., Pastari, M., & Martini, S. (2023). The Influence of De-Escalation Techniques on Reducing Anger Responses in Drug Clients. *Formosa Journal of Science and Technology*, 2(6), 1465-1480.

The article examined the impact of de-escalation techniques on mitigating anger responses among individuals with substance use disorders. The study focuses on understanding how de-escalation techniques, which involve non-confrontational and empathetic communication strategies, can help manage anger in patients with substance abuse disorders. Researchers designed a study in which a single patient group was screened for potential disposition to drug abuse-related aggression and recorded their levels of reported aggression after treatment. The treatment in the study consisted of HCWs employing a variety of verbal de-escalation techniques during an episode of patient agitation. The findings of the study suggest that the application of de-escalation techniques has a positive impact on reducing anger responses in patients with substance abuse disorders. The techniques promote a sense of safety, trust, and empathy, which contribute to defusing anger and preventing escalation. In summary, the article explores the influence of de-escalation techniques on reducing anger responses in drug clients. It demonstrates the effectiveness of these techniques in diffusing potentially volatile situations and enhancing client outcomes.

11. Foster, A., Li, J., & Hoffmann, J. (2022). How to Manage Acute Agitation in Children. *American College of Emergency Physicians*.

The authors' approach focuses on ensuring the safety of all parties, determining the etiology of

of the child's agitation, employing verbal de-escalation, reducing environmental stimulants by dimming lights, reducing noise, removing dangerous equipment, and minimizing staff presence when safe to do so. The authors state to only use pharmacological treatment or physical restraint as a last resort.

12. Grubb, A. R. (2023). Effective police negotiation: Synthesising the strategies and techniques that promote success within hostage or crisis situations. *Police Conflict Management*, Volume I, 285–314. https://doi.org/10.1007/978-3-031-41096-3_12

This publication addresses the significant gap in valid models for effective negotiation (and de-escalation) by officers in hostage and crisis situations, which is a challenge that stands in the way of the advancement of the negotiation discipline. The document emphasizes the crucial role of key theoretical constructs, including de-escalation, active listening, rapport building, empathy, social influence, and persuasion, in successful crisis resolution. A central focus of the publication is on exploring the underlying mechanisms that explain why certain negotiation practices are more effective than others. The discussion highlights the need for a more nuanced and evidence-based approach to crisis negotiation, aiming to bridge the gap between theoretical frameworks and practical application in high-stakes situations.

13. Gupta, I., Eid, S. M., Harris, C. M., Kauffman, R., Washburn, C., Singh, A., ... & Kisuule, F. (2023). Prevalence of Workplace Violence and Effects of De-escalation Training Among Hospitalists: A pilot study. *Journal of Community Hospital Internal Medicine Perspectives*, 13(3), 1.

The article examines the prevalence of workplace violence experienced by hospitalists and evaluates the impact of de-escalation training on mitigating such incidents. Despite suggestions by nursing organizations and professional societies to implement de-escalation strategies as the primary method of managing WPV, formal WPV education is not consistently provided in curricula. This in turn limits health care providers' ability and confidence to manage situations of WPV. Researchers measured healthcare workers' self-reported confidence in coping with patient aggression after a de-escalation training program. It was found that participants' confidence greatly increased immediately after program training and was sustained in follow-up questionnaires 3, 6 and 12 months after the program. The article emphasizes the importance of implementing de-escalation training programs as part of a comprehensive approach to workplace violence prevention. It suggests that such training can empower hospitalists with effective communication skills, and conflict resolution strategies, and sustains confidence in managing WPV situations.

14. Jones, C. G. (2022). IMPLEMENTATION OF A SENSORY MODULATION ROOM ON AN ACUTE CARE PSYCHIATRIC UNIT: SUSTAINABILITY ISSUES.

This article highlights the benefits of sensory modulation in reducing the need for seclusion, restraints, and PRN medications in psychiatric facilities. Sensory modulation, which involves using sensory inputs like music, weighted blankets, and aromatherapy to manage emotional states, has proven effective in de-escalating aggressive behaviors. Dr. Lancaster's 2018 project at Coastal Plains Hospital demonstrated a 60% reduction in security alerts after implementing a sensory room, with positive feedback from both patients and staff. Other studies confirm these findings, showing that sensory modulation and other non-pharmacological interventions significantly reduce agitation and the use of restrictive measures. The research aims to promote wider adoption of sensory modulation, particularly in regions where it is underutilized. Efforts include updating literature, educating healthcare staff, and addressing barriers such as infection control. The findings emphasize the need for non-restrictive interventions to improve patient care in psychiatric settings.

15. Jones, N., Decker, V. B., & Houston, A. (2023). De-escalation training for managing patient aggression in high-incidence care areas. *Journal of psychosocial nursing and mental health services*, 1-8.

The article focuses on the importance of de-escalation training in effectively managing patient aggression in high-incidence care areas, such as emergency departments or psychiatric units. The article cites a survey in 2018 which revealed that healthcare workers experienced 73% of America's WPV-related illness, a number that has spiked since the COVID-19 pandemic. Researchers developed an evidence-based de-escalation training session for high-incidence care areas which was delivered via workshop style and included pre and post-test questionnaires on general confidence in coping with WPV. The training session emphasized the use of verbal and non-verbal de-escalation methods, violence screening and role-play scenarios. After training, staff reported feeling safer around patients ($p = 0.001$) and an improvement in comfort working with patients displaying aggression ($p = 0.084$). The findings indicate that de-escalation training programs contribute to a reduction in the use of coercive measures and a shift towards empathy-based de-escalation methods. These programs promote a safer and more therapeutic environment for both patients and healthcare providers.

16. Kent, J. (2022). Using Simulation For Law Enforcement De-escalation Training.

The article explored the use of training simulation as a valuable tool in training law enforcement officers in de-escalation techniques. The article highlighted the limitations of traditional training methods and argues that simulation-based training offers a more realistic and immersive learning experience for officers in addition to providing officers with a safe training environment. A literature review in the study provided limited evidence on de-escalation training as a part of law enforcement education. Of the studies examined, it was found that training programs that introduced respectful attitudes towards the community and effective communication skills helped to increase positive public perceptions of the police. Researchers also explored the use of various different training simulations to improve de-escalation skills in various domains. Some of these simulations included driving trainers, use-of-force simulators and social interaction simulators. The article also addressed the importance of feedback and debriefing sessions following each simulation to facilitate learning and reflection on the skills used. The use of simulators to target different de-escalation techniques paired with debriefing sessions after training was proven to be effective in fostering successful conflict management skills. The article mentions the importance of including realistic simulation programs in police education programs.

