Lockdown Terminology in K-12 Schools:
Why It Is Okay To Use Codes And Which Codes Are Best.

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Abstract

In this paper, school leaders and their law enforcement partners will learn that using codes for lockdown terms does not violate the plain-language requirement of the National Incident Management System (NIMS). They will discover which lockdown codes are best at reducing confusion to help school students and staff members respond quickly and effectively during emergency situations. Finally, the reader will learn that the most flexible and intuitive lockdown terms are Code Yellow Lockdown and Code Red Lockdown.

Introduction

What to call lockdowns in K-12 schools is a controversial issue. Some say you cannot use codes to describe school lockdowns because it violates the plain language[1] requirement of the National Incident Management System[2] (NIMS). Others say that the NIMS plain language requirement is there to help emergency response agencies communicate with each other and that it does not matter what schools call lockdowns because that is for internal school use, not for responding agencies.

Although I concede that codes are not plain language, I maintain that using codes for school lockdowns does not violate the NIMS plain language requirement. Not only is it okay to use codes, but by combining the right codes with a descriptive word or phrase, schools can improve their lockdown response. While I agree that lockdowns are primarily an internal procedure for schools, I also contend that there is overlap with emergency response personnel. This makes it

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[1] "Plain Language Guide Frequently Asked Questions," U.S. Department of Homeland Security, https://www.dhs.gov/sites/default/files/publications/PlainLanguageFAQs_0.pdf

[2] *National Incident Management System*, FEMA, https://www.fema.gov/national-incident-management-system

important that responding agencies know and understand which codes are used for lockdowns in the schools they serve.[3]

Why is this Important?

Schools are susceptible to many different hazards and threats that can turn into dynamic emergency situations with life-threatening implications. When it comes to the safety of school children, most of us will readily agree that schools need emergency procedures like fire drills and lockdown drills so that they are prepared to take quick action to try to keep children safe when confronted with life and death situations.[4]

Why does it matter what we call lockdowns? When someone is under extreme stress, like in emergencies, they can have diminished capacity to process complex information or accomplish straightforward tasks. Silver explains that "it becomes very difficult to think clearly, make rational decisions and communicate civilly and effectively."[5] Having simple and easy to understand lockdown terms and procedures help reduce confusion and empower students and staff to overcome those natural stress responses.

Nationally, there is no standardized terminology for school lockdowns. School leaders such as superintendents, administrators, and school safety personnel along with their local law enforcement agencies, determine what to call lockdowns. One may ask why schools do not just use the word "lockdown." Schools need more than one type of lockdown protocol, they use varying degrees of lockdowns in response to different emergency situations, and they typically use distinct terms to identify each type of lockdown.

Some use numeric designations such as Level 1, 2, and 3 Lockdown. Others use the traffic signal color designations such as Code Yellow and Code Red Lockdown. Still others use terms such as Shelter-in-Place, Lock in, or Lock out to assign meaning to lockdowns. Many other terms are also used: soft lockdown and hard lockdown, partial lockdown and complete lockdown, preventive lockdown and emergency lockdown, to name just a few.

Schools and their emergency response partners often interface during emergencies requiring lockdowns. While it is self-evident that school staff[6] and students need to know and understand the school's lockdown terminology, it is also beneficial for the school's emergency response partners[7] to have a clear understanding of the lockdown terminology used in the schools they serve.

Often, a 911 dispatch center will support several different communities. If the name and meaning of lockdowns for schools in one community is different than another, this lack of clarity could cause 911 dispatch centers to delay or confuse law enforcement dispatch and response.

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[3] Marleen Wong, James Kelly, Dr. Ronald D. Stephens, *Jane's School Safety Handbook*, 2001, Jane's Information Group, pages 60-61

[4] J. Pete Blair and Katherine W. Schweit, *A Study of Active Shooter Incidents, 2000 – 2013*. Texas State University and Federal Bureau of Investigation, U.S. Department of Justice, Washington D.C. 2014. Pages 9 & 22 describe the speed in which active shooter incidents occur and the need to make speedy life and death decisions.

[5] Val Silver, "How the Stress Response Affects Body and Mind," http://www.holistic-mindbody-healing.com/stress-response.html

[6] This includes substitute staff, coaches, itinerant staff, volunteers, maintenance workers, and others who may be inside the school.

[7] This includes partners such as 911 dispatch center personnel, law enforcement personnel and local emergency managers.

Likewise, a sheriff's office which supports schools in different areas may run into a similar problem. Having lockdown terminology that is consistently applied in all schools in a district, county, or service area can reduce confusion, improve communication, and support an organized and cohesive response. [8, 9]

Roadmap

This paper is divided into three sections. In Section One, I will identify many of the threats and hazards schools may encounter which could require a lockdown response. I will also define what a lockdown is and explain its various forms. This will help the reader understand what lockdowns look like in a school setting and will establish the need to have more than one lockdown term.

In Section Two, I will layout a brief history of the evolution of school lockdown terminology and will explain how the National Incident Management System guidance caused confusion about what was acceptable for lockdown terms. I will evaluate the meaning of plain language and common terminology, and will explain what a code is and why using codes in conjunction with descriptive words are viable within the plain language guidelines.

In Section Three, I will demonstrate the efficacy of many of the lockdown terms used in schools by evaluating their meaning and clarity of communication, and will address number codes, color codes, and descriptive words and phrases. This will inform school leaders and their law enforcement partners which lockdown terms are best.

Section One: Hazards, Threats and Lockdowns

School personnel are directly in charge of hundreds and sometimes thousands of children, acting in place of their parents or guardians. This is called *in loco parentis*.[10] Not only do they work to educate students, but they must be prepared to respond to a wide range of hazards and threats schools can face, many of which require taking protective actions, such as lockdowns.

In 2013, six federal agencies[11] collaborated to develop guidance for schools on how to develop emergency operations plans. The *Guide for Developing High-Quality School Emergency Operations Plans*[12] advises schools to use an all-hazards approach[13] in their emergency planning and includes instructions for developing a Lockdown Annex[14] to address many of the threats and hazards schools may face.

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[8] Wong, Kelly, and Stephens, *Jane's School Safety Handbook*, pages 60-61

[9] *Guide for Developing High Quality School Emergency Operations Plans*, USDoE, USDHHS, USDHS, USDoJ, FBI, FEMA, 2013, page 1

[10] *Legal Dictionary*, In Loco Parentis, http://legaldictionary.net/in-loco-parentis/ and How far does in loco parentis extend for schools in America?, Politics Stack Exchange, http://politics.stackexchange.com/questions/700/how-far-does-in-loco-parentis-extend-for-schools-in-america

[11] The U.S. Department of Education, The U.S. Department of Homeland Security, FEMA, U.S. Department of Justice, The FBI, and the Department of Health & Human Services.

[12] *Guide for Developing High Quality School Emergency Operations Plans*, USDoE, USDHHS, USDHS, USDoJ, FBI, FEMA, 2013

[13] Ibid, page 4

[14] Ibid, page 29

Threats & Hazards

    Broad groupings of hazards and threats include natural hazards; adversarial, incidental, and human-caused threats; and technological and biological hazards.[15] This chart, adapted from the *Guide for Developing High-Quality School Emergency Plans*, shows examples of many of the threats and hazards schools may need to prepare for.

EXAMPLES OF THREATS AND HAZARDS			
Natural Hazards	**Adversarial, Incidental & Human-Caused Threats**		**Technological & Biological Hazards**
Cold Weather (severe) Dust Storm Earthquake Flood Heat Wave Hurricane Landslide/Mudslide Lightning Snow/Ice Tornado Tsunami - Distant Tsunami - Local Volcanic Eruption Wildfire Wind (severe)	Animal, Aggressive/Dangerous Bomb Threat Bullying Bus Crash Child Abuse Domestic violence/abuse Drowning Explosive Device Found Explosion Fights Fire Gang Violence Gunshots Medical Emergencies Hostage Situation Kidnapping	Missing Student People, Aggressive, Dangerous, Suspicious Poisoning Riot or Demonstration Sexting Self-harm (cutting) Sexual Assault Shooting or Stabbing Student/pedestrian hit by vehicle Suicide Threat, Attempt or Completion Swarm of Bees Threat of Violence Weapons	Cyber Crime/Attack Infectious Diseases Food Contamination Water Failure/Contamination Allergies (food, cold, sun, bees) Poor Air quality Toxic materials present in the school (mold, asbestos, lead) Hazardous Materials Release outside the school (industrial plants, highways, railroads, vessels, aircraft) Hazardous Materials Release inside the school (gas leaks or laboratory spills) Radiological releases from nuclear power stations Dam Failure Power Failure Sewer Failure Structural collapse, roof leaks

    Although lockdowns are sometimes utilized as a response during Active Shooter situations, these are actually quite rare in K-12 schools.[16] It is much more common for schools to implement lockdowns for hazards and threats such as:

- A missing student
- A medical emergency
- A fight in the hall or an out-of-control student
- A dangerous animal on campus
- A non-custodial parent who comes into the school demanding to see their child
- A police chase in the community near the school

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[15] Ibid, page 36

[16] Blair and Schweit, *A Study of Active Shooter Incidents, 2000 – 2013.*

- An intoxicated, aggressive or severely mentally ill person who comes on campus or wanders into the school
- A phoned-in threat of violence like a bomb threat or threat of a shooting
- Gunshots heard nearby the school campus.

