Measure what you treasure:
Safety culture mixed methods assessment in healthcare

DNV GL Healthcare

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Our purpose and vision

Purpose:	To safeguard life, property and environment
Vision:	Global impact for a safe and sustainable future

Housekeeping

- 45 minute presentation

- Objective:

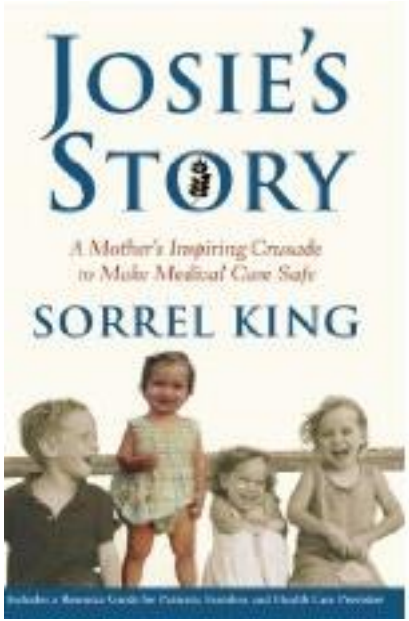
  Participants will learn about safety culture in healthcare, how to assess it systematically using a sequential mixed methods approach, and make sense of the results for quality improvement

Do not teach grandma to suck eggs

How culture can affect patient safety

Introducing the Partnership for Patients with Sorrel King.mp4.mp4

- Josie King was admitted to a Pediatric Intensive Care Unit at Johns Hopkins hospital because of first and second degree burns resulting from climbing into a hot bath.
- 2 days before her planned discharge, Josie's mother, Sorrel King, noticed that Josie screamed every time she saw a drink and sucked vigorously on the washcloth when she was bathed.
- Sorrel shared her concerns with the hospital staff. But the staff reassured Sorrel that children often do this kind of thing and that Josie's vital signs were considered normal.
- Josie died two days before she was planned to return to home; factors contributing to her death was severe dehydration and misused of drugs.



The failure to detect danger signals prior to a disaster is caused by "rigidities of perception and beliefs" (Turner & Pidgeon 1997, p. 47)

Second Victim:
Medical errors also cause deep scars to those who commit them.

*"I remember feeling horribly sad that I couldn't do more for this child. This hit me harder than most of them. For some reason I'm really related with this family. I guess one reason is that the child was the age of my oldest daughter and I guess that I felt that this could have been my family. They were a nice family and didn't deserve to have this outcome. I cried a lot over this case and I guess I still cry when I think about her." (*Scott et al., 2009)

"It has been 12 years since my internship, but I frequently think about a mistake I made one night when I was on call..[..]…the patient died and I had to tell his wife. Although I realized that many factors contributed to the patient's demise, I felt sick about my judgment error and ashamed the next day when the chief of medicine reprimanded me." (Levinson & Dunn, 1989)

Second Victim: Medical errors also cause deep scars to those who commit them.

Julie Thao: Charged with manslaughter for a drug error

"I believe that what ends up happening when a caregiver is treated unjustly following an adverse event is that another victim is created, that victim is the hospital and the staff that are left behind."

Thao mistakenly gave a 16-year-old Jasmine Gant an epidural anesthetic (Buvipacaine) intravenously.

