Normalization of Deviance: Impact on Patient Safety

Dr. Gwen Rogers, RN, CIC
Director, Epidemiology & Infection Prevention
Maine Medical Center

Objectives:

• Review the sociology of behavior
• Define what is normalization of deviance
• Give examples of why people may choose deviant behavior in the healthcare setting
• Give examples of deviant behavior and the potential impact on patient safety
• Describes steps that can be taken to provide safer patient care
Sociology 101

- Social behavior and interaction are influenced by:
  - Perception – dynamic balance between reality and thought
  - Reality –
    » Potentiality (possibilities),
    » Actuality (existing condition),
    » Manifestation (action)
- The balance between reality and perception defines our motivations, abilities, and attitude.

Attitude – influenced by:

1. Drive for coercive power
2. Need for achievement
3. Need for authority
4. Depends on perspective (idealistic vs. realistic)
5. Need for status
6. Radical vs. conservative temperament
7. Inward vs. outward directedness
8. Need for security
9. Pugnacity need
10. Aggressiveness
11. Integrative need
Behavior

• Behavior – the way one acts or conducts oneself is bound by our culture and environment
• Expectations – assumptions/anticipated consequences or outcomes of behavior
• How we behave influenced by our perception of the situation, expectations, and personality.
• Behavioral interactions with external reality establishes routine
• Routine – is a pattern of behavior and a structure of expectations that continue until a trigger event precipitates change.

Behavior Choice

• Behavior choice, in any situation, hinges on the balance of ongoing routine behavior and occurrence of an appropriate trigger event.
• Motivation – the reason or reasons one has for acting or behaving in a particular way
Culture

- Personality, society, and culture form a continuous whole:
  1. Cultural atmosphere gives perceptual interpretation
  2. Social roles are part of attitudinal framework
  3. Influences our potential behavior
  4. Structures our expectations

Organizational Culture

- Culture –
  - System of meanings, values, and norms
  - Determines what is good or bad; right or wrong
  - Unconscious perception
  - Evolves from acculturation and socialization into a group

- Cultural stimuli – orient us in regards to our cultural conventions
  - Ex. Shaking hands, red flashing lights approaching on a vehicle mean pull over
Social Interactions

• Power
  - component of social space
  - force, influence, energy, control, cause, strength, authority, and intelligible dynamics.

• Status
  - Rank in the social order - dominant – subordinate

• Status disequilibrium
  » Causes cognitive dissonance
  » Produces a strain
  » May alter behavior to rebalance

• Status - linked to expectations which are influenced by perception of status

• Culture and experience teaches us to expect certain behaviors in others associated with their status

• Social behavior – orientation is toward self – takes into account one’s actions, acts, and practices and the expected reaction in others
Social Power

- Capacity to produce effects through another
- Works on other’s perceptions, dispositions, interests, will, and all other aspects of a person’s self
- Coercion – two negative interests connected by threat
- Coercive power – capability to threaten a person into choosing one undesirable behavior over another.

- Vulnerability -

Authority

- Authoritative power – relative to position.
- Authority is the rightness of a request or command associated with another’s role.
- Three kinds of authority
  - Role
  - Situational
  - Individual
Types of Power

• Authoritative power
  - Positive or negative
  - Commanded or requested
  - Moral or unethical

• Control Power
  - Control over opportunities of another

• He who sets the rules, has power over the process and control over the perceptions

• A person responds to what he/she perceives – so influencing perceptions affects people’s interests and behavior

The Power of Conformity

• Imagine you were asked to participate in a basic vision test. In front of you is a pair of cards. On the left card is a line. And on the right card are three comparison lines, A, B, and C. Your job is simple. Just pick the line on the right that is the same length as the target line on the left card. Decide whether line A, line B, line C, is the same length as the target line. Should be easy, right?
“in group”

- When psychologist Solomon Asch designed this line length study in 1951, he was testing more than people’s vision. He was hoping to disprove an earlier study by Muzafer Sherif.
- Sherif’s study found that people answered whatever they wanted when they were alone but when they were in a group with other people, their answers converged.
- Additionally, if a “plant” was included, that purposely said an inaccurate answer, others in the group tended to agree with them, even if they knew it wasn’t the correct answer.

