Using Action Research to Plan a Violence Prevention Program for Emergency Departments

Authors: Donna Gates, EdD, RN, FAAN, Gordon Gillespie, PhD, RN, CEN, Carolyn Smith, MSN, RN, Jennifer Rode, MSN, RN, Terry Kowalenko, MD, and Barbara Smith, BS, Cincinnati, OH, and Ann Arbor, MI

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Introduction: Although there are numerous studies that show that emergency department (ED) violence is a prevalent and serious problem for healthcare workers, there is a lack of published evaluations of interventions aimed at reducing this alarming trend. Using an action research model, the authors partnered with six hospitals to plan, implement and evaluate a violence prevention and management intervention. Phase one of this project involved gathering information from employees, managers and patients using focus groups.

Methods: Ninety-seven persons participated in one of twelve focus groups. The Haddon matrix was used to develop focus group questions aimed at gathering data about the pre-assault, during assault, and post-assault time frames and to compare these findings to planned strategies. Analysis consisted of identification of themes related to intervention strategies for patients/visitors, employees, managers, and the work environment.

Results: Thematic analysis results supported the relevance, feasibility, and saliency of the planned intervention strategies. With the exception of a few items, employees and managers from the different occupational groups agreed on the interventions needed to prevent and manage violence against ED workers. Patients focused on improved staff communication and comfort measures.

Discussion: Results support that violence in the emergency department is increasing, that violence is a major concern for those who work in and visit emergency departments, and that interventions are needed to reduce workplace violence. The Haddon matrix along with an action research method was useful to identify intervention strategies most likely to be successfully implemented and sustained by the emergency departments.

T he growing trend of ED violence has the medical and nursing communities on alert. The eruption of violence in waiting rooms and treatment areas is becoming increasingly common, compromising the safety of nurses, physicians, and ancillary staff. Violence in the emergency department impacts over 1 million workers, including over 117,000 emergency registered nurses and 27,000 board-certified emergency physicians.[1-4] Recent evidence indicates that emergency nurses are at greater risk of violence than other nurses.[5-7] In Minnesota emergency nurses were 4 times more likely to report that they had been assaulted compared with nurses in other units.[6] In 2006 Gates et al[7] found that 67% of nurses, 63% of patient care assistants, and 51% of physicians

Donna Gates is Professor and Jane Procter Endowed Chair, College of Nursing, University of Cincinnati, Cincinnati, OH.

Gordon Gillespie, *Member, Greater Cincinnati Chapter Emergency Nurses Association,* is Assistant Professor, College of Nursing, University of Cincinnati, Cincinnati, OH.

Carolyn Smith is Doctoral Student, College of Nursing, University of Cincinnati, Cincinnati, OH.

Jennifer Rode is Doctoral Student, College of Nursing, University of Cincinnati, Cincinnati, OH.

Terry Kowalenko is Associate Professor Emergency Medicine, University of Michigan, Ann Arbor, MI.

Barbara Smith is Clinical Research Associate, Department of Emergency Medicine, University of Michigan, Ann Arbor, MI.

TABLE 1
Haddon matrix applied to ED violence prevention

	Host (employee) factors	Vector and vehicle (patient/visitor) factors	Physical/social environmental factors
Before assault	Education and training Policy and procedures Preventing aggressive behavior De-escalation and conflict resolution Managing aggression	Communication to patients and visitors of policy that violence will not be tolerated and potential consequences of violent behavior Minimize anxiety for waiting patients and visitors by communicating with them every 30 min	Develop and communicate policy to employees and management that violence is never acceptable Development and implementation of violence policies and procedures Manager education Security/police response/policies and education Monitor access to emergency department Develop mechanism to alert staff when patients and visitors who were previously violent visit the emergency department again Quiet environment/areas Special area for aggressive individuals/safe room for criminals Enforce visitor policies (ie, number of visitors)
During assault	Education and training Nonviolent crisis intervention	Isolate perpetrator from others	Security/police plan Implement procedures for dealing with violent event Create procedure for investigating physical threats
After assault	Critical incident debriefing Mandatory reporting of all physical assaults and physical threats	Reporting to security/police Maintain patient's/visitor's name for alerting staff upon return visit	Create procedure for reviewing violent event

had been assaulted at least once in the previous 6 months by ED patients. Kowalenko et al[8] in 2005 found that of emergency physicians, 28% were victims of a physical assault during the previous 12 months.