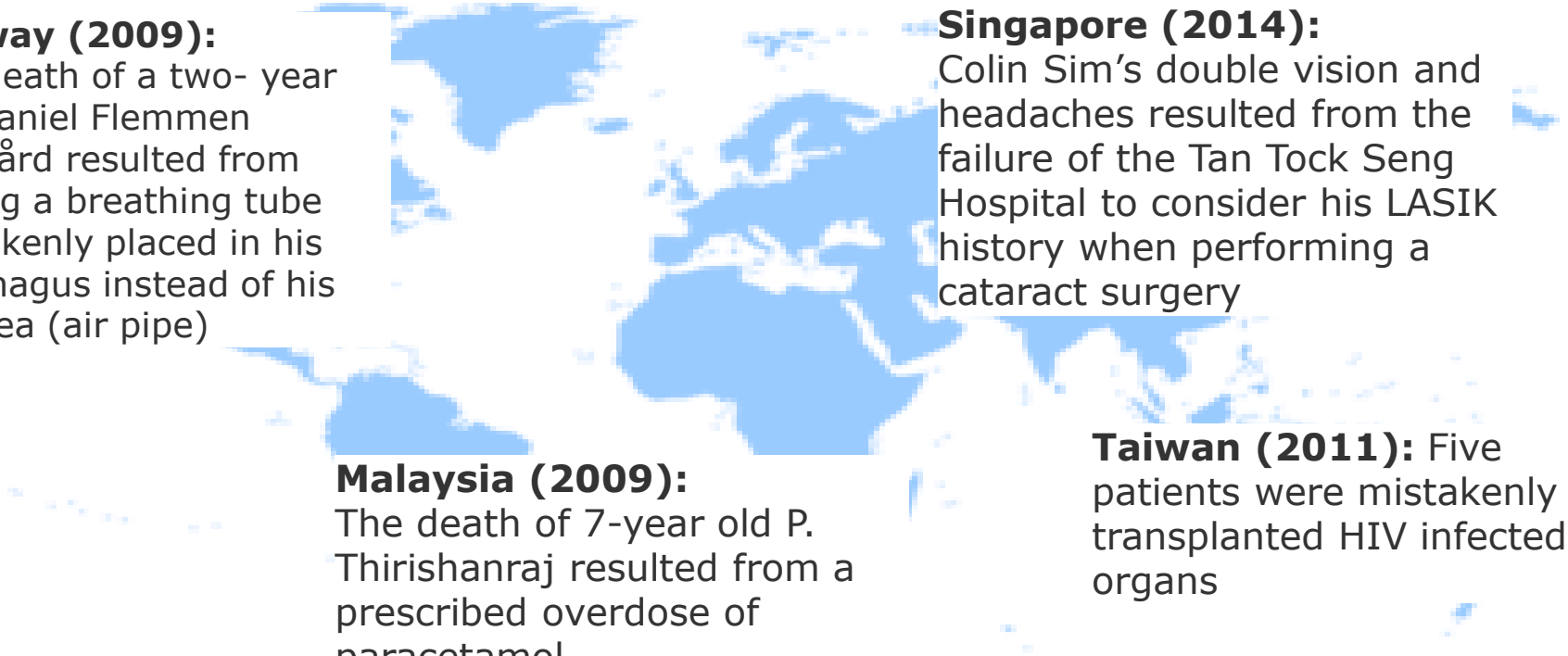
Gant was supposed to receive an IV antibiotic for a strep infection.

Within minutes of receiving the epidural IV, Gant suffered seizures and died.

Her child, a boy, was delivered by emergency Caesarean section and survived.

Patient safety incidents happen around the world

Norway (2009):
The death of a two- year old Daniel Flemmen Ødegård resulted from having a breathing tube mistakenly placed in his esophagus instead of his trachea (air pipe)



Singapore (2014):
Colin Sim's double vision and headaches resulted from the failure of the Tan Tock Seng Hospital to consider his LASIK history when performing a cataract surgery

Malaysia (2009):
The death of 7-year old P. Thirishanraj resulted from a prescribed overdose of paracetamol