Social Pressure

- Imitation is about more than just information. The behavior of others’ impacts our behavior.
- When it comes time to order dessert and coffee – even when you want dessert – if no one else order dessert – how often do you pass on it as well?
Acceptance

- People want to be liked and accepted or at least, not excluded.
- Though one dissenting voice may be enough to free up others to also disagree or state their true opinion.
- Then it is no longer about being “in-group” – it is a matter of opinion.

- Going first also has gravitational attraction – encourages neutral others to join a conversation (good to know in a debate or negotiation).

People often finds ways of getting around processes that seem to be unnecessary or that impede the workflow.
INVESTIGATION OF THE CHALLENGER ACCIDENT

OCTOBER 29, 1986.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. FUQUA, from the Committee on Science and Technology, submitted the following

Production Pressure

The Committee found that NASA’s drive to achieve a launch schedule of 24 flights per year created pressure throughout the agency that directly contributed to unsafe launch operations. The Committee believes that the pressure to push for an unrealistic number of flights continues to exist in some sectors of NASA and jeopardizes the promotion of a “safety first” attitude throughout the Shuttle program.

The Committee, the Congress, and the Administration have played a contributing role in creating this pressure. Congressional and Administration policy and posture indicated that a reliable flight schedule with internationally competitive flight costs was a near-term objective.

Pressures within NASA to attempt to evolve from an R&D agency into a quasicompetitive business operation caused a realignment of priorities in the direction of productivity at the cost of safety.

(3)
Flawed Decision Making

The Rogers Commission concluded that NASA’s decision-making process was flawed. The Committee does agree that the Marshall Space Flight Center should have passed along to higher management levels the temperature concerns that Thiokol engineers raised the night before the launch of Mission 51-L. However, the Committee feels that the underlying problem which led to the Challenger accident was not poor communication or inadequate procedures as implied by the Rogers Commission conclusion.\(^1\) Rather, the fundamental problem was poor technical decision-making over a period of several years by top NASA and contractor personnel, who failed to act decisively to solve the increasingly serious anomalies in the Solid Rocket Booster joints.

Information on the flaws in the joint design and on the problems encountered in missions prior to 51-L was widely available and had been presented to all levels of Shuttle management. Despite the presence of significant amounts of information and the occurrence of at least one detailed briefing at Headquarters on the difficulties with the O-rings, the NASA and Thiokol technical managers failed to understand or fully accept the seriousness of the problem. There was no sense of urgency on their part to correct the design flaws in the SRB. No one suggested grounding the fleet, nor did NASA embark on a concerted effort to remedy the deficiencies in O-ring performance. Rather, NASA chose to continue to fly with a flawed design and to follow a measured, 27-month, corrective program.
Normalization of Deviance

• Diane Vaughn (1996), Sociologist - developed the term after reviewing the Challenger disaster.
  - Vaughan noted that the root cause of the Challenger disaster was related to the repeated choice of NASA officials to fly the space shuttle despite a dangerous design flaw with the O-rings.
• Insensitivity to deviation occurs insidiously and sometimes over years because disaster does not happen until other critical factors line up.

Clinical Vignette

A third year medical student was observing a very difficult surgery. About 2 hours into it, and after experiencing a series of frustrations, the surgeon inadvertently touched the tip of the instruments he was using to his face mask. Instead of requesting or being offered a sterile replacement, he just froze for a few seconds while everyone else in the operating room started at him. The surgeon then continued the operation. Five minutes later he did it again and still no one did anything.

The medical student asked one of the nurses about it after the operation. The response was “Oh, it’s no big deal. We’ll just load the patient with antibiotics and he’ll do fine”.

What was a play in this scenario from a social standpoint?
Deviant Work Processes

- As in other industries, health care workers do not make these choices intending to set into motion a cascade toward disaster and harm.
- Often evolve as a result of local practice or personal preference rather than through a systematic approach to designing a system to lead to fewer errors and greater efficiency.
- “status quo trap” – do things simply because they always have been done that way.

Why Deviance Persists

- Learned workplace behaviors
- Persist regardless of knowledge or experience
- Complacency contributes to deviation.
- Knowing that a behavior could produce harm rarely controls behavioral choices
- Immediate reward controls choices
Justification

- Pressure leads to shortcuts
- Shortcuts become unsafe practices
- Because adverse outcome isn’t readily apparent
- Shortcuts become routine.

• As in other industries, people will often adamantly defend their actions as necessary and justified or, at least not an unethical way to accomplish objective

• Although many other high-risk industries have embraced the normalization of deviance concept, it is relatively new to health care.