Employees who have been assaulted report emotional distress, with feelings of anger, sadness, depression, anxiety, and fear. Some have post-traumatic stress disorder, and many have decreased feelings of safety and job satisfaction.[5,8-10] Workplace violence is also costly, with the employer incurring the cost of medical and psychological care for employees, lost workdays, decreased productivity, job turnover, workers' compensation, and litigation.[11]

The ENA's 2006 position statement entitled "Violence in the Emergency Care Setting" states, "Health care organizations have a responsibility to provide a safe and secure environment for their employees and the public."[12] In 2006 the American Nurses Association House of Delegates passed a resolution condemning violence against nurses and published principles for reducing violence.[13] Some states, including California and Pennsylvania, have increased the criminal penalties for assaults against nurses, making such assaults felonies.[14] The Joint Commission of Hospitals (JCH), Joint Commission Resources, and Occupational

Safety and Health Administration renewed their commitment in 2006 to continue to work together to protect health care employees' health and safety. In 2007 the JCH addressed health care security with their "Environment of Care" requirements, which included "mitigate violence in the emergency department and other locations."[15] Despite the guidelines and recommendations from professional organizations, legislators, the JCH, Joint Commission Resources, the Occupational Safety and Health Administration, the National Institute for Occupational Safety and Health and the media, researchers find that the rate of violence against health care workers remains high and prevention efforts low.

We are partnering with 6 emergency departments to implement and evaluate a violence intervention program over a 4-year period. We are using an action research approach that emphasizes close collaboration among researchers, hospital employees, and administration.[16] This partnership brings together these primary stakeholders to perform problem solving during the entire process of assessment, implementation, and evaluation to improve the likelihood that the violence prevention intervention will be successful. The first phase of this research project involved the use of focus groups to gather information from employ-

ees, managers, and patients regarding their beliefs about the violence and to identify strategies that they believe would be beneficial and sustainable in their work settings. These strategies were then compared with strategies previously identified in the literature by workplace violence experts (Table 1). These focus groups were critical to ensuring that the intervention being planned for the emergency departments would be relevant, acceptable, feasible, and comprehensive. This article describes the methods and results of the focus group study.

The Haddon matrix, used in public health to understand and identify measures to prevent injury,[17] was used to help us to identify and categorize intervention strategies. The Haddon matrix combines the epidemiologic concepts of host, vehicle, agent/vector, and environment with the concepts of primary, secondary, and tertiary prevention to identify contributing factors. In applying the Haddon matrix to prevention of ED violence, the host is the health care worker who is susceptible to physical and psychological injury, the vehicle is the injury-producing object (eg, knife or chair), the vector or agent is the patient or visitor, and the environment includes the physical environment (eg, open-access emergency department) and the social environment (eg, policies and procedures). Before the focus groups were conducted, this matrix was used to identify a list of salient, complementary, and feasible intervention strategies for preventing violence perpetrated by patients and visitors before (primary prevention), during (secondary prevention), and after (tertiary prevention) an assault (Table 1).

Methods

The primary goal of the focus groups was to utilize the expertise of the employees and managers to identify their beliefs regarding the violence prevention strategies to be tested in phase 2 of the study. The data would be used to help ensure that planned interventions would be viewed by employees and administration as relevant, acceptable, feasible, and comprehensive. Focus groups with patients were conducted to ensure that the planned intervention would include strategies targeted at reducing patient and visitor stressors that are commonly associated with aggression against staff.

PARTICIPANTS

Three Midwestern US hospitals (two urban and one suburban) were involved in the twelve focus groups. One ED manager, one patient, and two ED employee focus groups took place at each of the three planned intervention sites. Nurse managers, charge nurses, educators, physician supervisors, and security managers were invited to participate in the leadership focus groups. Stratified random sampling was used to select the ED employee groups, which included nurses, physicians, patient care technicians, paramedics, security personnel, and radiology technicians. Patients were approached at 15-minute intervals in the emergency department and invited to participate in a focus group the following weekend.

We invited 303 managers, employees, and patients to participate, and 96 (31%) agreed. Management participants (n = 24) had an equal gender distribution, and all were white. There were 47 employee participants, of whom 46% were female and 85% were white, 13% African American, and 2% multiracial. Twenty-five patients participated, of whom 60% were male and 44% were white and 56% African American.