17. Kruse, U., Kaufmann, J. M., Seidel, F., & Schweinberger, S. R. (2023). The de-escalating potential of body-worn cameras: Results from six German police departments. *Journal of Criminal Justice*, 88, 1021-13.

The article employed a repeated measures design to collect data on the implementation of body-worn cameras (BWCs) as a potential tool to reduce violence against police officers across six German police departments. The implementation of BWCs as a standard of police officer uniforms have been used to enhance the self-protection of police officers and collect evidence for possible criminal investigation. The article also mentions the current lack of studies that investigate the effectiveness of BWCs as an effective protective measure for police officers. Theoretical perspectives behind de-escalating effects of BWCs can be explained through numerous social psychology theories regarding choice determination and social desirability. Additionally, another approach focuses on rational choice theory in which individuals will choose behaviors that align with societal norms when they perceive a high probability of detection or sanction when being recorded. Researchers collected data on a control group, who completed shifts without BWCs and the experimental group, who completed shifts with BWCs.

Data collected included acts of resistance, verbal insults, threats of violence, bodily harm and other situations characterized by heightened levels of aggression. Results from data analysis stated that BWC presence had a modest de-escalating effect on public aggressiveness when recording was activated. Conversely, it was found that BWCs had an escalating effect on aggressive behaviors in individuals under the influence of intoxicating substances or mental distress. The study also discusses variations in the purpose of BWCs in different countries. Some countries use BWCs to record potential police use of force and reduce complaints against police while other countries use BWCs as a protective measure for police officers against citizen violence.

18. Kruse, U., Kaufmann, J. M., Seidel, F., & Schweinberger, S. R. (2023). The de-escalating potential of body-worn cameras: Results from six German police departments. *Journal of Criminal Justice*, 88, 102113.

The article employed a repeated measures design to collect data on the implementation of body-worn cameras (BWCs) as a potential tool to reduce violence against police officers across six German police departments. The implementation of BWCs as a standard of police officer uniforms have been used to enhance the self-protection of police officers and collect evidence for possible criminal investigation. The article also mentions the current lack of studies that investigate the effectiveness of BWCs as an effective protective measure for police officers. Theoretical perspectives behind de-escalating effects of BWCs can be explained through numerous social psychology theories regarding choice determination and social desirability. Additionally, another approach focuses on rational choice theory in which individuals will choose behaviors that align with societal norms when they perceive a high probability of detection or sanction when being recorded. Researchers collected data on a control group, who completed shifts without BWCs and the experimental group, who completed shifts with BWCs. Data collected included acts of resistance, verbal insults, threats of violence, bodily harm and other situations characterized by heightened levels of aggression. Results from data analysis stated that BWC presence had a modest de-escalating effect on public aggressiveness when recording was activated. Conversely, it was found that BWCs had an escalating effect on aggressive behaviors in individuals under the influence of intoxicating substances or mental distress. The study also discusses variations in the purpose of BWCs in different countries. Some countries use BWCs to record potential police use of force and reduce complaints against police while other countries use BWCs as a protective measure for police officers against citizen violence.

19. Liu T. Avoiding Excessive Physical Restraints to Reduce ICU Pseudo Delirium. *Mega J Case Rep.* 2023; 6: 2001-2006.

The article focused on the importance of minimizing the use of excessive physical restraints in the Intensive Care Unit (ICU) to prevent delirium among patients admitted to hospital ICUs. The article stated that physical restraints, which are sometimes used to prevent patients who are agitated from removing medical equipment or tubes or falling from hospital beds, can lead to negative consequences such as delirium-like symptoms referred to as pseudo-delirium. Pseudo-delirium includes manifestations that resemble delirium, such as confusion and agitation, but are actually caused by the distress of being physically restrained. In the article, it was mentioned that physical restraints may create further contribute to emotional agitation along with limiting patient air passages, resulting in subsequent breathing difficulties. As a result, the article stated that hospitals should focus on establishing transitional care units post-ICU discharge to provide a smoother transition for patients and limit the need for physical restraints during discharge. Additionally, the article stated that hospitals should implement comprehensive education programs that focus on prioritizing patient-centered care and patient needs.

20. Nicholas, M., Wittmann, J., Norena, M., Ornowska, M., & Reynolds, S. (2023). A randomized, clinical trial investigating the use of a digital intervention to reduce delirium-associated agitation. *npj Digital Medicine*, 6(1), 202.

The article discussed a study which explored the potential use of a novel digital therapeutic intervention to reduce patient agitation and unscheduled medication use in adult delirium acute care populations. The authors discuss the difficulties that are associated with managing delirium-associated agitation which poses a risk of physical harm to the patient, and to healthcare staff as well. As a result, HCWs often have to resort to using chemical and physical restraints as means to manage patients, despite limited available evidence on potential risks. Researchers discussed the increasing prevalence of using VR in combination with calming music to create a care environment that reduces symptoms of anxiety and pain. Another technological intervention used involves the use of tablets and screens which present video recordings of family members or nature videos. Both interventions have been found to reduce mean agitation scores amongst patients. In the current study, researchers exposed agitated patients with a digital intervention which dynamically responded to their agitation level over a 4-hour study period when patients were present in the ICU. Exposure to the intervention reduced the proportion of patients who received unscheduled agitation management medications and decreased scores on the Richmond Agitation-Sedation Scale. However, there was little reduction of physical restraint use related to agitation management reported during the study period.

21. Pavlo, A. J. (2022). Qualitative study of patient experiences and care observations during agitation events in the emergency department: implications for systems-based practice. *BMJ open*, 12(5), e059876. <https://doi.org/10.1136/bmjopen-2021-059876>

This paper took a systems-based approach to examine factors that contributed to events where a patient was agitated or events where physical restraints were used. To decrease the likelihood of patient agitation, the study suggests recognizing agitated patients' exposure to psychological trauma, improving coordination within mental health emergency care networks (those handling agitated patients), and optimizing physical environmental conditions and organizational culture. Based on interviews, they found that patients' agitation was typically influenced by external factors.

22. Pierce, K., Pepler, D. J., Craig, S. G., & Jenkin, M. (2023). Considerations for Developing Robot-Assisted Crisis De-Escalation Practices. *Applied Sciences*, 13(7), 4337.

The article considers the potential use of robots in crisis de-escalation situations. It discusses the benefits, challenges, and considerations involved in developing robot-assisted practices for managing and resolving clinical conflict situations. The authors highlight three main aspects of effective de-escalation training in robots, assessment, planning the response and actions to support de-escalation. Along with de-escalation techniques such as empathetic communication and active listening that can be taught to robots, the authors also iterate the importance of non-verbal de-escalation principles such as calm predictable movements and maintaining non-threatening eye gaze that should be considered in robot design. However, the article also acknowledges the complexities and ethical considerations associated with obtaining data to train robots. The use of trial and error with agitated patients is not an ethically reasonable method of collecting training data and thus alternative methods must be explored. In summary, the authors mention that robot de-escalation training should mimic evidence-based de-escalation approaches carried out by human healthcare workers.