Healthcare Deviance

• Usually not done with malicious or criminal intent

• Initialization exposes newcomers to deviant behaviors, often performed by authority figures, who explains those behaviors as organizational norm.

• Socialization determines whether a newcomer will join the group, by joining the group’s deviant behaviors.
Real-life Examples

- Last week, while orienting in Pre-Anesthesia Testing Unit, I was told by the charge nurse to write a verbal order for blood on an orthopedic patient because "we do it all the time." I didn’t – I paged the anesthesia provider on call, but was told by the charge nurse that really wasn’t necessary because "they are way too busy in the OR for that kind of call."

- Feeling pressured to meet the scheduled OR time and fearing blame for a case delay, preanesthesia nurses routinely initiate actions (e.g., blood draws, stat EKGs/labs) before a consent or history and physical is done or the surgeon/anesthesia provider writes or signs orders. Nurses are so involved in the paper drill they spend little time assessing the patient or individualizing care.

- When I began to do a typical preanesthesia assessment my first week there, I was told by the preceptor that it wasn’t necessary to listen to lung sounds or assess skin because "we have to get this chart in order and don’t have time for that, it’s anesthesia’s job."

More examples:

- When a patient arrived in our PACU the other day, the anesthesia provider pushed the patient into the bay, turned around and walked back to the OR without giving the nurse report. When these behaviors are reported, nothing happens.

- I was handed a syringe by an anesthesia provider and asked to administer the last 50 mcg of fentanyl to my patient. When I refused to administer medication from an unlabeled syringe, I was ridiculed and no one came to my defense.

- I was at another hospital in town with my mother who was having surgery. Numerous nurses administered preoperative and postoperative medications and only one nurse actually checked the arm band and double checked the patient identification.

- When these deviations are practiced often enough, they can become accepted by the entire group and considered routine and acceptable.
Common Deviations From Practice

1. Shortcuts to a complete handoff report
2. Improper or missed labeling of medication
3. Silencing alarms “because we are right there”
4. Failing to do double checks for medication administration (PCAs, epidurals)
5. Failure to do hand hygiene before and after patient contact
6. Failure to check patient identification
7. Not wiping IV ports with alcohol for 15 seconds before injecting
8. Improper medication practices, eg, signing medications out for someone else, taking unlabeled medications from an other provider, not “really” witnessing wastes, reusing syringes
9. Not conducting time outs
10. Assuming the patient condition is a problem with the equipment and not investigating fully

Presenteeism

- Coming to work sick
  - 549 responses
  - 212 students reported coming to the hospital while experiencing symptoms suggestive of a contagious illness
  - 56% felt pressured to attend despite illness
  - 13% were concerned about extending their rotation
  - 3% believed their absence contributed to a negative evaluation
Factors Contributing to Normalization and Deviance

- Leadership may be unaware of these breaches, or may contribute by not following through with supportive change or by actually facilitating punitive action against the person who reported the breach.

- Workers have been allowed to have disruptive and deviate behaviors and the problem is never dealt with.

- Other factors
  - poor communication, production pressure, fatigue and stress, inadequate provider experience, inadequate familiarity with equipment, excess noise or stimuli, assumption that alarms are false alarms, and faulty policy and procedures
  - Failure of health professionals to comply with standards, rules, or regulations.
  - The most remediable of these are absent or misused protocols for patient identification and informed consent, systematically faulty exchange of information among caregivers, and poorly functioning teams.
To Err is Human, to Drift is Normalization of Deviance

Although the Institute of Medicine's report implied that human error and flawed systems are the major reasons for patient harm, others say that risky behavior is the major reason for error.

Humans react to their immediate environments as if they were on autopilot.

They don't pause to consider how their immediate choices reflect their ideals, values, or moral codes.

Horrific and costly mistakes are more often than not is about the lack of thought, not the presence of thought, that enables our bad behavior.

The risky behavior (eg, not counting instruments, failing to use two identifiers, skipping time out, failing to clean hands) is not so much about the system, but the propensity of humans to drift (ie, take shortcuts).

Rationale for Drift and Violating Common Standards
Rule is irrational and a drag on productivity

- The violator feels the rules have been handed down by authorities and are imposed on front-line staff by people who are out of touch with “life in the trenches”.
- Compliance would make it impossible to achieve productivity target.