PROCEDURE

Before beginning the focus groups, university and hospital institutional board review approval were obtained. Focus group meetings took place over a 3-month period, with the duration ranging from 60 to 75 minutes. All focus groups were audio recorded. Focus group questions were developed from the Haddon matrix. Initial questions were directed at discovering what strategies hospitals currently use related to workplace violence before, during, and after an assault, as well as the benefits and barriers of these strategies. Participants were then asked questions about what strategies they hoped their hospital would use related to workplace violence. Finally, participants were asked to identify barriers to proposed interventions.

The discussion prompts used for the patient focus groups centered on aspects of the patient's recent ED visit that were positive or negative and on aspects of the visit that made the patient anxious or stressed. Sample questions included "What was good about your last ED visit?" and "What made you anxious during your last visit?"

DATA ANALYSIS

Audio recordings from all focus groups were transcribed and then verified by a research team member. Two researchers conducted independent analyses of each transcript. Analysis followed Wolcott's method of analyzing qualitative data, including identifying ideas, coding the ideas to categorize patterns, and then contextualizing patterns into an existing framework.[18] Specifically, analysis began with a thorough review of the transcripts to gain a broad perspective of the discussion. Researchers then methodically reviewed each transcript and highlighted themes. Salient themes were entered into an Excel spreadsheet (version 7.0; Microsoft, Redmond, WA) and categorized temporally as before, during, and after an

assault, with subcategories of host (employee), vector (patient/visitor), and environment, based on the Haddon matrix framework. Independent theme analyses were then compared between researchers for congruency. Inconsistencies were resolved by returning to the original transcripts for verification. A third researcher conducted a final review of the transcripts and theme analysis.

Results

The following is a presentation of findings organized according to the proposed intervention strategies (Table 1) in the before-, during-, and after-the-assault time frame. Participant quotes provide salient examples of support for the proposed intervention strategies.

BEFORE THE ASSAULT

Employees and managers stated that workplace violence should be prevented using multiple interventions. Suggestions included examining hospital policies, improving staff education and training, and increasing communication with patients and among ED staff. Employees and managers wanted hospital policies to be supported by administration, easy to access, and consistently followed by all ED employees. Patients agreed that staff consistency in following hospital policies (eg, number of visitors allowed per patient and distribution of patient cab vouchers and bus tokens) is an important strategy to reduce patient and visitor frustration and anger. Managers and employees wanted additional workplace violence education and training that are "interdisciplinary" and involve ED employees, security personnel, and management. Employees stated that existing policies and education about conflict resolution and aggression management techniques are inadequate. Consequently, employees wanted frequent educational opportunities that provided specific strategies to de-escalate situations with patients and resolve conflicts.

All 3 groups supported the need for improved communication as a strategy to prevent violence. Employees and managers voiced that communication needs to be improved between ED staff and patients/visitors, as well as among ED staff. Patients agreed with this concept and added that ED employees need "more people skills" so that they can listen and respond better to patient needs. One patient said, "You know when [patients] come in, they are overwhelmed, they are hurt, and people are going to have a little attitude sometimes. But the nurses and doctors . . . are supposed to be trying to comfort you . . . but they don't do that. They are just trying to get you in and out." Improvements in communication need to address delays in care, expectations of behavior, and patient plans

of care. Patients noted that aggressive behavior can be prevented by addressing patients' comfort (eg, food and entertainment in the waiting area) and having a staff liaison who updates patients about wait times. Patients also wanted to be treated with respect and courtesy and for staff to establish a trusting relationship with patients.

ED employees and managers reported frustration regarding the current tolerance of "bad" behavior by patients and visitors. One employee said, "[Patients] can do whatever they want; there is no ramification for their actions." ED employees believed that a major contribution to this problem was hospital administration's prioritization of customer service over employee safety. The managers and employees wanted administration to establish, communicate, and enforce a zero-tolerance violence policy to address patient and visitor behaviors. Boundaries specifying what behaviors would or would not be tolerated in the emergency department could be communicated by posting the information in the ED waiting area.