23. Recchi, J., Doucette, J. N., & Hawkins, J. E. (2023). Examining the Impact of De-escalation Training Among Emergency Department Nurses.

The article explored the effectiveness of de-escalation training programs in EDs to limit the prevalence of WPV and improve healthcare workers' perception of managing instances of WPV. Participants completed questionnaires related to patient aggression, caregiver resiliency, professional quality of life and intention to resign before and after de-escalation training. After the implementation of training, ED nurses reported significantly reduced levels of burnout however no other findings related to confidence in managing instances of WPV or caregiver resiliency were noted. The study states follow-up studies are needed to further explore the long-term impacts of de-escalation training on resignation rates and efficiency in de-escalation management.

24. Roppolo, L. P., Morris, D. W., Khan, F., Downs, R., Metzger, J., Carder, T., Wong, A. H., & Wilson, M. P. (2020). Improving the management of acutely agitated patients in the emergency department through implementation of Project BETA (Best Practices in the Evaluation and Treatment of Agitation). *Journal of the American College of Emergency Physicians open*, 1(5), 898–907. <https://doi.org/10.1002/emp2.12138>

This article introduces project BETA (Best practices in the Evaluation and Treatment of Agitation) which is a compilation of the best evidence and consensus recommendations developed by field experts to improve approaches for the acutely agitated patient. They focus on using verbal de-escalation as a first response to agitated patients and minimizing the use of physical restraints or seclusion. Other aspects of their approach include medical evaluation for red flags such as past traumas or abnormal vital signs, performing a psychiatric evaluation to determine the cause of agitation, and pharmacotherapy to treat agitation.

25. Schade, S., & Thielgen, M. M. (2023). Applying the Interpersonal Circumplex Model to de-escalative communication in police services. *Police Conflict Management, Volume I*, 223–247. https://doi.org/10.1007/978-3-031-41096-3_10

This publication presents the Interpersonal Circumplex Model and discusses its application to police operations. It emphasizes the importance of communication skills as a resource for police officers, impacting the escalation of aggression during their encounters with citizens. The study proposes that dyadic interactions, characterized by the two-dimensional space of interpersonal transactions that result from crossing dominance and affiliation, follow distinct behavioural patterns where certain officer behaviours are more likely to elicit specific reactions from citizens. This application of the model to policing contrasts with its typical use in clinical settings. The authors explore the implications of this model for police training, aiming to help establish de-escalation communication strategies for the field. Ultimately, understanding these interpersonal behaviour patterns can contribute to more effective and safer police operations.

26. Ta-Johnson, V., Suss, J., & Lande, B. (2023). Using natural language processing to measure cognitive load during use-of-force decision-making training. *Policing: An International Journal*, 46(2), 227–242.

The article focuses on the application of natural language processing (NLP) to evaluate cognitive load in training scenarios related to use-of-force decision-making. The study utilizes NLP techniques to analyze linguistic patterns and extract meaningful insights from trainees' verbal responses during use-of-force simulations. Factors such as sentence length, word complexity, and the use of certain linguistic markers were used to identify indicators of cognitive load and measure its variations throughout the training process. In addition, researchers suggested that NLP-based approaches can provide valuable insights into trainees' cognitive states, allowing for targeted interventions and personalized training strategies. Overall, the article demonstrates the potential of NLP in objectively measuring cognitive load during use-of-force decision-making training, offering a promising avenue for improving training methodologies in high-stakes

scenarios.

27. Terrill, W., Zimmerman, L., & Somers, L. J. (2023). Applying Video-Based Systematic Social Observation to Police Use of Force Encounters: An Assessment of De-Escalation and Escalation within the Context of Proportionality and Incrementalism. *Justice Quarterly*, 1-30.

The article explored the use of video-based social observation to analyze police encounters involving use-of-force and potential de-escalation methods employed when handling suspect encounters. Researchers conducted a literature review on use-of-force measures and the results of body-worn cameras. Additionally, researchers also collected video-based data from two police agencies in Texas to assess use-of-force and methods of de-escalation that were used. The findings revealed that officers were less likely to use force when backup officers are present and officers were less likely to use force when there was more evidence provided to them in suspect encounters. Both of these key findings stipulate that having a greater availability of resources to make judgements about suspects limits the need for use-of-force methods as a de-escalation tactic. In relation to healthcare settings, healthcare workers should not only have a solid basis for de-escalation management techniques, but they should also incorporate screening assessment tools and attempt to understand a patient's potential disposition to aggression in order effectively mitigate the occurrence of WPV.

28. Wigozki, E., Sullivan, S., & Jacobo, M. (2023). Dedicated De-escalation Training for Nurse Navigators. *Journal of Oncology Navigation & Survivorship*, 14(10).

The article discussed the importance of implementing de-escalation education training for oncology nurse navigators (ONNs) as they are the first point of contact for oncology patients. Researchers in the study created an education program by implementing two online small-group sessions on Zoom which included de-escalation tips and best practices for patient de-escalation along with scenario-based role-playing. Additionally, breakout room sessions were included to allow for ONNs to further discuss de-escalation strategies in a smaller group environment. 85% (n=48) ONNs who participated in the education intervention reported they found the education content relevant to current nursing practices. However, it was reported that creating content that was effective and easily applicable to practice was the most prevalent challenge.