Lockdown: Definitions

Lockdown, a term which generally describes restricting movement and securing people, can be defined as:

1. "a security measure in which those inside a building such as a prison, school, or hospital are required to remain confined in it for a time: *many schools remained under lockdown yesterday.*" [17]
2. "The state of being grounded and denied privileges: *can't go to the mall; I'm on lockdown.* [or] A relationship in which one is controlled or confined by the other: *wanted to go to the party, but his girl's got him in lockdown.*" [18]
3. The *Guide for Developing High-Quality School Emergency Operations Plans* describes "The primary objective of a lockdown is to quickly ensure all school staff, students, and visitors are secured in the rooms away from immediate danger." [19] It also instructs schools to consider using distinct types of lockdowns to address various circumstances.

I have worked as a school safety professional for over fifteen years with Lincoln County School District on the Oregon Coast. I have also served the U.S. Department of Education as a trainer for several years, teaching school leaders and their community partners how to develop high-quality school emergency operations plans. Through my work experience, I have learned that there are several types or degrees of lockdowns schools use to manage various emergency situations. Being familiar with these types of lockdowns will help the reader understand the need for different lockdown terminology.

Exterior Doors Locked, Everyone Stays Inside School

The most basic type of lockdown is when the school keeps all exterior doors closed and locked. Everyone stays inside the school and can move about freely within the school building. All outdoor activities are canceled. Depending on the situation, visitor access may be allowed but carefully monitored or not allowed at all.

For example, there have been many school threats, mostly hoaxes, regarding clowns attacking schools and students. This prompted some parents to express concern and threaten to

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[17] lockdown. Dictionary.com. *Collins English Dictionary - Complete & Unabridged 10th Edition*. HarperCollins Publishers. http://www.dictionary.com/browse/lockdown (accessed: October 30, 2016).

[18] lockdown. Dictionary.com. *The Dictionary of American Slang*. http://www.dictionary.com/browse/lockdown (accessed: October 30, 2016).

[19] *Guide for Developing High Quality School Emergency Operations Plans*, USDoE, USDHHS, USDHS, USDoJ, FBI, FEMA, 2013, page 29

keep their children home from school.[20] To address this situation, school leaders have to consider if protective measures, such as a lockdown, are needed.

In response, some schools decided to implement a modified lockdown, which may also be called a soft lockdown,[21,22] and keep all activities inside during the school day. In this low-level lockdown, students are not allowed to be outside for recess or any other activity. High school students are also restricted from leaving campus at lunch.[23] This is the most basic type of lockdown: exterior doors are locked and everyone stays inside the building.

There are risks with allowing free movement inside a school during a lockdown since schools have numerous exterior doors. In Lincoln County School District, the average number of exterior doors is 27 per school. Students sometimes need to leave class to go to the restroom, the library, the health room, or the office. Students often move about the building throughout the school day while changing classes. If students are free to move about the building, what is to stop them from going out an exterior door? Or from letting someone inside who is waiting at an exterior door? Most schools do not have enough personnel to monitor every exterior door.

Another drawback to this type of lockdown exists for schools that are not contained in just one building. Many schools have multiple buildings on a campus, requiring students to go outside to change classes. At some schools, their halls are exterior walkways and lockers are even outside. For schools with this configuration, this type of lockdown is not feasible. For these reasons, many schools make even their most basic lockdown a little bit more restrictive.

All Doors Locked, Students Stay in Classrooms

In this type of lockdown, students are secured in their classrooms, doors are closed and locked, everyone is accounted for and instruction continues in the classroom. Depending on the situation, the administrator may allow movement in one section of the campus while another section is off limits, or limited movement may be very controlled and allowed only with an escort. Depending on the reason for the lockdown, visitors may or may not be allowed to enter the school.

This type of lockdown could be useful if a student has a medical emergency, such as a seizure, in the hallway. The goal is to provide privacy for the student, reduce trauma among bystanders, and clear the way for first responders. It may also be used if the school receives a report of a police chase in the community that does not yet involve imminent danger of violence at school. It is also used when school leaders learn of a threat that is not yet substantiated. It allows for time and physical space to deal with the emergency situation while students are secured in classroom and instruction continues.

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[20] "School Districts Taking Extra Precautions Amid Clown Threats," FoxNews4.com POSTED: OCT 03 2016 10:52AM CDT UPDATED: OCT 04 2016 06:36AM CDT, http://www.fox4news.com/news/209341330-story
[21] "Clown sightings, text threats put Rogers High School on modified lockdown," The News Tribune, October 4, 2016, http://www.thenewstribune.com/news/local/article105837362.html
[22] "Grady High School placed on soft lockdown after clown threat," Kristen Reed, WXIA, 12:28 PM. EDT October 4, 2016, http://www.11alive.com/news/local/midtown/grady-high-school-under-soft-lockdown-after-clown-threat/328888487
[23] "Creepy clown sighting puts NKY school on lockdown, frustrates neighbors," WLWT5, Brian Hamrick, Updated: 7:10 PM EDT Oct 6, 2016, http://www.wlwt.com/article/creepy-clown-sighting-puts-nky-school-on-lockdown-frustrates-neighbors/4967281

Once a school is in this type of lockdown, with everyone immediately accounted for and secured, the administrator has the flexibility to quickly transition the school into a more complete lockdown if the incident escalates. This is important because emergency situations are dynamic and can change suddenly. In life threatening situations, being able to quickly move into a full lockdown is essential.

Everything Locked: Everyone Secured, On the Floor and Quiet

This is a complete lockdown and is used to quickly take protective measures when there is an imminent threat of danger. Everyone immediately gets into a lockable space. They are to lock doors, turn off lights, get down on the floor away from view of windows, and maintain complete quiet. Teachers are to make their space look and sound like it is unoccupied; they are not to admit anyone into their room once it is locked. This type of lockdown may be used when there is a dangerous person on or near the campus; a credible or time-sensitive threat; an act of violence such as a shooting, stabbing, or hostage situation; or a fatality on campus.

Variation: Barricade

Some schools take this complete lockdown a step further when there is an active shooter situation. They teach staff and students to secure their rooms by pushing bookcases, desks and other furniture in front of their classroom door to barricade and essentially slow down an intruder. This barricade measure is sometimes employed when classrooms do not have lockable doors. Some schools do this even for classrooms that are locked.[24]

Summary: Two Main Lockdowns

The *Guide for Developing High-Quality School Emergency Operations Plans* advises that planning teams should consider "when to use the different variations of a lockdown." [25] While some schools have as many as four different types of lockdowns as just described, most just have two: 1) A low-level lockdown to secure students in their classrooms while instruction continues, limiting movement at school while an emergency situation is being assessed and or managed. 2) A full-fledge lockdown requiring that everyone is quickly secured in lockable rooms, on the floor, and quiet, used to shut down the entire campus due to an imminent threat of danger.[26]

Section Two: Lockdown Terminology and NIMS

When I began working for Lincoln County School District, I found that some of our schools conducted lockdown drills and others did not. At the schools that did, they used veiled phrases to signal a lockdown. At one school the administrator would turn on the public address system and say, "*Attention staff, there is a tiger loose in the building. I repeat there is a tiger loose in the*

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[24] Kelley Mohr, "Lockdown or barricade,"Daily Record [Wooster, Ohio] 25 Sep 2013: A.1.

[25] *Guide for Developing High Quality School Emergency Operations Plans*, USDoE, USDHHS, USDHS, USDoJ, FBI, FEMA, 2013, page 29

[26] "School Safety, Training and Drills," Lincoln County School District, accessed 11/22/2016, http://lincoln.k12.or.us/dept_programs/safety.php

building." At another school, the code for a lockdown was, "*Elvis is in the building!*" Schools in other areas of the country used phrases such as "Mr. Green has left the building," and "All people with Apple computers may leave the building." [27]

Universal Codes

In the early 2000s, federal grants became available to help schools develop emergency plans.[28] Galemore, in the National Association of School Nurse *School Nurse*, describes the history of the use of vague to universal color codes stating that many schools and districts "switched from vague codes (i.e., *'would the owner of the pink Cadillac please move your car from the loading zone?'*) to implementation of universal codes." Later she goes on to say that these "universal codes were felt to be effective in communicating needed information to school staff while minimizing alarm to students." [29]

Code Yellow and Code Red became standard lockdown terminology for many schools. They were considered Universal codes.[30] The colors made sense. They seemed intuitive. Yellow is associated with caution and red with danger. Yellow was a low-level lockdown, and Red a full-fledge lockdown.