Employees and managers stated that increased security and/or police presence in the emergency department could reduce violent events. Employees also expressed that security personnel need to have the authority to enforce zero-tolerance policies and the ability to respond more quickly to potentially violent situations. Managers and employees wanted ED employees and security personnel to have a clear understanding of the role of security personnel and police when responding to violent events. Identified barriers included lack of administrative and financial support for increased security personnel. "They cut back on security recently, and to me that just shows you that [administration] don't care and that's the attitude everybody has."

All participants supported limiting access to the emergency department as a way to prevent violence. Some of the employees stated that metal detectors would help decrease violence. However, employees at the only study site that currently has a metal detector indicated that metal detectors foster a false sense of security and do not necessarily deter patient and/or visitor violence. Employee and manager participants reported that most of the participating hospitals have a quiet or secure room(s) in which to place patients at risk for violence. However, they reported that the lack of an adequate number of quiet/secure rooms poses a barrier to using this intervention with every at-risk patient.

DURING THE ASSAULT

During the assault, managers and employees reported that they call for security, use nonviolent crisis intervention techniques, and isolate the perpetrator. Current nonviolent crisis intervention strategies include use of verbal contracts,

calling other ED staff for assistance, intimidating the patient by staring at them or surrounding them with "giant people," and switching staff assignments. However, employees wanted multidisciplinary training to clarify the procedures and staff roles when responding to a violent event. One emergency nurse said, "I would like a more together approach between our police, our doctors, and ourselves . . . to make it look like we are not a bunch of buffoons there trying to beat down this patient." Similarly, patient participants did not want ED staff to argue with patients because they feel this inflames the situation.

ED employees and managers agreed that isolation of violent patients is an important strategy to deal with violent events. ED employees desired additional safe/secure areas in the emergency department to isolate violent patients. Employees and managers wanted physical and chemical restraints to be used appropriately, consistently, and more frequently. They also reported a need for increased clarity about when security can intervene and for quicker admission of psychiatric patients to the psychiatric unit. Patients also felt that violent patients needed to be isolated and wanted ED employees to inform other ED patients when the situation was under control.

Employees and managers stressed that involvement of security is an important strategy to handle patient and/or visitor violence. Employees desired an increased security presence in the emergency department and wanted security officers to have additional resources (eg, Tasers [TASER International, Inc., Scottsdale, AZ] or arrest power) to adequately handle violent persons. One ED employee expressed frustration with security's lack of ability to resolve violent events by saying, "Security doesn't even carry firearms. Security told me before if somebody comes in this department with a gun, do not call us because we will not respond, and I [said] I'm not calling anybody, I'm running."

Employees and managers stated that they desire "easy to enact" procedures to deal with violence, including the use of a panic button to alert ED staff and security about an ongoing violent event. Such an alert would initiate a multidisciplinary response to address the event. Employees also wanted security to have the ability to lock down the emergency department and detain the perpetrator—allowing ample time for local police to respond to the incident.

Managers and employees agreed that effective interventions to address violent events will require the support of hospital administration. However, employees reported concerns that administration seems more focused on maintaining a positive public image than addressing employee safety. One ED employee said his or her hospital "views itself as a very prestigious hospital and . . . that [adminis-

tration feels] if we had to bring security down here full time, it reflects on us negatively" and that members of administration "don't want to acknowledge that we have violence here." Employees also worry that administration will not make any significant changes to address violence in the emergency department unless a serious event occurs. One nurse who had experienced ED violence in the past said, "It is going to take now somebody else getting hurt like that for somebody to wake up and say, 'Oh, we need to do something else.'" Both groups acknowledged that to garner administration's support, interventions will need to preserve the safety of ED employees while maintaining a positive hospital image within the community.

AFTER THE ASSAULT

Management and employee participants supported the use of debriefing after a violent event, but they stressed that debriefing is rarely done, and when it is done, it is informal. Both groups agreed that barriers to debriefing include lack of time and a workplace culture that tolerates violence as part of the job. One nurse remarked, "We see [patient violence] so often that nobody cares to debrief unless it's a really bad one. We would spend half our shift debriefing." Another nurse said, "You know, we joke around about it's not a good day if you haven't been verbally abused . . . or someone's taken a swing at you." Employees also identified the lack of administrative support as a reason why debriefing was not done. "Your administration is not going to pay you to stay after work for an hour to get debriefed. No. You are on your own."