29. Wilson, M. P., Rifai, M. A., & Ng, A. T. (2012). Verbal De-escalation of the Agitated Patient: Consensus Statement of the American Association for Emergency Psychiatry Project BETA De-escalation Workgroup. *The western journal of emergency medicine*, 13(1), 17–25.
<https://doi.org/10.5811/westjem.2011.9.6864>

The paper suggests that there are four main objectives to working with agitated patients, ensure the safety of all parties involved, help the patient manage their emotions, use restraint as a last resource, and avoid coercive interventions that escalate agitation. The paper also provides 10 domains of de-escalation according to a literature review; respect personal space, do not be provocative, establish verbal contact, be concise, identify wants and feelings, listen closely to what the patient is saying, agree or agree to disagree, lay down the law and set clear limits, offer choices and optimism, and debrief the patient and staff. This study attempts to replace traditional methods of treating agitated patients such as restraints and involuntary medication with a noncoercive approach. This approach has three steps, verbal engagement with the patient, establishing a collaborative relationship, and then using verbal de-escalation techniques to help the patient de-escalate from their agitated state. The article states that both verbal de-escalation and nonverbal communication are key to engaging the patient. In addition, they found that helping the patient become an active partner in de-escalation can be effective. If the HCP is genuinely committed to this process, they are more likely to find success. While the authors encourage verbal de-escalation, they acknowledge that voluntary medication and environmental

planning can also be important

30. Wong, A. H., Ray, J. M., Eixenberger, C., Crispino, L. J., Parker, J. B., Rosenberg, A., Robinson, L., McVaney, C., Iennaco, J. D., Bernstein, S. L., Yonkers, K. A., & Pavlo, A. J. (2022). Qualitative study of patient experiences and care observations during agitation events in the emergency department: implications for systems-based practice. *BMJ open*, 12(5), e059876. <https://doi.org/10.1136/bmjopen-2021-059876>

This paper took a systems-based approach to examine factors that contributed to events where a patient was agitated or events where physical restraints were used. To decrease the likelihood of patient agitation, the study suggests recognizing agitated patients' exposure to psychological trauma, improving coordination within mental health emergency care networks (those handling agitated patients), and optimizing physical environmental conditions and organizational culture. Based on interviews, they found that patients' agitation was typically influenced by external factors.

and health during pregnancy.

26. Ramm, R. M., Lerner, Z. I., Levy-Meeks, G. S., Burke, R. V., Raven, M. C., Song, A., & Glass, M. H. (2023). A Case Report of Treatment-Resistant Agitation in Dementia With Lewy Bodies: Medical Marijuana as an Alternative to Antipsychotics. *Journal of Palliative Medicine*, 26(5), 737-740.

The paper presents a case study of an 85-year-old male diagnosed with LBD (Lewy body dementia) who was admitted to the ED for dementia-related symptoms of aggression. Within the case study, researchers presented an alternative method to traditional antipsychotic drugs in the long-term management of behavioral changes regarding aggression and agitation tendencies related to dementia. It was stated that while promising research towards the prescription of low-dosage cannabinoids for treating psychiatric symptoms of dementia such as agitation and aggression exists, there is not enough present literature to suggest its routine usage. However, due to the potential worsening of symptoms and increased risk of mortality observed among antipsychotics usage, the prescription of cannabinoids is a line of emerging research that bears recognition in treating behavioral changes related to dementia. In the described case, the patient was noted to have a history of violent outbursts to family caregivers and during hospital visits, in which he was prescribed numerous different antipsychotics, specifically haloperidol and lorazepam. After another violent outburst, the hospital's palliative care team prescribed 5mg of THC and 5mg of CBD to the patient which were to be administered daily and 50 mg of quetiapine nightly.

27. Recsky, C., Moynihan, M., Maranghi, G., Smith, O. M., PausJenssen, E., Sanon, P. N., ... & Hamilton, C. B. (2023). Evidence-based approaches to mitigate workplace violence from patients and visitors in emergency departments: a rapid review. *Journal of emergency nursing*.

The paper presents an overview of evidence-based strategies used in EDs to address and prevent instances of WPV. Researchers conducted a review of studies addressing WPV management interventions in hospital EDs and formulated a general summary of effective intervention strategies. Some of these interventions include the implementation of comprehensive violence prevention policies, enhanced security measures, staff training in de-escalation techniques, the use of personal alarms or panic buttons, and strategies for improving communication with patients and visitors. Additionally, the researchers suggest that a multi-component approach, combining multiple strategies such as screening, policy change and post incident debriefing, is more effective in reducing workplace violence in EDs compared to single interventions that target certain causes and acute instances of WPV. The article also emphasizes the importance of organizational commitment to enforcing zero-tolerance WPV policy and a culture of safety in preventing and managing violent incidents. However, the article also acknowledges the limitations of the available evidence, including the lack of robust research studies and variations in study designs.

28. Shane Escue, J., Gutierrez, F., Rebecca Batts, J., Lumagui, M., & Oloan, V. (2023). Implementing effective interventions against workplace violence. *Critical care nursing quarterly*, 46(3), 255-270.

The literature review discusses the importance of developing and implementing effective interventions as a means of minimizing instances of WPV. It emphasizes the negative impact of WPV on employee resignation rates due to increasing job dissatisfaction, safety concerns and ineffective WPV management interventions. The article also reports that 86% of WPV reports are verbal reports to supervisors and are not formally addressed, in turn, limiting the effectiveness of the post-incident process and contributing to the acceptance that WPV is just a normal occurrence in the hospital. Researchers identified 6 key factors that contribute to preventing the frequency and severity of WPV. Additionally, the article emphasizes the importance of training programs to

and severity of WPV. Additionally, the article emphasizes the importance of training programs to equip employees with the skills to recognize, prevent, and respond to workplace violence. Suggested policy changes include creating behavioral urgent response teams, mandatory post-event checklists and standardized intervention process in managing agitated and aggressive patients. It also suggests the implementation of enhanced security measures and surveillance systems to create a safer work environment. The article emphasizes the need for ongoing evaluation and monitoring of interventions to ensure their effectiveness. It also highlights the importance of fostering a supportive organizational culture that prioritizes safety, respects employees' concerns, and provides support for victims of workplace violence.

Key Factors identified in the study:

- Work environment
 - Promoting the morale and confidence of hospital staff
 - Having a clean workspace to minimize stress levels
- WPV managing processes
 - Evidence-based management techniques
- Interventions are standardized
- Staff knowledge in managing WPV
 - Knowledge of symptoms and potential escalating factors
- Transparent communication with patient
- Consistent intervention
 - Consistency and standardization in interventions
- Zero-tolerance WPV policy

29. Rhodus, E. K., Kryscio, R. J., Barber, J. M., Burhan, A. M., & Jicha, G. A. (2022). Feasibility of community-based remote, biometric data collection in persons with Alzheimer's disease and behavioral symptoms. *Alzheimer's & Dementia*, 18, e068135.

The review study focused on the feasibility of collecting biometric data in older patients living with AD (Alzheimer's disease) in a non-pharmacological home-based randomized controlled trial. Patients wore ActiGraph watches on their wrists for six continuous days at two different data collection time points. Feasibility was measured regarding the acceptance of wearing the device for the entirety of the data collection period. 14 participants or 66.7% of the total participants in the study wore the device for the entirety of the data collection period. The study reported that biometric data collection for older adults with AD in a home setting was a feasible means of collecting data, limiting the frequency for acute hospitalizations related to biometric data collection and routine check-ups.

30. Rosenberg, P. B. (2022). Special Circumstances: Agitation with Dementia in Emergency Departments. *Alzheimer's & Dementia*, 18.