NIMS and Codes and Confusion

When the *National Incident Management System* (NIMS) was established in 2003[31] and then revised several times between then and 2010, school leaders and their law enforcement partners began to question these color codes because NIMS advocated the use of common terminology and plain language, and federal grant funding was contingent on being NIMS compliant.[32]

The guidance about plain language evolved with each new iteration of NIMS. This caused confusion and resulted in many different interpretations of what common terminology and plain language really meant. The original guidance did not address codes but focused on common terminology noting, "all entities involved in managing the incident will utilize common terminology, prescribed by the NIMS, for communications."[33]

In 2006, FEMA released a document entitled, *NIMS AND THE USE OF PLAIN LANGUAGE*.[34] The guidance describes the importance of emergency responders using plain language and common terminology to coordinate response activities. It strongly encouraged plain language for internal operations but did not require it. In terms of codes, it explicitly said

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27 Bob Hull, "Security Solutions: The Colors of Crisis," *American School and University*, Sep 1, 2001, http://asumag.com/crisis-amp-disaster-planningmanagement/security-solutions-colors-crisis

28 Emergency Response Crisis Management Grants, U.S. Department of Education, Office of Safe & Drug-Free Schools

29 Cynthia A. Galemore, "Enhanced Lockdown for Schools," NASN *School Nurse*, page 29, January 2015, http://nas.sagepub.com.libproxy.nps.edu/content/30/1/29.full.pdf+html

30 Hull, "Security Solutions: The Colors of Crisis"

31 New York State Department of Health, National Incident Management System (NIMS), http://www.health.ny.gov/professionals/ems/policy/06-05.htm

32 National Incident Management System, December, 2008, DHS, https://www.fema.gov/national-incident-management-system, page 3

33 National Incident Management System, March 1, 2004, DHS, page 50

34 NIMS Alert, NIMS AND THE USE OF PLAIN LANGUAGE, December 19, 2006, NIMS Integration Center, https://www.fema.gov/pdf/emergency/nims/plain_lang.pdf

the "requirement to use plain language does not abolish the use of 10-codes[35] in everyday department communications."[36] This seemed to contradict the use of plain language and codes.

The 2008 updated NIMS guidance required using plain language and said that "codes should not be used."[37] However, it did allow for encryption and tactical language.[38] Which in essence, are codes. This was another contradiction. In 2010, the Department of Homeland Security (DHS) released "*Plain Language, Frequently Asked Questions.*" This document said that plain language is "designed to eliminate or limit the use of codes and acronyms during incident response involving more than one agency."[39] Once again, the use or non-use of codes was not an absolute.

A Note about NIMS and Schools

The NIMS does not specifically address schools, but is primarily designed for emergency response agencies. However, schools have emergencies and must implement their own emergency response. They also must coordinate with and communicate clearly with community partners responding to school emergencies. Consequently, looking closely at the communication philosophy of NIMS in relationship to the needs of schools and how they interface with their emergency response partners is necessary.

The Verdict

So where does that leave us for lockdown terminology? According to NIMS guidance, schools can use plain language and common terminology. They can use codes in a "limited" number. And schools can use encryption and tactical language for lockdowns.

Plain Language, Common Terminology and Codes

Now we will examine the concepts of plain language, common terminology[40] and codes in more detail. This is an important step because, ironically, there are some misconceptions about what plain language, common terminology and codes really mean. These impact decisions about lockdown terminology.

What are Plain Language and Common Terminology?

DHS defines plain language as "communication that can be understood by the intended audience and meets the purpose of the communicator." [41] Common Terminology, on the other hand is defined as "normally used words and phrases - avoiding the use of different

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[35] Note: 10-codes are codes used by police to shorten radio transmissions and in some cases to enhance officer safety.

[36] NIMS Alert, NIMS AND THE USE OF PLAIN LANGUAGE, December 19, 2006, NIMS Integration Center, https://www.fema.gov/pdf/emergency/nims/plain_lang.pdf

[37] National Incident Management System, March 2008, page 29

[38] National Incident Management System, December 2008, DHS, page 29

[39] "Plain Language Frequently Asked Questions," DHS June 2010, page 5, https://www.dhs.gov/sites/default/files/publications/PlainLanguageFAQs_0.pdf

[40] *Federal Plain Language Guidelines*, March 2011, Revision 1 May 2011, plainlanguage.gov

[41] "Plain Language Frequently Asked Questions," DHS June 2010, page 5

words/phrases for similar concepts."[42] There are slight differences between the concepts of plain language and common terminology. Plain language is that which can be understood by anyone. Common terminology is that which is understood by a smaller, trained audience, such as school personnel.[43]

Is "*K-12*" Plain Language or Common Terminology?

Here is an example. In the title of this paper I used the phrase "K-12" schools. What does K-12 stand for? K stands for Kindergarten and 12 for twelfth grade. For those who work in the school system, K-12 is considered "common terminology." It is a "normally used phrase," and no further explanation is needed. For those outside of the school system, plain language would say "Kindergarten through twelfth grade." This could be understood by anyone. Therefore, it is considered plain language.

However, plain language and common terminology are not always so straight forward. Here is an example that illustrates how easy it is to miscommunicate, even when trying to use plain language and common terminology.

Example: "*Back Side of the Building*"

Suppose there is an emergency situation at a school. A first responder using plain language says, "Go to the back of the building." Another using common terminology says, "Go to side Charlie."[44] The "back of the building" to one person might mean something entirely different to another. This school is essentially a rectangular building. The exterior doors of the building are all labeled/signed (both inside and out) using an identification system designed by fire personnel.

The main entrance side of the building is identified by A. The next side (clockwise) is the "B" side, and so forth. The doors are numbered A1, A2, A3, etc., B1, B2, B3, etc. This labeling system helps everyone, students, staff, parents, and first responders, to easily identify any given door.

So where does "side Charlie" fit in? Side Charlie would be the "C" side of the building. For first responders, there are two different phonetic systems or codes to help identify letters of the alphabet through the spoken word: the civilian system and the military system.[45] Some of the

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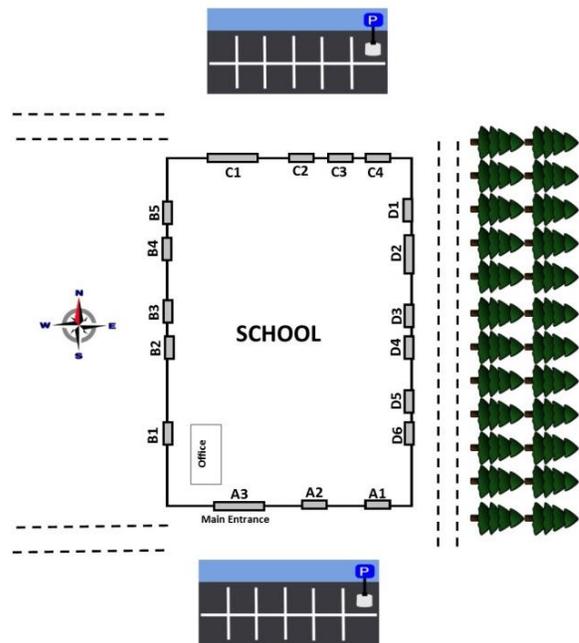
42 Ibid.

43 "Plain Language Frequently Asked Questions," DHS June 2010, page 5

44 Ibid.

45 Luke Huebner, "Police Codes: Police Scanner Codes, Police 10 Codes," Zip Scanners, August 23, 2016, https://www.zipscanners.com/resources/police-codes/#.W.AkrAvkrKUk

letters are the same in these systems, but most are different.

First responders, 911-dispatchers, people who have served in the military, ham radio operators, and others may be familiar with one or both of these code systems. These phonetic code systems may be considered common terminology depending on one's background and experience. For others "side Charlie" might not have any meaning and may cause confusion.

Phonetic Alphabet								
CIVILIAN					**MILITARY**			
A	Adam	N	Nora		A	Alpha	N	November
B	Boy	O	Ocean		B	Bravo	O	Oscar
C	Charles	P	Paul		C	Charlie	P	Papa
D	David	Q	Queen		D	Delta	Q	Quebec
E	Edward	R	Robert		E	Echo	R	Romeo
F	Frank	S	Sam		F	Foxtrot	S	Sierra
G	George	T	Tom		G	Golf	T	Tango
H	Henry	U	Union		H	Hotel	U	Uniform
I	Ida	V	Victor		I	India	V	Victor
J	John	W	William		J	Juliett	W	Whiskey
K	King	X	X-ray		K	Kilo	X	X-ray
L	Lincoln	Y	Yellow		L	Lima	Y	Yankee
M	Mary	Z	Zebra		M	Mike	Z	Zulu

Now let's look at the description, the "back of the building." At this school, the buses drop off and pick up students at the "A" side of the building, where the main entrance is located. For school staff, this is considered the front of the school. But if the A side is the front, does this make the C side the "back of the building"? Good question. This depends on point of view. Parents who drive their children to school drop off students at the "C" side of the building. Parents might think of this side as the front of the building.

Here is another perspective. At this school, the east side of the building sits right up against the forest, with a narrow service road for kitchen deliveries and garbage service between the forest and the school building. This side is typically referred to by custodial workers and delivery drivers as the "back of the school." It is the "D" side of the building. First responders might call it the Delta or David side, depending on what phonetic codes they are accustomed to using for the alphabet.

This illustrates that "the back side of the building" is neither plain language nor common terminology. It demonstrates how challenging it can be to communicate even simple concepts about a simple school campus. When making decisions about lockdown terminology, one must consider the different stakeholders involved and how perceptions can influence understanding. What lockdown means for one person might be totally different for another.

What is a Code?

As indicated earlier, concepts of plain language and common terminology in the NIMS aim to "eliminate or limit the use of codes and acronyms."[46] So what is a code and how are codes used in emergency warnings and notifications? Here are a few definitions of codes:

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[46] Ibid.