Employees and managers stated that they have violent event–reporting mechanisms. Employees stated that barriers to reporting violent events exist and include confusion about what events should be reported, lack of time to complete reports, and lack of feedback from management and administration about the reported event. One nurse said, "There is [an existing] hotline or something, [but] it's not even worth our time . . . because the times I've tried to use it . . . there has been no feedback and no change, and so after awhile, I have other things to do." To improve the reporting, both groups wanted a policy that would specify what events to report, how to report them, and when legal charges are warranted. Employees stressed that reporting should be easy to access and quick to complete.

Employees and managers reported that there were no systems in place to track repeat offenders. Both groups believed that patient tracking would be an effective way to identify and flag previously violent patients and initiate preventive measures with "at-risk" patients. Managers and employees supported development of a procedure to review violent events to help identify ways to enforce or improve

policies and procedures aimed at preventing future violence. In addition, employees desired to have a staff liaison follow up with employee victims to ensure that their physical, emotional, and psychological injuries have been addressed before returning to work.

Discussion

It was evident that all participants were concerned about violence in the emergency department and perceived the problem as increasing. Most employee participants voiced their dissatisfaction with the perception that violence against health care workers was often accepted by administration, managers, and employees as part of the job. For example, the following statements by 2 employees signaled a very common theme: "change will occur when something catastrophic happens to someone here and it will" and "have you ever seen on the news 'nurse assaulted in the emergency department,' but you always hear about the convenience store worker who got beat up for doing his job." Several of the manager statements supported this belief. One example of such statements was "You need to walk away for a minute and then you have to put your game face back on and get back out there." There was also a common belief that although patients clearly have rights, it is not clear that the staff members have rights in relation to their safety at work. An example of this is illustrated by the following employee statement: "We live in a world where the patients have more rights than the staff and that is beat into us every day." These beliefs support previous research findings in health care workers in other settings.[19]

As described earlier, the purpose of the focus groups was to determine whether the strategies being planned for intervention were relevant, acceptable, feasible, and comprehensive. The majority of the planned strategies were supported by all participants at the 12 focus groups. The greatest difference between the groups regarding pre-assault interventions was that the employee and patient groups, unlike the managers, emphasized the need for more to be done to prevent aggression from occurring in the first place. Suggested strategies included better communication, enhanced and more frequent training for staff and managers, staffing issues, and separating patients early when obvious aggression is occurring. Other specific suggestions included having the physicians keep a list of patients with drug-seeking behavior and which patients received pain medications earlier. Although both employees and managers stressed education and training for staff, no discussion took place regarding manager education by any of the groups. It was not clear whether the participants believed that managers are already skilled in violence prevention or whether they do not need the skills because they are not in direct contact with patients as frequently. Clearly, it is imperative that managers be educated and trained on the full array of strategies to be used to prevent and manage violence. Another area of difference between groups was the topic of "enforcement of visitor policies." Only the employees addressed the issue that there is a lack of communication of policies to patients who are "acting out." Again, the employees frequently focused on the perception that patients have rights because they are the customer and that employees do not have rights in relation to patient and visitor aggression. Employees would like more administrative support to change the culture of accepting violence.

As for strategies during the assault, there was a great deal of agreement between the employees and managers regarding the need to use nonviolent crisis intervention, isolation of aggressive patients or visitors from others, involvement of security or police, and implementation of procedures. The one strategy that we proposed that was not mentioned by the manager or employee groups was the need to create a procedure to investigate and review threats and violent events. We propose that important data will emerge by examining details about a violent event and that such information can be used to prevent future violent situations and assaults. As for investigation of threats, researchers have found that threats of harm are extremely upsetting to staff, often more than actual assaults.[5,19] Thus it may be beneficial for staff to discuss threats with trained chaplains, security, police, or administration. These experts can provide the victimized staff member with emotional support, as well as information regarding the seriousness of the threat. Likewise, the experts will have the needed information to investigate the threat. The only strategy identified by patients was the need for ED employees to increase their communication with patients during an aggressive event. It can be extremely frightening for patients and visitors when they witness these events while in the waiting or treatment room.