The review study discussed the prevalence of agitation in patients living with dementia that are admitted to emergency departments. The study stated that a major challenge with agitation management in older adults living with dementia is creating a timeframe and history of their agitation, particularly for patients coming from LTC. LTC staff are able to readily describe episodes of agitation but may miss or not entirely recall the history of episodes or their potential causations. The inability to create a timeframe of episodes makes it difficult to identify whether agitation is chronic or acute, which was stated to be a key symptom of delirium. As a result, the review suggests that EDs should create a systematic method of delirium screening and incorporate the continued usage of non-pharmacological strategies in the management of agitated patients as they have been shown to be highly effective in recent studies.

31. Sano, M., Cummings, J., Auer, S., Bergh, S., Fischer, C. E., Gerritsen, D., ... & Zhu, C. W. (2023). Agitation in cognitive disorders: Progress in the International Psychogeriatric Association consensus clinical and research definition. *International Psychogeriatrics*, 1-13.

The article discusses the advancements made in defining and understanding agitation in individuals with progressive cognitive disorders. A panel of expert psychotherpists and psychiatrists along with findings from current literature and clinical trials were used to create a working definition of agitation to address unique circumstances in healthcare settings. The article highlights the importance of defining agitation in order for future studies to use the definition to correctly identify behaviors related to agitation and target interventions to prevent episodes of acute agitation. Literature regarding WPV and agitation management techniques report the lack of a standard definition of terms related to identifying the symptoms and causes of agitation, creating a disparity among the targeted behaviors of WPV prevention interventions. The panel also stressed the need to differentiate agitation from other related symptoms, such as anxiety or depression to effectively implement agitation management techniques. Overall, the article iterates the importance of addressing agitation within the context of the individual's cognitive impairment and overall clinical presentation along with the importance of implementing effective, individual intervention.

32. Sarkar, S., Bhatia, G., & Dhawan, A. (2023). Clinical Practice Guidelines for Assessment and Management of Patients with Substance Intoxication Presenting to the Emergency Department. *Indian Journal of Psychiatry*, 65(2), 196.

The present article provides guidelines aimed at assisting healthcare professionals in assessing and managing patients admitted to the ED for substance intoxication. The guidelines provide recommendations for the initial assessment of patients, including the collection of a comprehensive medical history, physical examination, and monitoring of vital signs. They emphasize the importance of promptly identifying the substances involved, assessing the patient's level of intoxication and managing symptoms of acute intoxication and withdrawal symptoms. Additionally, the article mentions the increased occurrence of patients becoming aggressive or agitated either due in part to lowered inhibition as a result of their intoxicated stated or being admitted to the ED against their wishes, largely being admitted by law enforcement. It is also mentioned that the biggest concern for staff is the potential unreliability of substance history use as patients tend to underreport or may not fully recollect their use. The guidelines serve as potential preventative measures for instances of WPV related to substance intoxication.

33. Strayer, R. J. (2023). Disruptive and Dangerous Agitation. *Urban Emergency Medicine*, 13.

The book chapter highlighted the challenges that HCWs are faced with when managing agitated patients in emergency department (ED) settings. The author identified three levels of agitation severity. Additionally, diagnostic tools, treatment suggestions and de-escalation techniques are suggested regarding each level of agitation severity.

- *Agitated but cooperative patient*
 - Patients respond to suggestions and may be managed with minimal or gentle pharm
 - Example patients
 - Older person with mild dementia
 - Mildly intoxicated teenager
 - Patients can be reliably assessed and concern for underlying dangerous conditions is low
 - Management techniques
 - Using staff to distract them

- Feeding patient
 - Reducing environmental stimuli or giving access to audio or visual stim
- Pharmacological management techniques
 - First choice is a agitation management medication the patient already takes or knows
 - Small doses of calming medication offered by mouth or oral dissolving tablet may be used, medications include; risperidone, lorazepam and ziprasidone
- *Disruptive without danger patient*
 - Patients require medications to treat agitation but are not an immediate threat
 - Example patients
 - Highly intoxicated patients
 - Management techniques
 - Verbal de-escalation techniques should always be the first method of treatment
 - Include identifying patient's needs, providing validating support of the situation, offering patient choices or options
 - Pharmacological management techniques
 - Physicians should understand that sedative have a period of delay before the onset of sedation and should take safety precautions before hand
 - Includes removing environmental stimuli, removing other patients that may be harmed
 - Combination of haloperidol and lorazepam is a commonly used sedative for patients
 - Use of combination of triperidol and midazolam is also an alternative with a high degree of supporting evidence
- *Dangerous agitation*
 - Medical emergency that requires immediate control to protect patient and others
 - Example patients
 - Severely intoxicated patients
 - Patients with mental health episodes (delirious patients)
 - Patients may harbour dangerous conditions that are not acute to the state of mind they are currently expressing
 - Management techniques
 - Degree of agitation should first be identified and then correct security resources are called to manage the patient
 - Suggested that after subduing the patient, an oxygen face mask should be placed on the patient's face to treat potential hypoxia that the patient may display due to their agitation
 - Identification of restraint use should be considered after subduing patient
 - Pharmacological management techniques
 - Main concern of pharm techniques is to minimize adverse medication effects and the possible need for repeat dosing... Thus, deep sedation is accepted in exchange for immediate agitation treatment
 - Ketamine is a common IM medication used to effectively and immediately sedate agitated patients and its safety has been routinely supported... Side effects include potential cardiorespiratory compromise and high rates of intubation

34. Le Bail, S., Mouden, J., Gaillard, M., & Dupouy, J. (2023). Clinical practical guide for the management of an acute psychiatric crisis in primary care: a meta-review of systematic literature. La Presse Médicale Open, 100043.

The review study focused on existing literature and meta-analyses regarding guidelines towards oral antipsychotics treatment for acute psychiatric crisis management. It was mentioned that while the use of oral antipsychotics are an effective treatment and are widely used to manage cases of acute agitation, many general practitioners lack confidence in their treatment and diagnostic in cases of acute crisis management. The article attempted to identify evidence-based practice and guidelines towards optimal treatment for general practitioners. Researchers collected 31 articles from various online academic databases including, PUBMED, Cochrane and Web of Science. Main findings from the article state that oral antipsychotics were included as a first-line treatment for first-episode psychosis in all guidelines that were reviewed. Additionally, reviewed guidelines suggested a "low and slow" dosage to first-episode psychosis patients. All reviewed guidelines also stated that oral formulation was the best method towards treating agitation. Finally, although guidelines differed on what physical monitoring methods to use when monitoring patient tolerance when antipsychotics were prescribed, all guidelines recommended monitoring weight, blood pressure and monitoring fast glucose and lipids.