- A code is "a system of signals or symbols for communication; a system of symbols (as letters or numbers) used to represent assigned and often secret meanings." [47]
- "Language is a code. So is the system of highway signage, the system for classifying plants, computer algorithms, and etiquette."[48]
- "Code, in communications, set of symbols and rules for their manipulation by which the symbols can be made to carry information. By this extended definition all written and spoken languages are codes."[49]

Here is an example of a code:

Code Example: AMBER Alert[50]
Code An *AMBER Alert* is a common, standardized, national code used for missing or abducted children. **Girl's Name** AMBER is named after a girl named Amber. **Acronym** AMBER is also an acronym for "America's Missing: Broadcast Emergency Response." **Color** Amber is also a color. **Common Terminology** The standardized use of this phrase has helped it become common terminology.

At its basic level, a code can be a word, phrase, number, color, sound or symbol that means something. It does not need to have the word "code" in it in order to be a code, i.e. *AMBER Alert* or *Side Charlie*. However, for a code to be effective, the intended audience must understand what it means. This is also true with school lockdown codes.

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[47] *Merriam-Webster*, "Definition of code," http://www.merriam-webster.com/dictionary/code, accessed 11/23/16

[48] "Culture at Work," Communicating Across Cultures, What are Codes?, http://www.culture-at-work.com/code.html, accessed 11/23/16

[49] "Infoplease," codes, http://www.infoplease.com/encyclopedia/society/code-communications.html, accessed 11/23/16

[50] "AMBER Alert," U.S. Department of Justice, http://www.amberalert.gov/faqs.htm#faq1

A Variety of Lockdown Terms Emerged

In response to the NIMS guidance about plain language, common terminology, and codes, some schools decided to keep the code yellow and code red lockdown designations as they were. They were known and understood by their intended audience within the school and the NIMS guidance allowed for limited use of codes. Others decided to keep the yellow and red designations but add the plain language word "lockdown" after the color. For instance, *Code Yellow* became *Code Yellow Lockdown* and *Code Red* became *Code Red Lockdown*. Some schools took the NIMS directive to "eliminate" the use of codes as an absolute. They scrapped the color code designations all together and went with entirely different terms for lockdown, and a wide variety of lockdown terms emerged.

In 2013, I reached out to my colleagues at the U.S. Department of Education for assistance in conducting an inquiry of schools around the country who had received grants through their *Emergency Response and Crisis Management* (ERCM) Grant initiative.[51] With their help, I conducted a list-serve survey to find out some of the terminology schools use to accomplish a partial lockdown verses a complete lockdown. Responses revealed a wide-range of terms used by schools for various types of lockdown. No one term in either category emerged as a term that was used most frequently, except the generic word "lockdown."

EXAMPLES OF LOCKDOWN TERMINOLOGY		
Partial Lockdown		**Complete Lockdown**
Code Yellow		Code Red
Partial Lockdown		Complete Lockdown
Modified Lockdown		Full Lockdown
Soft Lockdown		Hard Lockdown
Code Yellow Lockdown		Code Red Lockdown
Preventative Lockdown		Emergency Lockdown
External Lockdown		Internal Lockdown
Lock-out		Lockdown
Lock-in		Lockdown-Inside
Secure the Building/Perimeter		Locks, Lights, Out of Sight!
This table captures the most common responses, in no particular order, from the ERCM email query that was conducted in 2013.		

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[51] "Federal Grants," Emergency Response and Crisis Management Program (84-184E), http://www.federalgrants.com/Emergency-Response-and-Crisis-Management-Program-84184E-6381.html, accessed 11/23/16

Since then, other terms for lockdown have emerged including, Shelter-in-Place[52], Minor/Major Lockdown, Controlled/Total Lockdown[53], Level 1, 2, and 3 Lockdown[54], Condition 1, 2 and 3 Lockdown[55], Type 1, 2, 3, and 4 Lockdown, [56] and many more.

All of these school lockdown terms are essentially codes. They are not plain language in and of themselves. For example, the terms partial lockdown, soft lockdown, level 1 lockdown and code yellow lockdown, are all designed to communicate a desired response. The intended audience, primarily school students and staff, must receive regular and ongoing training to understand and remember the meaning of and responses associated with the lockdown terminology.

Why do Schools use Codes for Lockdowns?

Most schools use coded language for lockdowns such as modified or full lockdown, level 1 or 2 lockdown, code yellow or red lockdown, preventative or emergency lockdown rather than just using plain language and describing the actual emergency situation the school is facing. There are several reasons for this.

Plain Language Can Increase Anxiety

Giving out too much information about an emergency situation can raise anxiety in children. This can cause them to change their focus from their educational activities to wondering about the emergency, which in turn can distract students from learning and cause behavior problems. [57] It can also cause parents to panic, rush to the school, and get in the way of those trying to manage the emergency. I have seen this occur multiple times in the fifteen years I have worked in my school district.

Picture this: two children are late to class and collide while running down the hall. One is injured, with a possible broken arm. The school needs to get two things done very quickly. They need to get medical help to the injured child, and they need to keep everyone else out of that area while they deal with the situation.

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52 Chris Crasper, "Lockdown Procedures, Responsibilities, & What to Expect,"Fort Wayne Police, Snider High School, www.insroa.org/resources/Documents/2012%20Lockdown%20Presentation.ppt, accessed 11/23/16

53 "Security Lockdown Levels and Response," Stanford University, http://sgec.stanford.edu/content/dam/sm/sgec/documents/events/WebinarGEPR/PDF-Security-Lockdown-Levels-and-Response-General.pdf, accessed 11/23/16

54 Crasper, "Lockdown Procedures, Responsibilities, & What to Expect,"

55 "Guest Teacher Handbook, 2015-16," Salem-Keizer Public Schools, http://www.salkeiz.k12.or.us/sites/default/files/documents/sub-m001_5.pdf, accessed 11/23/16

56 "Security Lockdown Levels and Response," Standford University,

57 Caroline Miller, "How Anxiety Leads to Disruptive Behavior," Child Mind Institute, http://childmind.org/article/howanxietyleadstodisruptivebehavior/, accessed 11/23/16

If the school uses plain language to describe the emergency, it might sound like this:

> *"Staff and Students, May I have your attention? There is a student with a medical emergency in Hall A. Everyone, go to your classroom immediately. If you are already there, stay there. Teachers, lock your door and continue instruction. We will let you know when the situation is resolved."*

All of a sudden, staff and students are wondering who is hurt and what kind of medical emergency it is. Some might quickly go to Hall A to check it out. Others look around to see who is missing from class and try to figure out who is hurt. Some may even text their parents with limited information. Giving too much information, even if it is plain language, can escalate the situation and cause other problems. It can also cause people to hesitate while they process all the information given, delaying the lockdown response.

Plain Language Takes Time

Another reason for not using plain language is that it takes a long time to announce a descriptive plain language emergency message. Some emergencies involving lockdowns require quick decision-making, a quick warning, and an equally quick response from students and staff.

In the Virginia Department of Education Model Emergency Plan, [58] they suggest using this plain language lockdown announcement:

> *"Students and Staff – It is necessary at this time to begin a school wide lockdown. All students are to remain in class. Students in the hall report immediately back to your room. Teachers lock your classroom door. No one is to leave the classroom until an all clear announcement is made by an administrator. Ignore a fire alarm. If we need to evacuate the building, an announcement will be made."*

Consider the amount of time it may take to make this announcement. Students and staff need to be trained so they will know the action steps to take when a particular type of lockdown is announced. When there is an imminent threat of harm, school leaders need to make a quick announcement, and students and staff need to respond with urgency.

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[58] *Virginia Department of Education Model Plan*, page 44, http://curry.virginia.edu/uploads/resourceLibrary/VDOE_model_plan.pdf

A Note about Training

Training increases confidence, reduces confusion, and can help mitigate the stress responses. Schools conduct drills to train their students and staff how to take protective measures. Training and drills give people practice hearing the lockdown terminology and carrying out the actions related to the specific lockdown protocol. The Department of Homeland Security explains "training is essential to ensure that everyone knows what to do when there is an emergency…to become familiar with protective actions for life safety (e.g., evacuation, shelter, shelter-in-place and lockdown)."[59]

Training also helps to develop muscle memory. Muscle memory for the brain "is like a store of frequently enacted tasks for your muscles. It's a type of procedural memory that can help you get to be great at something through redundancy and practice."[60] The Department of Homeland Security (DHS) acknowledges the benefits of training to overcome stress responses even when plain language is not employed, explaining "If responders train using coded language they will likely respond under stress with coded language." [61] With adequate training, lengthy plain language lockdown announcements are not necessary.

Codes Can Simplify the Message

When someone is under extreme stress, they often have diminished capacity to process complex information or accomplish straightforward tasks. Students and staff usually don't need to know all the reasons for a lockdown. They simply need to hear the lockdown announcement and implement their training. For example:

> *"Attention Students and Staff! This is a Soft Lockdown, I repeat; we are in a Soft Lockdown. Follow Soft Lockdown procedures immediately."*

With training and practice, staff and students learn that a Soft Lockdown means that they will be staying in their classroom for a period of time while school leaders take care of an emergency. Repeating the straight forward lockdown code several times simplifies and reinforces the message. Teachers quickly lock their classroom door, continue instruction and work to keep their students in class and focused on learning. Having simple and easy to understand lockdown terms and procedures are extremely important elements in a schools emergency plan.