Taiwan (2011): Five patients were mistakenly transplanted HIV infected organs

What is safety culture

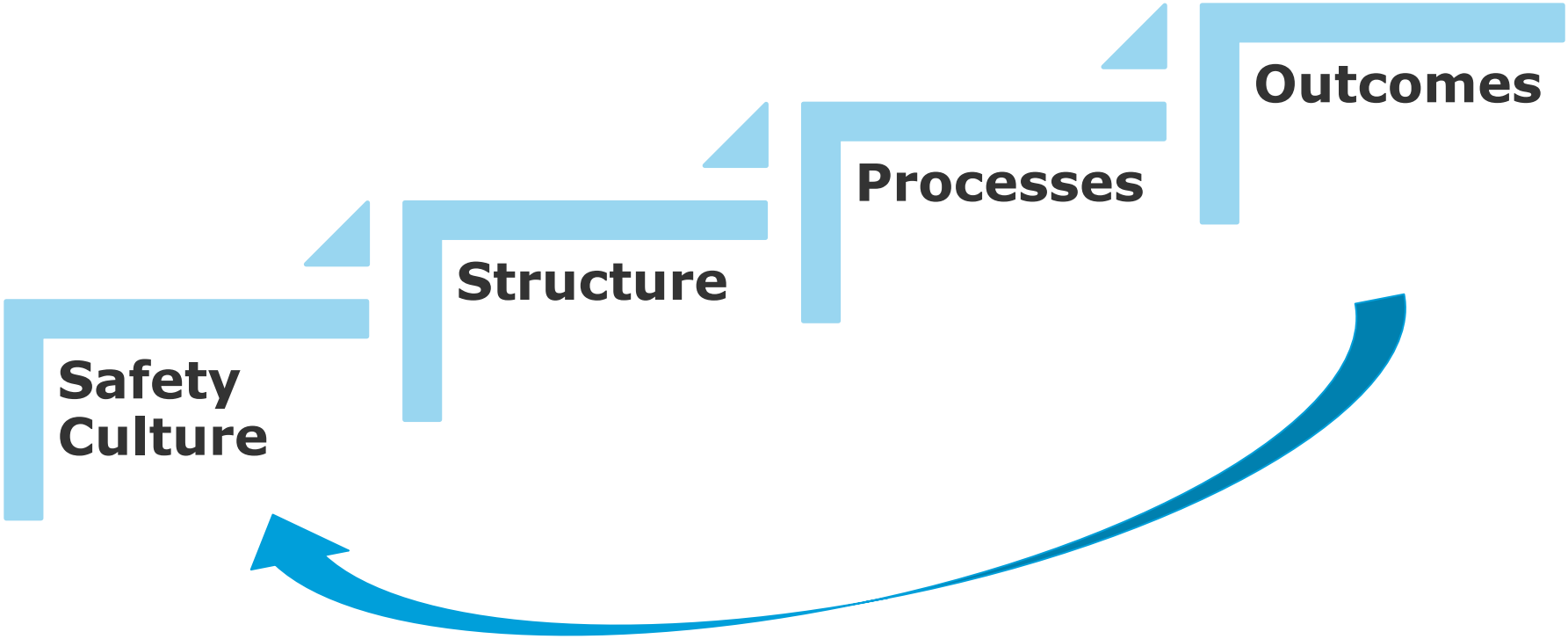
"It's the way we do things around here"

"What we do when no one is watching"

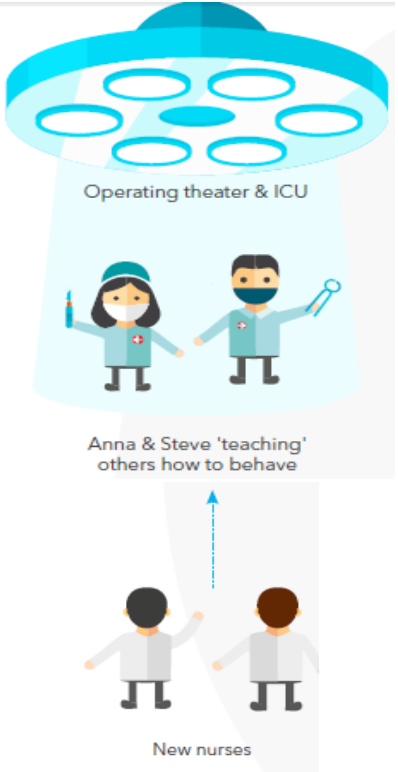
Safety culture is organisational culture that directly or indirectly **influences patient safety**

Safety culture is **the elements or parts of organisational culture** that influence the organisational members' attitudes, beliefs, perceptions, and behaviours, which have an impact on the level of safety within the organisation.

Safety culture in the system



How is culture created and socialized?