35. Miller, G., Enguidanos, E., & Wilson, M. (2023, July 7). Agitation Treatment in the Emergency Department. <https://www.acepnow.com/article/agitation-treatment-in-the-emergency-department/>

The blog post addressed challenges and strategies for managing agitation in patients coming to the Emergency Department (ED). The post highlighted the importance of pharmacological and non-pharmacological calming measures as a means of managing agitated patients. It was suggested that calming treatment should be considered immediately when patients who are expressing agitation are brought to EDs. When considering verbal de-escalation, it was suggested that healthcare providers should focus on creating a non-confrontational relationship with the patient to order to gain their trust and successfully de-escalate the situation. Regarding pharmacological measures, the post suggested that physicians must first establish trust with a patient before administering any medication to reduce agitation. After establishing trust with the patient, it was suggested that physicians should start with a low dosage of a single medication rather than multiple different medications. It was also suggested that along with pharmacological intervention, physicians should also focus on patient comfort, some examples listed in the post included limiting environmental stimuli and offering meals. Finally, the post also suggested that ED physicians should consider re-starting outpatient medication for agitation management once they are stabilized for their agitation.

36. Strayer, R. J., Friedman, B. W., Haroz, R., Ketcham, E., Klein, L., LaPietra, A. M., ... & Nelson, L. S. (2023). Emergency Department Management of Patients With Alcohol Intoxication, Alcohol Withdrawal, and Alcohol Use Disorder: A White Paper Prepared for the American Academy of Emergency Medicine. *The Journal of Emergency Medicine*, 64(4), 517-540.

The article provided guidelines for ED healthcare professionals in managing patients presenting with alcohol-related conditions. A suggestion made by the authors was the importance of considering the impact that alcohol has on ED admission frequency due to its broad acceptance in society. Thus, ED physicians should be well-equipped with agitation management techniques to manage patient agitation in alcohol-related cases. The authors outline evidence-based guidelines for managing alcohol-related situations in the ED. This includes assessing and stabilizing vital signs, managing potential complications, and identifying what interventions should be employed along with how to implement interventions to address alcohol withdrawal symptoms. They also discuss the use of pharmacological agents, such as benzodiazepines, in managing withdrawal symptoms. Overall, the authors state the importance of creating a solid foundation for treating patients admitted to the ED for alcohol-related complications due to the high frequency of alcohol-related ED admissions. It was also stated that while acute hospitalization acts as a means to stabilize patients, meaningful treatment lies in treatment and rehab programs that focus on

educational efforts and improving community resources.

37. Reißmann, S., Wirth, T., Beringer, V., Groneberg, D. A., Nienhaus, A., Harth, V., & Mache, S. (2023). "I think we still do too little": measures to prevent violence and aggression in German emergency departments—a qualitative study. *BMC health services research*, 23(1), 1-16.

The study explored the perspectives and experiences of healthcare professionals in German emergency departments regarding measures taken to prevent and manage violence and aggression from patients and visitors. Researchers cited the need for a better understanding of the effectiveness of preventative measures and what further needs must be made to improve present preventative guidelines and management techniques. One significant barrier in intervention implementation mentioned by the researchers was the lack of a clear consensus on how to create effective training interventions for healthcare workers. Researchers conducted interviews via telephone with doctors and nurses in EDs across Germany regarding their perception of available prevention method effectiveness and future needs in violence prevention measures. The findings were organized into three main factors, environmental, organizational and individual-focused. Additionally, researchers stated that barriers to better preventative measures were often related to financial constraints and high workloads. Overall, the study called for evidence-based guidelines to provide a consensus on agitation management techniques and well-organized security services to promote a sense of safety among hospital staff.

Influencing factors regarding management techniques:

- Environmental
 - Use of alarms and personal emergency devices to increase staffs' sense of safety
 - Increased camera surveillance and door-locking systems to keep violent incidence outside of EDs
- Organizational
 - Availability of security services when needed
 - Effective guidelines and procedures to direct staff on how to manage situations
- Individual-focused
 - Effective training programs regarding violence prevention
 - Promoting patient-centred communication as a preventative measure

38. Tampi, R. R., Tampi, D. J., Farheen, S. A., Ochije, S. I., & Joshi, P. (2022). Propranolol for the management of behavioural and psychological symptoms of dementia. *Drugs in Context*, 11.

The literature review discussed the use of propranolol, a beta-blocker used to treat high blood pressure, as a potential treatment for BPSD (behavioral and psychological symptoms of dementia). The study highlights the importance of balancing between the use of propranolol for non-pharmacological approaches, which have been reported to reduce BPSD severity and caregiver burden, and pharmacological approaches when non-pharmacological approaches are either not available or will not be useful. The study identified propranolol as an effective treatment in reversing stress-related cognitive deficits related to BPSD by blocking the effect of excessive catecholamines, expressing a neuroprotective effect in patients with dementia. Within the case studies explored, individuals responded well to propranolol and improved in BPSD symptoms such as agitation, violent outbursts and wandering. However, the review found limited data on the use of propranolol among individuals with BPSD and identified the need for further trials to assess the efficacy and potential adverse effects of propranolol usage.

389 Tartak, J. A. C., Rodriguez, G., Schwid, M., Meeker, M. A., Thomas, M. D., Roy, H. J., Dadabhoy, F. Z., Molina, M., Chary, A., Bukhman, A. K., Im, D. D., Temin, E. S., & Macias-Konstantopoulos, W. L. (2025). Evaluating the feasibility and effectiveness of an interdisciplinary

verbal de-escalation and implicit bias check training for agitation management in the emergency department. *Risk Management and Healthcare Policy*, Volume 18, 1355–1366.

This publication details the impact of an interdisciplinary training program for emergency department (ED) staff on verbal de-escalation and implicit bias awareness as part of agitation management. It was conducted at an academic medical center in Boston and the aim was to reduce racial bias in restraint usage and improve workplace violence (WPV) prevention. The training course had an hour-long online prerequisite and a 2-hour in-person session covering skills like defensive skills practice, and simulation-based debriefings. Participants completed pre- and post-training surveys, and findings showed a statistically significant improvement in confidence across all agitation management competencies. The integration of simulation scenarios featuring standardized patients of color, combined with consistent implicit bias checks in real time and trauma-informed de-escalation practices offered a racially conscious training framework for ED teams. The program was impactful for staff with less than 5 years of experience, while more experienced staff showed smaller gains, highlighting a potential need for more tailored training for more experienced clinicians.