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59 "Training," Ready.gov, Department of Homeland Security, https://www.ready.gov/business/implementation/training

60 Alina Rasheed, "The Importance of Muscle Memory and Drills in Crisis Prevention and Education," Business Partners, February 26, 2015, http://www.strategic-business-partners.net/importance-muscle-memory-drills-crisis-prevention-education/

61 "Plain Language Frequently Asked Questions," DHS June 2010, page 6

Codes Facilitate Encryption & Tactical Language

Sometimes schools use encrypted language for a lockdown for security purposes. The National Incident Management System recognizes this need and encourages encryption to be incorporated into emergency plans:

When necessary, emergency management/response personnel and their affiliated organizations need to have a methodology and the systems in place to encrypt information so that security can be maintained. Although plain language may be appropriate during response to most incidents, tactical language is occasionally warranted due to the nature of the incident (e.g., during an ongoing terrorist event). The use of specialized encryption and tactical language should be incorporated into any comprehensive IAP[62] or incident management communications plan. [63]

Here is an example of how an encrypted lockdown code could be useful in a school emergency situation:

Encryption or Tactical Language Example
Incident
Suppose an agitated parent is in the school office demanding to see their child. The office secretary knows there is a restraining order against this parent. She makes up an excuse and tries to dissuade the parent. The parent persists, yells at the secretary and threatens to go get the child himself.
Common Terminology or Encryption
Another staff member witnesses the situation and realizes she needs to quickly get students secured in their classrooms. If she gets on the intercom and announces a "Code Yellow Lockdown" this is likely to agitate the parent further and increase risk. However, if she uses encryption she may be able to lockdown the school without escalating the situation.
Use Encryption
"Good Morning Boys and Girls. This is Mrs. Jones. The color code for today is yellow. Everyone needs to follow our code yellow plan. Again, our color code for today is yellow. Have a great code yellow day!"
Results
Since the school regularly trains with the phrase "Code Yellow Lockdown" teachers recognize the encrypted message and quickly implement their normal Code Yellow Lockdown procedures. This gets students quickly secured in classrooms, preventing unwanted access by the non-custodial parent.

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62 An IAP is an Incident Action Plan

63 *National Incident Management System*, December 2008, DHS, page 29

As this example shows, encryption can be a valuable lockdown strategy for schools in response to certain emergency situations.

Section Three: Evaluating Lockdown Terminology

Schools use a wide variety of codes to assign meaning to their lockdown procedures. There are number codes, color codes, and many different descriptive words and phrases which correspond to lower and high levels of lockdown. In this section, I will examine how these codes are applied in schools and in other organizations to determine their meaning and how easy they are to understand. This will illuminate their potential efficacy as school lockdown terms. We will start with codes involving numbers.

Numeric Codes

Numeric codes are often used to designate a level, category, or severity of an emergency or warning. Some schools use numeric codes to identify different degrees of lockdowns. Level 1 Lockdown, Level 2 Lockdown, Level 3 Lockdown, etc. Numeric codes are also used to denote the severity of a wide range of weather and natural hazards as well as local, state, and national emergency response protocols. Sometimes number one is defined as the lowest level of the warning or degree of severity, and sometimes as the highest level. This can make number codes confusing. Here are some examples.

Weather & Natural Hazards

Weather and Natural Disaster classifications tend to follow a pattern of 1 being the most minor and higher numbers are more dangerous. Snow Emergency Classifications[64] identifies Level 1 as the lowest danger and Level 3 with the highest danger. Hurricane warnings range from Category 1 to Category 5, with 1 being the least dangerous to 5 the most dangerous.[65] Tornado categories range from F0 to F5, with F0 being the least dangerous to F5 the most dangerous.[66] Likewise, Earthquakes Intensity Scales of 1-10 represent "increasing levels of intensity."[67]

Evacuation Levels

The State of Oregon has three Evacuation Levels for floods, wildfires, and other hazards: Level 1, which is also identified by the color green, means "BE READY." Level 2, which is

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[64] "Snow Emergency Classifications," Ohio.gov, Ohio Committee for Severe Weather Awareness,
 http://www.weathersafety.ohio.gov/snowemergencyclassifications.aspx, accessed 11/23/16

[65] "Saffir-Simpson Hurricane Wind Scale," NOAA National Hurricane Center, http://www.nhc.noaa.gov/aboutsshws.php

[66] "Fujita Tornado Intensity Scale," NOAA, http://www.outlook.noaa.gov/tornadoes/fujita.htm

[67] "The Modified Mercalli Intensity Scale," USGS, https://earthquake.usgs.gov/learn/topics/mercalli.php

yellow, means "BE SET." And Level 3, designated by the color red means "GO." [68] Consider the confusion that could result by using the color red along with the word "go."

Trauma Centers

In U.S. hospital trauma centers, the numbering hierarchy is opposite.[69] Level 1 represents the highest level of capability, and Level 3 is the lowest (some states have five designated levels, in which case Level 5 is the lowest)."

Emergency Operations Centers (EOC) Activation Levels

Likewise, FEMA's Emergency Operations Center Activation Levels are designated as Level 1: Full Activation, Level 2: Partial Activation and Level 3: Monitoring. [70] In fact, "the EOC in Brevard County is the most frequently activated EOC in the country because of the many rockets launched from Cape Canaveral."[71] They use the same numbering system for their EOC Activation Levels as FEMA. [72] However, their Levels are also color coded. Level 1 is red, level 2 is yellow, and level 3 is green, as seen in this image.[73] We will discuss the significance of the use of colors in emergency communications later in this section. In Santa Barbara County, the EOC Activation levels are opposite. With Level 1 at the Monitoring stage, Level 2 Partial Activation, and Level 3 Full Scale Activation.[74]

The Centers for Disease Control and Prevention (CDC) also have designated Emergency Response Activation Levels: Level 1 is for critical emergencies and represents the highest level of response. Level 3 is the lowest.[75] The CDC also uses color codes with Level 1 as orange, level 2 yellow, and level 3 green.
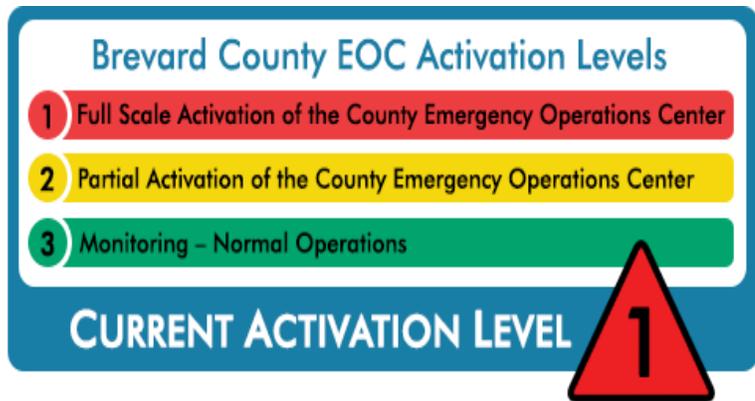
[68] "Final Approved Oregon Evacuation Levels June, 2014," https://www.oregon.gov/osp/SFM/Documents/Ready,%20Set,%20Go!%20Evacuation%20Levels.pdf, accessed 11/23/16

[69] "Trauma Center Levels Explained," American Trauma Society, http://www.amtrauma.org/?page=traumalevels, accessed 11/23/16

[70] "EOC Activation Levels," FEMA, https://emilms.fema.gov/IS775/assets/EOCActivationLevels.pdf, accessed 11/23/16

[71] "Brevard EOC stands by on launch days should a rocket go awry," Updated: Oct 29, 2014, WFTV 9 ABC, http://www.wftv.com/news/local/brevard-eoc-stands-launch-days-should-rocket-go-aw/106772083

[72]"State Emergency Operations Center Emergency Activation Levels," FloridaDisaster.org, http://floridadisaster.org/eoc/eoclevel.htm, accessed 11/23/16

[73] Terri Wright, "Hurricane Matthew Information Closures/Cancelations," OCT 5, 2016, WFIT 89.5 FM, Florida Tech, http://wfit.org/post/hurricane-matthew-information-closurescancelations#stream/0

[74] "Current Activation Level," The Santa Barbara County Office of Emergency Management, http://www.countyofsb.org/ceo/oem.sbc, accessed 11/23/16

[75] "CDC Emergency Response Activation Levels," U.S. DHHS, https://www.cdc.gov/media/dpk/2014/images/ebola-outbreak/img29.pdf

Schools, Numbers and Lockdowns

Numbers are used in many applications in schools. There are guided reading levels in which Level 1 means Beginning Reading, Level 2 is Reading with Help, Level 3 means Reading Alone, and Level 4 is Advanced Reading.[76] There are numbering scales in which 1 is sometimes the highest and at other times the lowest. In fact, there are five different numbering scales: nominal scale, ordinal scale, interval scale, ratio scale and absolute scale. When using numbers, one has to determine what the numbers mean. Ryan offers these questions about numbers: "is the number functioning merely as a label? Or is it counting how many? Does it denote a magnitude or merely indicate an ordering relation?"[77] Numbers represent many different concepts. Often, a higher score on a piece of schoolwork indicates a better grade.