In order to discourage drug diversion in a neonatal care unit, and in the days before computerized fingerprint recognition, nurses had to reconcile medication use in the Pyxis drawer. Nurses extracted the medication, and administer the correct dose to the patient but if any medicine remained in the vial—which happens frequently because newborns often require smaller doses—the nurse was supposed to call a second nurse to the Pyxis, who would enter their password. The second entry was supposed to indicate that the second nurse observed the first nurse discarding the left-over medication. However because nurses resented having to bother one another, especially when they were extremely busy with patient care, they simply shared their passwords with one another and entered them when they returned to the Pyxis. Not only was this an easy shortcut, but it compensated for the nurses’ taking offense that administration would think them as drug diverters. Of course it categorically defeated the purpose of the regulation.

Knowledge is imperfect and uneven

- People may not even know that a particular rule or standard exists; or they might have been taught a system deviation without realizing that is was so; or, they might know that a rule exists but fail to appreciate its purpose or recognize the conditions under which to implement it.
- This is particular acute in professionals who feel uncomfortable asking for help, or admitting ignorance in understanding or how to apply a standard
- Newly graduated professionals are easy prey for learning deviant behaviors that have become normalized in the work environment
New technology can disrupt work behaviors and rule compliance

• Complex work environments are often dynamic, unstable, and therefore, unpredictable.

• New technology can disrupt ingrained practice patterns, impose new learning demands, or force people to devise novel responses or accommodations to new work challenges.

• When new technologies are used to eliminate well-understood system failures or to gain high precision performance, they often introduce new pathways to large scale, catastrophic failures. Not uncommonly, these new, rare catastrophes have greater impact than those eliminated by the new technology.

I’m breaking the rule for the good of the patient.

• The rule is counterproductive.

• A phlebotomist in the neonatal unit would slip on her gloves to do a blood draw, but then immediately tear-off the index fingertip of one of them (violating infection control rules). She would use that exposed fingertip to detect the baby’s vein, which she would then stick. She claimed she had a very hard time feeling the baby’s vein through the glove, and she didn’t want to miss the vein and subject the baby to multiple sticks. After multiple rather direct confrontations with her supervisor, she changed her practice.
Cognitive bias

• Healthcare professionals are often disinclined to learn from the mistakes of others

• If an adverse event hasn’t happened to them, the lesson, does not apply

• Professionals are unlikely to make a long-term change without understanding and appreciating the significance of the risk associated with practice.

The rules don’t apply to me – I should be trusted

• The worker feels perfectly justified in performing the problematic behavior, because the deviant practice, such as drug diversion, would never cross their mind.

• Humans perceive themselves as good and decent people, such that they believe many of their rule violations are entirely rational and ethically acceptable responses to problematic situations.

• They don’t believe they are doing anything wrong and will be outraged and often fiercely defend themselves, when confronted with evidence to the contrary.
Workers are afraid to speak up

- Schwappach & Cehring (2014) study of >1000 nurses and physicians
  - Using 4 clinical scenarios – substantial variation between and within types of errors and rule violations
  - Speaking up behaviors considerably affected by situation factors
  - Hinged on the potential patient harm perceived from the violation
  - Lower hierarchical status more difficulty deciding to speak up or not and expressed higher levels of discomfort associated with speaking up
  - Preserving trust strong motivator to withhold voice even at the risk of potential patient harm

Behavior – Speaking up

- Willingness to speak up about patient safety is affected by contextual factors
- Speaking up against rule-breaking, incompetence, or disrespectful behavior may be inhibited by fear of retaliation, lack of ability to confront, feeling intimidated or frightened, belief that “it is not my job” or low self-confidence.
- People don’t want to make others angry or undercut their working relationship.
- Dr. X’s penmanship is frequently illegible, but he becomes very testy and sometimes downright insulting when a nurse asks him to clarify what he’s written down. So, rather than ask him, the annoyed nurse will proceed to the nurse’s stations, consult with another nurse or two, and collectively try to decipher Dr. Smith’s scrawl.
Leadership withholds or dilutes findings on system problems

- Findings of system flaws or weaknesses are frequently revised and diluted as that information ascends the chain of command.
  - Fear that revelation of the issue will cause them to look bad to their supervisor
  - Need to “save face” in front of peers
  - Remediation efforts would be too time consuming and threaten short-term productivity
  - Fear that a valuable contributor will leave if confronted about behavior and that will have a financial impact on the hospital

Adverse Outcomes Associated with Deviant Behaviors

- Wrong site surgery
- Erroneous laboratory reports – positive diagnose of illness in the wrong patient or missed diagnosis because of name mix-up
- Wrong medication, wrong route, wrong dose, wrong patient, wrong time
- Surgery on wrong patient
- Hospital Associated Infection
- Others?
What can be done? Making healthcare safer.