40. Tat, J. (2023). Anger management: Agitated patients in the ED. *EMOttawa Blog*. <https://emottawablog.com/2023/02/anger-management-agitated-patients-in-the-ed/>

The present article was a blog post that presented a four-step approach to managing acutely agitated patients in EDs. The author stated that the goal of any approach in managing agitated patients was to ensure patient and staff safety, minimize the use of coercive interventions and encourage patients' self-control of their emotions whenever possible. The 4 steps identified different considerations that healthcare workers should make when managing an agitated patient. Healthcare workers should first address agitation and categorize its degree before employing de-escalation techniques that are in accordance with the patient's level of agitation. The article additionally iterates that non-pharmacological approaches should always be considered first when employing de-escalation techniques.

41. Totsikas, M., & Pavia, E. (2023). Positive Behavioural Support. *The Allied Health Scholar*, 4(1).

The present article conducted a literature review to examine existing interventions regarding WPV techniques in an effort to potentially decrease staffing requirements and hospitalization stay length in hospitals in Adelaide, Australia. Researchers conducted a literature review which evaluated current WPV management interventions and shared their results with a panel of occupational therapists and clinical psychologists to identify any gaps in research. The article showcases the importance of listening to the input of hospital staff along with evaluations from field experts and specialists to create effective WPV prevention policy and evidence-based improvement in management techniques. Researchers found that many staff were not formally trained on agitation prevention techniques and did not use formal screening as a preventative measure. As result, the researchers suggested the formation of a new staff role who was specifically tasked with de-escalating violent patients and employing strategies to manage instances of WPV

42. Tripodi, B., Matarese, I., & Carbone, M. G. (2023). A Critical Review of the Psychomotor Agitation Treatment in Youth. *Life*, 13(2), 293.

The article provided a comprehensive evaluation of pharmacological treatment approaches for psychomotor agitation (PA) in children and adolescents. It was mentioned that significant variation exists in effective prescription guidelines for administering antipsychotics for pediatric PA, currently available guidelines exist only for specific medications for specific instances of agitation management. Researchers reviewed primary studies, editorials, book reviews and

review studies to explore the use of various antipsychotics in managing symptoms of pediatric PA. Some of the symptoms stated in the article include autonomic hyper-arousal, hostility and severe irritability regarding impulse dyscontrol. Researchers identified the most commonly used medications as ziprasidone, risperidone, aripiprazole, olanzapine and valproic acid. Overall, the drugs examined in the review displayed acute treatment of PA however only with limited evidence support. It was mentioned that the majority of studies regarded case-control studies and provided little information on treatment follow-up. Researchers called for future studies to evaluate the efficacy ratio and treatment follow-up of drugs for treating pediatric PA.

43. Trzepacz, P. T., Franco, J. G., Meagher, D., Kishi, Y., Sepúlveda, E., Gaviria, A. M., ... & Kean, J. (2023). Delusions and Hallucinations Are Associated With Greater Severity of Delirium. *Journal of the Academy of Consultation-Liaison Psychiatry*, 64(3), 236-247.

The study attempted to examine the relationship between patients displaying symptoms of delirium and the expression of clinical symptoms of psychosis with a focus on the potential presence of hallucinations and delusions within patients expressing delirium. The study identified three core domains of delirium in the analysis; cognitive, higher-order thinking and circadian, and examined whether patients expressing any symptoms within the core domains also exhibited symptoms of psychosis. A cross-sectional analysis of 366 adults with delirium as per the DRS-R98 assessed the relationship of psychosis with other delirium characteristics using bivariate comparisons and ANOVA to compare groups without psychosis and groups with psychosis. The study concluded that symptoms of psychosis were present in 44.5% or 163 patients that were identified to have expressed symptoms of delirium. In addition, they reported a significantly higher symptom severity for the psychotic group in thought process abnormalities and sleep-wake cycle disturbance. The study iterates that psychosis is a marker for overall delirium episode severity and suggested a potential link between psychosis-related neural network dysconnectivity within cases of delirium, citing disruption in the reciprocal switching between the DMN and CEN as a potential explanation behind symptoms of delirium and psychosis.

44. Leppla I, Tobolowsky W, Patel S, Mahdanian A, Lobner K, Caufield-Noll C, Ponor IL, Roy D, Scoping Review on Educational Programs for Medical Professionals on the Management of Acute Agitation, *Journal of the Academy of Consultation-Liaison Psychiatry* (2023), doi: <https://doi.org/10.1016/j.jaclp.2023.05.003>.

The article highlights a review of agitation management studies and curricula designed to teach inpatient healthcare professionals how to manage acute agitation in patients in hospital EDs. Researchers used a PRISMA scoping review methodology and online databases to create a curriculum based on the review of articles discussing agitation management and previously implemented general healthcare provider curriculums in an attempt to better understand what educational programs exist for inpatient healthcare providers and their outcomes. The findings from the review stated that inpatient staff reported increased awareness, confidence and communication regarding agitation management within hospital settings after undergoing completion of agitation management curricula. Additionally, the study found that onsite staff training and simulation / role plays were the most widely used educational strategies in designed curricula. It was also reported that the Hawthorne effect was observed in the students of the curriculum and aided in the implementation of more humane techniques and less coercive measures within agitation management.

45. Wolpert, K. H., Kodish, I., Kim, S. J., & Uspal, N. G. (2023). Behavioral management of children with autism in the emergency department. *Pediatric emergency care*, 39(1), 45-50.

This article highlights the importance of understanding common psychiatric comorbidities within

autism spectrum disorder youth (ASD) youth admitted to ED in hospitals along with the importance of mitigating stressors during the ED visit to prevent behavioral outbursts. Additionally, the article mentions the frequency of suicidality and externalizing behaviors as common behavioral health concerns in ASD youth, noting the importance of mitigating potential stressors in both the ED environment and at home. Low ED wait times, low stimulus spaces, and a calm ED atmosphere provided by the practitioner were suggested to aid in the successful reduction of agitation and aggression symptoms. The article also emphasized the role of adaptive non-pharmacological strategies in effectively managing long-standing behavioral issues as an alternative to hospitalization for acute stabilization and the use of pharmacological interventions.

Classes of interventions in managing agitation in the ED

- Non-pharmacological interventions
 - Psychosocial interventions
 - Physical restraints
- Pharmacological interventions
 - Controlled and purposeful use of medications such as haloperidol and risperidone to treat acute agitation

46. Wong, A. H., Sapre, A. V., Wang, K., Nath, B., Shah, D., Kumar, A., Faustino, I. V., Desai, R., Hu, Y., Robinson, L., Meng, C., Tong, G., Bernstein, S. L., Yonkers, K. A., Melnick, E. R., Dziura, J. D., & Taylor, R. A. (2025). Predicting agitation events in the emergency department through artificial intelligence. *JAMA Network Open*, 8(5), e258927–e258927.