In U.S. schools, for lockdowns, the number 1 usually denotes a minor response level. The higher the number is, the more intense or severe the emergency or corresponding lockdown response. However, in Canada, it is opposite. Here are some examples:

- Schools in Fullerton, California use three levels of lockdown for their 29 schools. "Level 1, or 'Alert' lockdown, stops people from going on or off campus. Students might not be aware that the campus has been locked down. Such a scenario could be triggered by a nearby arrest or search warrant being conducted. Level 2, or 'Caution' lockdown, calls for students to stay in classrooms with unsupervised movement on campus prohibited. A pursuit ending near a campus could warrant a Level 2. Level 3, or 'Emergency' lockdown, mandates that students and teachers stay in locked classrooms and lay on the floor with the lights off. Furniture would be deployed to block entrances. Scenarios involving a Level 3 include a possible shooter on campus."[78]

- The Salem-Keizer Public Schools in Oregon has three categories of lockdowns. Condition 1 Lockdown means there is Suspected or Known External Danger. Condition 2 Lockdown means there is Imminent External Danger. And Condition 3 Lockdown means there is Imminent Internal Danger. [79]

- Columbus City Schools in Ohio also have three Levels of Lockdown. Level 1 is the most basic lockdown. Exterior doors and windows are closed and locked but movement is allowed inside the building. Level 2 is the next level up and requires locking all doors and windows. Students must stay in a classroom but movement within the classroom is allowed. Level 3 is the highest level and is like Level 2 except that students must be out of view of windows be on the floor.[80]

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[76] "I Can Read! Where The Story Begins," HarperCollins Publishers, 2014, https://www.icanread.com/levels

[77] "The Different Number Scales," Statistical Trends and Numbers, January 8, 2012, by Ryan, http://www.numbersleuth.org/trends/the-different-number-scales/

[78] Lou Ponsi, "Fullerton police chief offers new school-lockdown Policy," The Orange County Register, Jan. 16, 2013, http://www.ocregister.com/articles/school-383479-lockdown-campus.html

[79] "Guest Teacher Handbook, 2015-16," Salem-Keizer Public Schools, http://www.salkeiz.k12.or.us/sites/default/files/documents/sub-m001_5.pdf

[80] "Columbus City School's Lockdown Procedures," WBNS-10tv.com, 04/13/10, http://www.10tv.com/article/columbus-city-schools-lockdown-procedures

- In Toronto, Ontario, the numbering system is <u>opposite</u>. Lockdown Level 1 means Danger Inside School. Level 2 indicates Danger Outside School. And Level 3 means Danger in the Neighborhood. [81]

It is possible that, with training and with descriptive words such as Level 1 Partial Lockdown and Level 2 Complete Lockdown, a numbering system may be feasible for school lockdown terminology. But the fact that numbers have so many different meanings and uses in schools could compromise the quick understanding and response required when a lockdown is necessary.

In addition, in the most extreme emergency situations, such as gun violence at school, using the number system could negatively impact communications with emergency response agencies. If schools use 1 as the designation for their lowest level lockdown and least dangerous situations but their local emergency response partners use 1 as their highest activation level, this may cause confusion. This is one of the very things the NIMS guidance aims to prevent.

What about Color?

How is color typically used to denote warnings, types of emergencies or safety communications? Is the use of color helpful, feasible, or meaningful in communicating types of lockdowns? Does it add confusion or add clarity? What does it communicate?

Color helps us remember information. The Oregon State University School of Electrical Engineering and Computer Science recommends using "the four 'focal colors' to encode information that needs to be remembered. The focal colors (red/blue/yellow/green) are easily discriminated, and unlikely to be confused with one another. They are also easily remembered and recognized by individuals from most cultures." [82]

Colors are codes. They are associated with meaning in our everyday lives. For example, "stop signs are red. Caution signs are yellow. Construction signs are orange. These colors, and what they represent on the road, have been embedded into our daily routines since infancy." In fact, traffic engineers follow an established methodology for the use of color in road signs modeled after distinct color group classifications: "warm colors (red, orange, yellow), cool colors (blue, green, purple), and neutral colors (black, white, brown). Warm colors are typically utilized in graphic design to generate a strong emotion. Thus, a large majority of advisory signs on the roads follow these guidelines."[83]

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[81] "What Happens During a School Lockdown," City News, 5/23/07, http://www.citynews.ca/2007/05/23/what-happens-during-a-school-lockdown/

[82] C. Pancake, "Color coding guidelines," 1988, School of Electrical Engineering and Computer Science, Oregon State University, Derived from Richard E. Christ, 1975, "Review and Analysis of Color Coding Research for Visual Displays," *Human Factors*, Vol. 17, No., 6, pp. 542-570.http://web.engr.oregonstate.edu/~pancake/cs552/guidelines/color.coding.html

[83] "The Meanings Behind Traffic Sign Colors" Road Traffic Signs, http://www.roadtrafficsigns.com/traffic-sign-colors

Traffic Signs

The colors in traffic lights also have specific meanings: "red communicates immediate action, yellow indicates caution, and green suggests uninterrupted travel."[84] While road signs often have words or symbols along with the color designation, traffic lights are plain language enough to communicate only with color.

OSHA

The U.S. Department of Labor and the Occupational Safety and Health Administration (OSHA) designate color codes for marking physical hazards: "Red shall be the basic color for the identification of Fire protection, Danger, and Stop. Yellow shall be the basic color for designating caution." [85]

Triage

In mass casualty events, the wounded are sorted out and labeled with a color according to their injuries. This is called triage. There are four triage designations: Immediate (red) means the survivor has life-threatening injuries that demand immediate attention; Delayed (yellow) indicates the injuries do not jeopardize the person's life; Minor (green) refers to the walking wounded who have only minor injuries; Victims who are dead are marked with a black tag.[86]

Schools, Colors & Lockdowns

From these examples, we see a pattern of associating red with danger or the highest level of alert and yellow with caution or a medium or lower level of alert. Because of the frequency and consistency of the use of at least these two colors, they can be considered common terminology.

If schools use these colors to denote a lockdown, they may be considered common terminology to those within the school, but they are not plain language unless the descriptive word "lockdown" is combined with the color. And as discussed earlier, many schools do use the colors of yellow and red to help communicate their lower and higher level lockdown terms.

Here are a few examples of schools that use colors in their lockdown terminology and what the terms mean to them.

- Miami Dade County Public Schools use Code Yellow & Code Red for their lockdown terminology. A Code Yellow is used when a possible threat to students and staff exists

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[84] Ibid.

[85] "Safety color code for marking physical hazards 1910.144." United States Department of Labor, Occupational Safety & Health Administration, https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9793

[86] "CERT Disaster Medical Operations" *CERT Basic Training Manual*, FEMA, https://www.fema.gov/media-library-data/1446216182950-02eb347496f7038f9856601f42da700b/Section_6_PM_Unit_3.pdf

within the community. A Code Red is used when "an imminent threat to students and staff safety exists within the school."[87]

- Washoe County School District in Reno, Nevada uses Code Yellow and Code Red: "Code Yellow is a preventive, heightened security lockdown due to a threat on or near campus. A Code Red is a response lockdown to be used when an actual crisis situation has occurred…[such as] shots fired on or near the campus, stabbing on campus, explosion(s) near campus or a hostage situation with an armed subject on or adjacent to campus."[88]

With the Miami Dade and Washoe County School examples, both use the color code without a descriptive word such as "lockdown." Using codes without descriptor words can be problematic. Mike Dorn and Chris Dorn from Safe Havens International caution about dangers associated with using color codes "without any plain text instructions such as 'emergency lockdown' to clarify what life and death action steps should be implemented."[89]

- Minneapolis Public Schools use Code Yellow Lockdown and Code Red Lockdown.[90] These procedures are based on whether the threat is outside or inside the building.

- Orange County Public Schools use four color codes: A Code Red Lockdown means no movement of any kind. A Code Red Lockdown/Lay Down (Red L/D) means take cover and stay away from doors/windows. A Code Yellow Lockdown is a modified lockdown and is limited to essential movement only. A Code Blue indicates a Bomb Threat. And a Code Green means All Clear.[91] This quantity of color codes may cause confusion and require additional training. Further research is needed to determine how many codes students and staff are likely to remember during emergencies.

- Lincoln County School District has two different types of lockdowns to help manage various emergency situations. A Code Yellow Lockdown is a low-level lockdown used to limit movement at school while an emergency situation is being assessed and/or managed. A Code Red Lockdown is much more serious and is used to shut down the entire campus due to an imminent threat of danger.[92]

With each of these school systems, there are slight variations in the meanings and use of the red and yellow lockdown designations. However, the use of yellow as a lower level lockdown and red as a high level lockdown corresponds well with the self-evident quality of the yellow and red colors.