Much of the discussion regarding intervention strategies during the assault timeframe involved the use and role of security and police. Whereas the employees focused on the desire for an increased security presence, quicker response times, and proper use of security, the managers tended to focus more on how a "locked down" approach with more security could scare people and "drive patients away." Managers also brought up liability issues and a desire for more equipment (eg, Tasers) for security personnel, as well as more equipment (eg, panic buttons) for all staff. Both employees and managers strongly identified that policies and procedures need to be stricter and must be enforced. In addition, education about these procedures was

needed for all ED workers. Participants stressed that roles and responsibilities of individuals involved in a violent event are often not clear. Training for such events should mirror other crisis-type training.

Managers and employees were consistent in their suggestions for strategies after a violent incident. Both groups stressed the importance of debriefing; however, it was clear that there was no formal debriefing policy or procedure at the participating hospitals. Again, employees stated that management focused more on the patient, with the expectation that staff should be able to "suck it up and move on." The findings strongly suggest that it will take administrative support to develop and enforce policies and procedures for employees who suffer a violent event, and administration must provide the resources to be successful. Given the documented prevalence of post-traumatic stress disorder in ED workers,[20] such interventions are recommended to reduce emotional trauma, job dissatisfaction, and turnover. Both employee and manager groups stated that although reporting should be done, it often does not occur because of lack of time, and the perceptions that nothing is done with the reported data and that those who make such reports might be penalized. The lack of reporting and its reasons support what has been commonly found in other research studies.[5,8,9,21] Employees and managers discussed the need for legal follow-up with assaults and for a method to develop a tracking system based on patients or visitors who have shown previous aggression in the emergency department. This would alert staff earlier when someone has a history of aggression. Although this strategy could be helpful, there are 2 concerns that need to be addressed before initiating this intervention. First, staff might focus on known offenders and not remain open and aware that all patients and visitors could potentially become aggressive given the right circumstances; second, legal issues such as the Health Insurance Portability and Accountability Act might prevent the use of this approach.

There were 3 suggestions that came out of the focus groups that were not proposed by us. The patient participants suggested that the emergency department provide comfort measures to patients/visitors in the waiting area (eg, food, TV, appropriate magazines, and child activities). The employee participants wanted the ability to refuse to care for patients and visitors who are repeatedly violent or obnoxious. The Emergency Medical Treatment and Active Labor Act was mentioned as being a barrier to enacting such a policy. Third, employees and managers from two of the emergency departments without metal detectors felt that metal detectors would help them to feel more secure. Interestingly, the employees and managers from the one emergency department with metal detectors questioned

their effectiveness. They believed that the metal detectors instill a false sense of security and that they are often not used properly.

Study Limitations

Limitations of this study include the fact that the findings may not be generalizable to all emergency departments. Although employees and managers represented a variety of occupations from suburban, urban, and trauma center hospital emergency departments, rural emergency departments were not included in the study. In addition, data were collected from one geographic area in the United States, and only qualitative data were obtained.

Implications for ED Health Care Workers

Strategies identified from this study to prevent, manage, and cope with violent events were relatively uniform among ED leadership and employees. It is important that hospitals partner with researchers to test recommended intervention strategies and publish the results. Such information is critically needed to add to the current science on workplace violence and to close the knowledge gap that currently exists because of the lack of published research on effective interventions. Managers can also use the list of strategies to serve as best practice guidelines and to initiate discussions during interdisciplinary ED meetings to determine the feasibility of implementing successful violence prevention interventions. ED workers can form "safety committees," led by staff, with administrative support, to initiate a workplace change. Adoption of zero-tolerance policies and mandatory reporting is critical.

Workplace violence is an important topic to the ENA (one of its three clinical priorities). Research needs to be conducted to test the strategies posed in this article in a variety of settings, including rural and government-owned (eg, Veterans Administration and military) emergency departments, to address this clinical priority.

Conclusion

Discussions during the focus groups with ED managers, employees, and patients supported the data showing that violence in the emergency department is increasing, that it is a major concern for those who work and visit emergency departments, and that interventions are needed to reduce the violence. The data also showed that the planned intervention strategies were relevant, acceptable, feasible, and comprehensive. In addition, with the exception of a few items, the employees and managers agreed on what was needed to prevent and manage violence against health

care workers. This agreement and support should help the implementation of the intervention in the emergency department. The intervention's success will depend on the successful collaboration of all stakeholders, support from administration, and a hospital culture that violence against health care workers will not be expected, tolerated, or accepted.

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