This publication presents a novel study aiming to address the increasing agitation events in emergency departments (EDs) and the difficulty in predicting these events. The study was conducted using electronic health record (EHR) data from over 3 million visits across 9 ED sites in a large US health system. The study developed and trained an agitation-specific AI prediction model. The final version of the model demonstrated good discriminative ability. Key predictors of agitation as expressed through the model included the number of past ED visits, initial vital signs, medical history, main concerns, previous sedation/restraint events, and socioeconomic factors. According to the publication, this is the first study to derive an evidence-based prediction model for the risk of developing agitation specifically in the emergency setting, filling a gap where previous models focused on other environments. The model uses a large dataset and a set of clinical and environmental predictors. Furthermore, the model demonstrated robust and stable performance across various age, sex, and racial/ethnic groups, indicating its applicability and potential to support patient care in an equal way. This model could enhance patient-centered care by enabling preemptive de-escalation and preventing agitation through early identification.

47. Woo, M. Y., & Gantioque, R. (2023). An Obstetric and Psychiatric Emergency: Managing Acute Agitation Among Pregnant Patients in the Emergency Department. *Advanced Emergency Nursing Journal*, 45(4), 301-310.

The article discusses clinical evaluation of different types of nonpharmacologic and pharmacologic interventions when managing acute agitation during pregnancy. It was noted that managing agitation in pregnancy is difficult due to the fear of potential adverse maternal and neonatal outcomes in addition to potential legal risk. Thus, it was mentioned that clinicians are hesitant to prescribe new antepartum medications or to continue necessary psychotropic medications. However, hesitancy to manage symptoms of agitation can put the risk of the patient and the practitioner at risk. The article searched 39 relevant articles for methods of managing agitation in pregnancy and currently used non-pharmacological and pharmacological management methods. Findings from the article emphasized the need for comprehensive behavior assessments, creating safe and comprehensive initial triage assessments and the high

importance recognizing early symptoms of agitation in patients. In terms of de-escalation methods, verbal de-escalation was recognized as the method of patient de-escalation, including offering environmental changes for patients and providing comfort measures. Pharmacologic methods should achieve calm or drowsiness in patients instead of sedation. Monotherapy is recommended to minimize potential adverse effects to the fetus and minimize the risk of fetal malformations. Pharmacologic methods included in the review include first-generation antipsychotics, second-generation antipsychotics, antihistamines and benzodiazepines. The article also supports the use of physical restraints only when as a last resort. It was also noted that physicians should take particularly close note of patient vital signs and should never restrain patients in a prone position.

48. Yau, B. N., Aggarwal, R., Coverdale, J., Anthony, B., Beresin, E. V., & Brenner, A. M. (2023). Beyond psychopharmacology: The interpersonal dynamics of agitation management. *Academic Psychiatry*, 48(1), 1–4.

This publication provides a discussion on overlooked interpersonal dynamics in the management of agitation in psychiatry, specifically focusing on the experiences of psychiatry residents. Though not a traditional research study, the authors draw upon existing literature and clinical experience to specifically explore the dynamics between residents and agitated patients, the treatment team, and the larger residency program. The publication highlights how a resident's personal history, including past trauma and perceived vulnerability, can influence their (the resident's) threshold or willingness for intervention in a violent or aggressive situation. Similarly, patient characteristics and the nature of the therapeutic alliance can also impact a resident's decision-making. The race of the patient is noted as a critical factor, with evidence suggesting Black patients face a disproportionately higher rate of physical and chemical restraints. The authors emphasize the need for training programs to encourage residents to acknowledge their emotional responses to aggressive patients and to implement strategies such as implicit bias training, process groups, cognitive empathy exercises, and self-reflection opportunities to help mitigate the negative influence of these dynamics and biases.

49. Long, C. (2023) Use of behavior management training to improve nurses' confidence in managing patient aggression. *Doctoral Projects*, 12.

This project evaluated the effectiveness of a behaviour management training intervention on improving nurses' and nursing staff's confidence in managing patient aggression. Beyond highlighting the high frequency of experienced workplace violence across various nursing specialties beyond just psychiatric and emergency settings, the publication details a study that was conducted at Tennova's North Knoxville Medical Center (NKMC) in Tennessee. A pre-and-post-test design was used, employing the Confidence in Managing Patient Aggression Scale before and after approximately a 20-minute training session. The training session used STAMP Violence Assessment (this incorporates a framework that nurses use to quickly assess observable behaviour in patients and assess it), and de-escalation techniques through seminars and modelling. The findings of the study revealed statistically significant increases in confidence across all measured areas, with the most improvements in perceived effectiveness of aggression management techniques, ability to physically protect oneself, and feelings of safety and comfort around aggressive patients. This suggests that even a brief, targeted training session can boost nurses' confidence in handling aggressive situations.

50. Yu, B., Lee, J. Y., Kim, Y. B., Park, H. Y., Jung, J., & Jo, Y. Y. (2022). Management of a trauma patient with alcohol withdrawal who developed neuroleptic malignant syndrome: a case report. *Journal of the Korean Society of Traumatology*.

The case study examines the management of a trauma patient with alcohol withdrawal who developed NMS (neuroleptic malignant syndrome) while being transferred to a medical center. The study expressed the importance of correctly identifying symptoms of NMS in patients and early consideration of treatment to prevent further NMS-related complications. A 69-year-old male was admitted to the hospital for alcohol withdrawal and while being transferred to another medical center for repeated episodes of agitation, he jumped out of a first-floor window and sustained several rib fractures. A diagnostic laparotomy was performed and the patient was stabilized during and immediately after the operation. The patient was aggressive and irritable on postop day 1 and was given haloperidol and lorazepam, to which the patient subsequently began to lose consciousness and his temperature rapidly increased, prompting the diagnosis of NMS due to the patient's reaction to the administration of the antipsychotics and an emergency laparotomy was performed as a result. The study iterated the importance of recognizing the symptoms of NMS and suggested that early consideration and treatment of NMS should be made when a patient's medical history is not known. In addition, the importance of advisory from expert staff and knowledge of related symptoms when making effective diagnoses and suggesting treatment were evident in the correct diagnosis of NMS by onsite anesthesiologists despite the presence of symptoms congruent with septic shock and alcohol withdrawal which were ruled out as potential diagnoses. The combination of knowledge of symptoms, correct diagnosis, early considerations of treatment, effective usage of hospital resources, and collaboration amongst hospital staff prove to be effective in managing and de-escalating cases of agitated patients in pharmacological settings in EDs.