Along with the plain language word *lockdown*, these color designations are viable lockdown terms. For example: Code Yellow Lockdown and Code Red Lockdown. Further research is

[87] "School Operations," Miami Dade County Public Schools 2013/14, schooloperations.dadeschools.net/parent-student_hdbk/Md_PS_handbook13.doc

[88] "Washoe County School District Classroom Emergency Procedures," 9/1/09, http://www.washoecountyschools.net/csi/pdf_files/em-g102%20protocol%20for%20emergency%20in%20classroom-Classroom%20Flip%20Chart%20Rev%20B.pdf

[89] Michael Dorn, "Codes Can Kill – Update on Why the Use of Codes in School Crisis Plans Can Cause Death and Serious Injury," Safe Havens International, May 14, 2012

[90] "Minneapolis Public Schools Lockdown Procedures," May 2010, http://emss.mpls.k12.mn.us/uploads/lockdownprocedures_3.pdf

[91] "OCPS Emergency Response Quick Reference Guide," Orange County Public Schools Security Control Center, July 2009, http://uscustomer.kellyservices.us/uploadedFiles/5-Customer_Sites/Orange_County/Content/OCPS_Classroom_Emergency_Folder.pdf

[92] "School Safety, Training and Drills," Lincoln County School District, accessed 11/22/2016, http://lincoln.k12.or.us/dept_programs/safety.php

needed to determine if they are more easily understood with an additional descriptor such as: Code Yellow "Partial" Lockdown and Code Red "Complete" Lockdown.

Descriptive Words and Phrases

Schools also use a wide variety of descriptive words and phrases for lockdown terminology. Some are more effective than others.

Should Shelter-in-Place be a Lockdown Term?

There are many meanings associated with the phrase Shelter-in-Place. Sometimes Shelter-in-Place is associated with responses to weather related hazards, such as taking shelter from particular storms, tornadoes, or hurricanes. Others associate it with disaster sheltering, often coordinated by the American Red Cross.

Recently, the phrase Shelter-in-Place has been used in place of lockdown, particularly in high-profile community emergencies. This was the case in the Boston Marathon bombing[93] and when shots were fired at the nation's capital. The Washington Post described it like this: "during the chase, police officers opened fire twice, both times in areas busy with tourists and office workers. The Capitol itself was locked down, as a bitter debate over the government shutdown was interrupted by echoes of shots, officers with guns and an urgent order to 'shelter in place.'"[94]

Officially however, federal agencies such as OSHA[95], FEMA[96], CDC[97], and the American Red Cross[98] have identified the term Shelter-in-Place as the emergency protective action related to a hazardous materials spill. In fact, the U.S. Department of the Army and the U.S. Department of Homeland Security even developed a 55-page Shelter-in-Place Protective Action Guidebook for airborne toxic chemical hazards.[99] Shelter-in-Place responses include sealing your room with plastic sheeting and tape, and turning off heating, ventilation and air conditioning systems, as shown in this image.[100]

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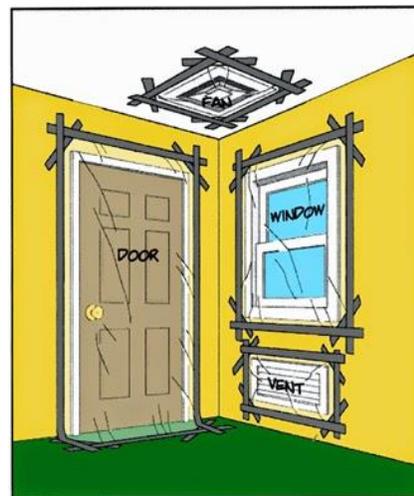
[93] "How Can Wireless Emergency Alerts Benefit Local Media? Boston Bombing Shows How," Galain Emergency Notification Consulting, http://new.galainsolutions.com/?p=3099

[94] Peter Hermann, Ed O'Keefe and David A Fahrenthold, "Driver killed after car chase from White House to Capitol," *The Washington Post*, October 3, 2013, https://www.washingtonpost.com/politics/police-lock-down-capitol-after-shots-fired/2013/10/03/48459e0e-2c5a-11e3-8ade-a1f23cda135e_story.html

[95] "Emergency Action Plan - Shelter in Place," Evacuation Plans and Procedures e-Tool, U.S. Department of Labor/OSHA, https://www.osha.gov/SLTC/etools/evacuation/shelterinplace.html

[96] "Shelter," Department of Homeland Security, https://www.ready.gov/shelter

[97] "Stay Put - Learn How to Shelter in Place," Centers for Disease Control and Prevention, January 12, 2016

[98] *Be Red Cross Ready – Coping with Shelter-in-Place Emergencies*, 2010, redcross.org, https://www.redcross.org/images/MEDIA_CustomProductCatalog/m17540377_Coping_with_ShelterinPlace_Emergencies.pdf

[99] G. Yantosik, *Shelter-in-Place Protective Action Guide Book*, Decision and Information Sciences Division, Argonne National Laboratory for The Chemical Stockpile Emergency Preparedness Program (CSEPP) May 12, 2006 Sponsored by the U.S. Department of the Army and the U.S. Department of Homeland Security.

[100] Cindy Stanley, "What the Heck is Shelter-in-Place," June 10, 2015, http://cresa911.org/2015/06/10/what-the-heck-is-shelter-in-place/, accessed 11/23/16

Here are a few examples of how schools use the term Shelter-in-Place:

- Riverside County Schools follows these official Shelter-in-Place protocols for their schools in Southern California. Their plan is designed to "protect students and staff in the event of potential exposure to a dangerous chemical that could be released through an industrial accident, a chemical spill, a break in a natural gas pipeline, materials transported through our community, or a terrorist attack." [101]
- Lincoln County School District, on the Oregon Coast, takes the traditional definition of Shelter-in-Place a bit further. Rather than limiting the definition to chemical hazards, other contaminants are also included, such as "excessive smoke from a wildfire, a swarm of bees outside, volcanic ash in the air, etc. [stating] it may be necessary to temporarily seal off school occupants from the outside to prevent exposure to a contaminant in the air. This is called a *Shelter-in-Place* and includes taking immediate shelter inside; shutting down HVAC systems (heating, ventilation, air conditioning); and sealing off windows, doors, vents, and other openings to outside air." [102]
- Fort Wayne, Indiana schools have Minor and Major Lockdown designations. A Minor Lockdown or "Shelter in Place" is used when the threat is outdoors and non-specific. Teachers are to lock their doors, keep students in the rooms, and continue to teach until further advised. A Major Lockdown or "Level III Lockdown" is announced in accordance to a direct threat, such as an active shooter on property or in the building. [103] This school district seems to have many different terms for lockdown (Minor & Major Lockdown, Shelter-in-Place, and Level III Lockdown). This can cause confusion and compromise emergency response.

There is a longstanding tradition and national standard of Shelter-in-Place being the official term for taking specific protective measures related to sealing off the environment due to a hazardous materials spill. Since the action steps for sealing a room are very different than the action steps for a lockdown, Shelter-in-Place is not a viable lockdown term.

Internal & External Lockdown

Some schools use the terms Internal and External Lockdown. They base their lockdown terminology on whether a threat is inside the building or outside the building, rather than on the nature of the hazard or threat itself. An Exterior Threat Lockdown [104], (which is also sometimes called a Lock Out) is used if a threat or hazard is outside. In this case, exterior doors are locked and limited movement is allowed in the school. This is similar to the concept of a partial lockdown. But it is only used when the threat is outside the school. An Interior Threat Lockdown

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[101] "Shelter-in-Place vs. Lockdowns," Riverside County Office of Education, accessed 11/22/2016, http://www.rcoe.us/administration-business-services/operational-support-services/emergency-preparedness/parent-emergency-information/shelter-in-place-vs-lockdowns/

[102] "School Safety, Training and Drills," Lincoln County School District, accessed 11/22/2016, http://lincoln.k12.or.us/dept_programs/safety.php

[103] "Lockdown Procedures, Responsibilities, & What to Expect." From the beginner to the advanced, you will learn something new from this class!, Officer Chris Crapser, Fort Wayne Police Officer / Snider High School , accessed 11/22/2016, www.insroa.org/resources/Documents/2012%20Lockdown%20Presentation.ppt

[104] *Pennsylvania State Police School Safety Report*, http://www.homelandsecurity.pa.gov/Documents/rvat_school_safety_report_final_v1_2.pdf , page 19

is used if a threat or hazard is inside the school. In this case, students report to lockable rooms and do a complete lockdown. Everyone is on the floor and quiet.

It is not practical to base the decision of which type of lockdown to implement on whether the threat or hazard is inside or outside the building, rather than on the particular emergency situation. Many emergencies occur inside the school but do not call for a complete lockdown. Situations including missing students, medical emergencies, an unauthorized and unarmed person in the office, a report of a threat that is not yet substantiated, or a fight in the hall can often be handled by a partial lockdown. In these cases, educational activities can continue while students are secured in their classroom.

If schools do an Interior Lockdown (a complete lockdown) whenever the hazard or threat is INSIDE the school, but it is not really needed, there can be negative ramifications. First and foremost, there is lost educational time while students and staff are unnecessarily in a complete lockdown. Next, students and staff may become complacent. This cry wolf[105] response decreases urgency when there is an imminent threat that does require the protective measures of a complete lockdown. For other hazards and threats occurring inside the school, it makes total sense to do a complete lockdown. Examples of this would be an armed and dangerous person inside the school or a shooting or stabbing at school.

Likewise, certain threats or hazards outside a school building sometimes require a complete lockdown rather than an Exterior Lockdown (which is a partial lockdown). Examples of this include gunshots fired near the school, certain dangerous person situations outside the building, etc. The failure to do a complete lockdown in these situations may leave the school vulnerable.