• Pay attention to weak signals – Take action
  - Vulnerability – acknowledging that there are problems but fail to intervene because a particular deviant practice has yet to result in patient harm

• Avoid irrational optimism about avoiding adverse events
  - Vulnerability – Downplaying risk and weighing the labor required to remediate the deviance as higher than the probabilities of an adverse event

• Teach employee how to conduct emotionally uncomfortable conversations
  - Support peer intervention, follow up with managerial intervention or team intervention as needed

• Leadership needs to show commitment to patient safety and the value of speaking up.
  - Vulnerability – consider the impact of a “blameless and nonpunitive” culture

• Understand that oversight and monitoring of rule compliance is never-ending.
  - Vulnerability – “acceptable” risk, reliance on system to prevent adverse events, or behavior can drift
Establish a Just Culture

- Both the Joint Commission and the Agency for Healthcare Research and Quality have recommended that leaders commit to developing a just culture in their organizations.
  - Learning culture - there is a thirst for knowledge and a need to understand both individual and organizational risk.
  - Those involved in a learning culture learn from their mistakes and share this learning in such a way as to support performance improvement and encourage safe choices.

Open and Fair Culture

- Reporting of errors is transparent. The erring professional feels safe reporting errors so others have the opportunity to learn from them.
- Near misses are reported to provide a learning opportunity so that future risk and error may be reduced.
- Managers and employees collaboratively work to design systems that anticipate human error, capture errors before they reach the patient or employee, and allow for recovery when errors reach the patient.
The System is the Problem: Human Factors

- Focused on human beings and how we interact with products, devices, procedures, work spaces, and environments encountered at work or in daily living.
- Applies the knowledge of human strengths and limitations to design of interactive systems of people, equipment, and their environment to ensure
  - Effectiveness
  - Safety
  - Ease of use

Idiot Proof
Team Training – Leveling the Playing Field

• Takes away the hierarchy – power
• Sets the tone of equal membership of group
• Establishes trust – needed for speaking up
• Expects respectful behavior – addresses non-compliance
• Centered around the successful completion of the task
• Provides a check and double check for safety
• Promotes cross-functional understanding
• Increases ownership and stewardship
• Enhances problem-solving skills

Patient Story

Sometimes I do remember, but before I can find the dispenser, the patient puts his hand out in greeting and I think it too strange not to go ahead and take it. On occasion, I even think, well, screw it — I'm late, I have to get a move on, and what difference does it really make what I do this one time?

Later in my tour with Yokoe and Marino, we walked through a regular hospital unit. And I began to see the ward the way they do. Flowing in and out of the patients’ rooms were physical therapists, patient care assistants, nurses, nutritionists, residents, students. Some were good about washing. Some were not. Yokoe pointed out the three rooms with precaution signs on the doors because of MRSA or VRE. Only then did I realize we were on my own patient’s floor. One of those signs hung on his door.

He was 62 years old and had been in the hospital for almost three weeks. He had been transferred in shock from another hospital where an operation had gone awry. I performed an emergency splenectomy for him and then had to go back in again when the bleeding still didn't stop. He got through it all, though. Three days after admission, he was recovering slowly but steadily. Surveillance cultures were completely negative for resistant organisms. Ten days after admission, however, repeated cultures came back positive for both MRSA and VRE. A few days after that, he became septic. His central line — his lifeline for parenteral nutrition — had become infected, and we had to take it out. Until that moment, when I stood there looking at the sign on his door, it had not occurred to me that I might have given him that infection.

But the truth is I may have. One of us certainly did.
Thoughts?

References

- Mannos, D, et. al. June/July (2003) VA National Center for Patient Safety. 3(1)
- Phelps, D. (2014) August, Why has the safety and quality movement been slow to improve care? The International Journal of Clinical Practice. 68(8), 932-935.
References cont.


Reference cont.