The external, internal threat philosophy does not work with these and other types of situations. Safe Havens International, a non-profit school safety center, agrees with this assessment saying, "basing the lockdown decision on the location of the threat instead of the nature of the threat can be dangerous. Often referred to as lockout/lockdown protocols, taking this approach has a very high fail rate (81% in two of the districts we evaluated) because it is very difficult for employees to quickly decide which approach is best when they are presented with varying scenarios."[106]

Lock Out and Lock In

Some schools use the terms lock out and/or lock in for their lockdown codes. However both of these terms have established meanings not related to school lockdowns, which could result in confusion and delayed response.

Lock Out is a standardize term used in two different areas of labor and industry.

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[105] *Cambridge Dictionary*, "Definition of 'cry wolf'", http://dictionary.cambridge.org/us/dictionary/english/cry-wolf , "Cry Wolf: to ask for help when you do not need it, which may prevent people from helping you when you do need it: *The administration has cried wolf so many times, it's difficult to know if there's a problem or not"* accessed 11/23/16

[106] Chris Dorn. "9 Tips for More Effective Lockdowns," Safe Havens International, http://www.campussafetymagazine.com/article/9-tips-for-more-effective-school-lockdowns, accessed 11/22/16

- "A lockout is a temporary withholding or denial of employment during a labor dispute in order to enforce terms of employment upon a group of employees. A lockout is initiated by the management of an establishment."[107]
- Lock Out means temporary shutdown of the factory by the employer…Unlike the strikes, lockout is declared by the management out of the consequences of clashes between management and the workers, due to unjustified demands by the workers.[108]
- According to OSHA, Lockout/Tagout "addresses the practices and procedures necessary to disable machinery or equipment, thereby preventing the release of hazardous energy while employees perform servicing and maintenance activities." An employee lockout program includes Lockout devices used "for equipment that can be locked out."[109]

Lock In also has several meanings.
- A protest demonstration in which a group locks itself within an office or factory.
- A type of slumber party, for tweens ages 11-14, where children are "locked in" (not allowed to leave) until the next morning.[110]
- A commitment from a lender to a borrower to guarantee a given interest rate for a limited amount of time.[111]
- *"Vendor lock-in*, or just *lock-in*, is the situation in which customers are dependent on a single manufacturer or supplier for some product (i.e., a good or service), or products, and cannot move to another vendor without substantial costs and/or inconvenience."[112]

There is a lot of healthy noise going on both inside and outside of schools such as in gymnasiums, music rooms, wood shops, cafeterias, playgrounds, etc. It is important that school leaders give our students and staff ample opportunity to hear warning announcements. If only a portion of the announcement is heard and if the words are too similar to each other, students and staff may have difficulty determining which lockdown they were supposed to follow.

Due to potential confusion caused by the lack of distinction of lock out and lock in and since there are so many different meanings already associated with these terms, they are not appropriate terms for a school lockdown. They are not as easy to understand as a Partial Lockdown and a Complete Lockdown. They are not as intuitive as Code Yellow Lockdown and a Code Red Lockdown. They also are not as easily identifiable verbally and aurally since lock out, lock in and lock down are so similar.

Secure the Building/Perimeter, Locks, Lights, Out-of-Sight
Some schools use Secure the Building or Secure the Perimeter to indicate a lower level lockdown. These phrases communicate a directive for staff members who are on the school's

107 "Work Stoppages," Bureau of Labor Statistics, U.S. Department of Labor, http://www.bls.gov/wsp/wspfaq.htm#Question_3
108 "Lockout (Industry) l Definition of Lockout l Reasons - Procedure of lockouts," What is Human Resource.Com, http://www.whatishumanresource.com/lockouts
109 OSHA Fact Sheet, "Lockout/Tagout," 2002, https://www.osha.gov/OshDoc/data_General_Facts/factsheet-lockout-tagout.pdf
110 "All About Kids Slumber Parties," All About Kids Sports Center, http://allaboutkids.cc/parties/slumber-parties/
111 *Business Dictionary*, "lock in Definition," www.businessdictionary.com/definition/lock-in.htm
112 LINFO, "Vendor Lock-in Definition," April 29, 2006The Linux Information Project, http://www.linfo.org/vendor_lockin.html

emergency response team. They do not communicate a clear lockdown message for students and the rest of the staff.

On the other hand, a phrase like *Locks, Lights, Out-of-Sight* is fairly descriptive and communicates to both students and staff. With a directive like Full Lockdown, it could be applied like this:

> *Attention Staff and Students. We are in a Full Lockdown. Everyone, follow full lockdown procedures now. Locks, lights, out of sight. I repeat; we are in a full lockdown.* Follow full lockdown procedures now.

In this construction, the main lockdown term would be "full lockdown." The added descriptors of *Locks, Lights, Out-of-Sight* would be secondary. However, there are potential drawbacks with the phrase Locks, Lights, Out-of-Sight. 1) The school would also need a corresponding lower level lockdown code and phrase; 2) the more complex the message, the more likely school staff members who makes the lockdown announcements will have difficulty remembering this phrase while under stress; and 3) this phrase does not provide a mechanism which allows for encryption and tactical language.

Partial and Complete Lockdown

There are many other phrases used by schools to denote different types or levels of lockdowns:

- partial lockdown and complete lockdown,
- preventive lockdown and emergency lockdown,
- modified lockdown and full lockdown,
- minor lockdown and major lockdown, and
- soft lockdown and hard lockdown.

Each set of these lockdown codes have several things in common. First, they incorporate the plain language word "*lockdown*" in their description. This is important because it communicates to everyone in the school, including visitors that they need to take protective measures and lockdown. Next, they denote two distinct types of lockdowns. Like the color system of yellow and red, the words are somewhat intuitive. They infer a lower level lockdown and a higher level lockdown. Finally, these codes are viable for school lockdown terminology. They are not optimal, however, since they do not provide a mechanism allowing for encryption and tactical language.

Conclusion

Schools encounter many hazards and threats that require implementing lower and higher levels of lockdowns. School leaders and their law enforcement partners must choose lockdown terminology that meets the needs of their unique schools, and that works to reduces confusion in

stressful emergency situations. This will support a timely, cohesive, and coordinated response within the school and with the school's emergency response partners.

Codes are Allowable

There is a wide variety of lockdown terminology used in schools. Whether numbers, colors, descriptive words or phrases, all of the terms represent coded language. According to the National Incident Management System, schools can use plain language and common terminology, they can use codes in a "limited" number, and schools can use encryption and tactical language for lockdowns.

Codes are Preferable

Codes have many advantages. They provide the flexibility of encrypted language, which is essential in some school emergency situations. Codes can simplify the message, reducing the time necessary for issuing the warning. Lockdown codes that are intuitive and meaningful can reduce confusion and empower students and staff to overcome the natural stress responses. In life threatening situations, quick decision-making, a quick warning, and an equally quick response from students and staff is essential.

Some Codes are Better

Some lockdown codes are more intuitive, easier to remember, and provide the added benefit of encryption.

It is questionable whether number codes coupled with a descriptive phrase such as Level 1 Partial Lockdown and Level 2 Complete Lockdown are feasible lockdown codes for internal school use, since there are so many number applications already used in schools. Likewise, if schools use 1 to indicate their lowest level lockdown and their emergency response partners use 1 to denote a higher level of alert, this may cause confusion which could negatively impact their response. For this reason, the use of numbers to designate lockdown terms is not ideal.

Yellow and red have an intuitive element to them and are linked with meaning in our everyday lives. Yellow is associated with caution. Red is associated with danger and immediate action. The use of yellow as a low-level lockdown and red as a full-fledge level lockdown corresponds well with the broadly understood quality of the yellow and red colors. They also support the use of encryption during emergency situations when tactical language is needed. As a result, these color designations are viable for use in lockdown terms.

Some descriptive words and phrases are not viable lockdown terms. This includes Shelter-in-Place, Lock Out, Lock In, External and Internal Lockdown, Secure the Building or Secure the Perimeter, and Locks, Lights, Out-of-Sight.

However, other descriptive words and phrases such as partial and complete lockdown, preventive and emergency lockdown, modified and full lockdown, minor and major lockdown, and soft and hard lockdown are viable lockdown codes. There are several reasons for this: they denote two distinct types of lockdowns (a lower level and a high level), they are somewhat

intuitive, and they include the plain language word "lockdown" in their description. A drawback to all of these phrases is that they do not provide a mechanism to allow for encrypted communications.

Final Recommendation

It is evident that some lockdown codes are better than others. The most flexible lockdown terms are Code Yellow Lockdown and Code Red Lockdown. The colors are intuitive in their meaning; they are associated with caution and with danger. They indicate a lower and higher level lockdown, and include the plain language word lockdown. Finally, they allow for encrypted warnings. As schools use them consistently during training, drills, and in real emergencies, they become common terminology. Code Yellow Lockdown and Code Red Lockdown are the best lockdown codes.

Further Research

This paper is limited in its scope. Further research regarding other aspects of school lockdown terminology may be beneficial and could include:

- Research to determine if including descriptors, such as Code Yellow "Partial" Lockdown and Code Red "Complete" Lockdown add clarity or cause confusion.
- Research which establishes how many codes students and staff can feasibly remember during stressful emergency situations.
- Research that demonstrates the extent to which emergency response agencies' understanding of lockdown terminology impacts their response.
- Finally, research could be conducted to determine if standardizing lockdown terminology regionally or nationally would be beneficial.

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