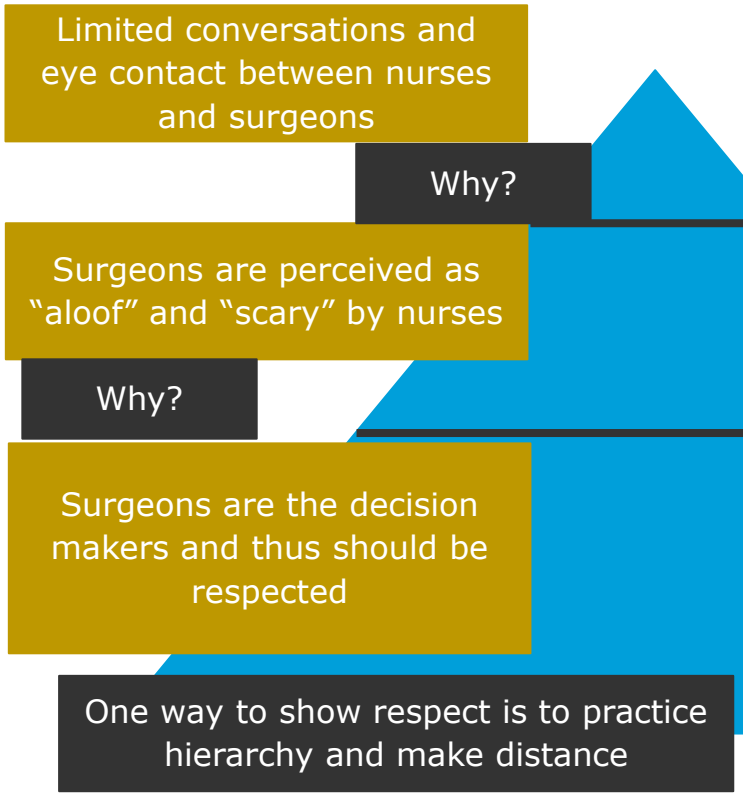


1. Externalisation

2. Institutionalisation

3. Internalisation

Layers of culture



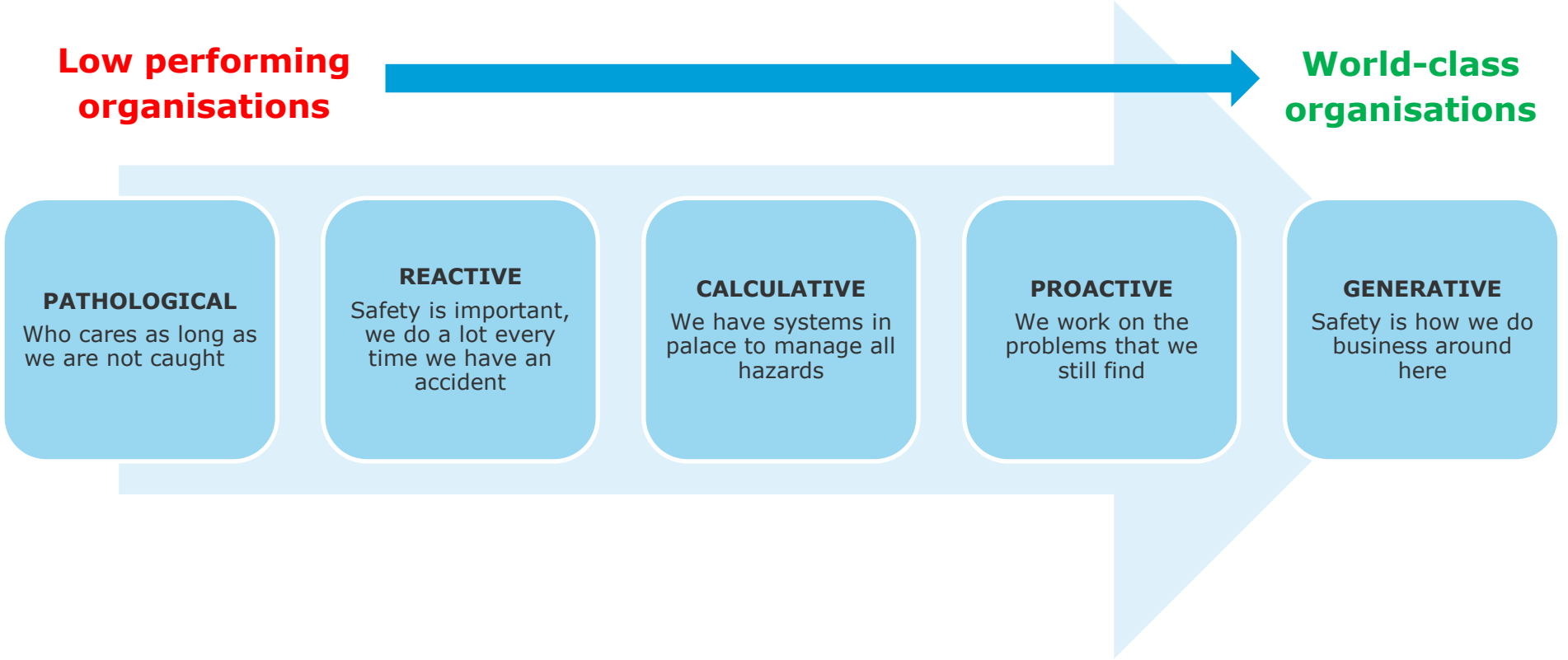
Artifacts – Visible organisational structures and processes (hard to decipher)

Espoused beliefs and values – Strategies, goals, philosophies (espoused justifications)

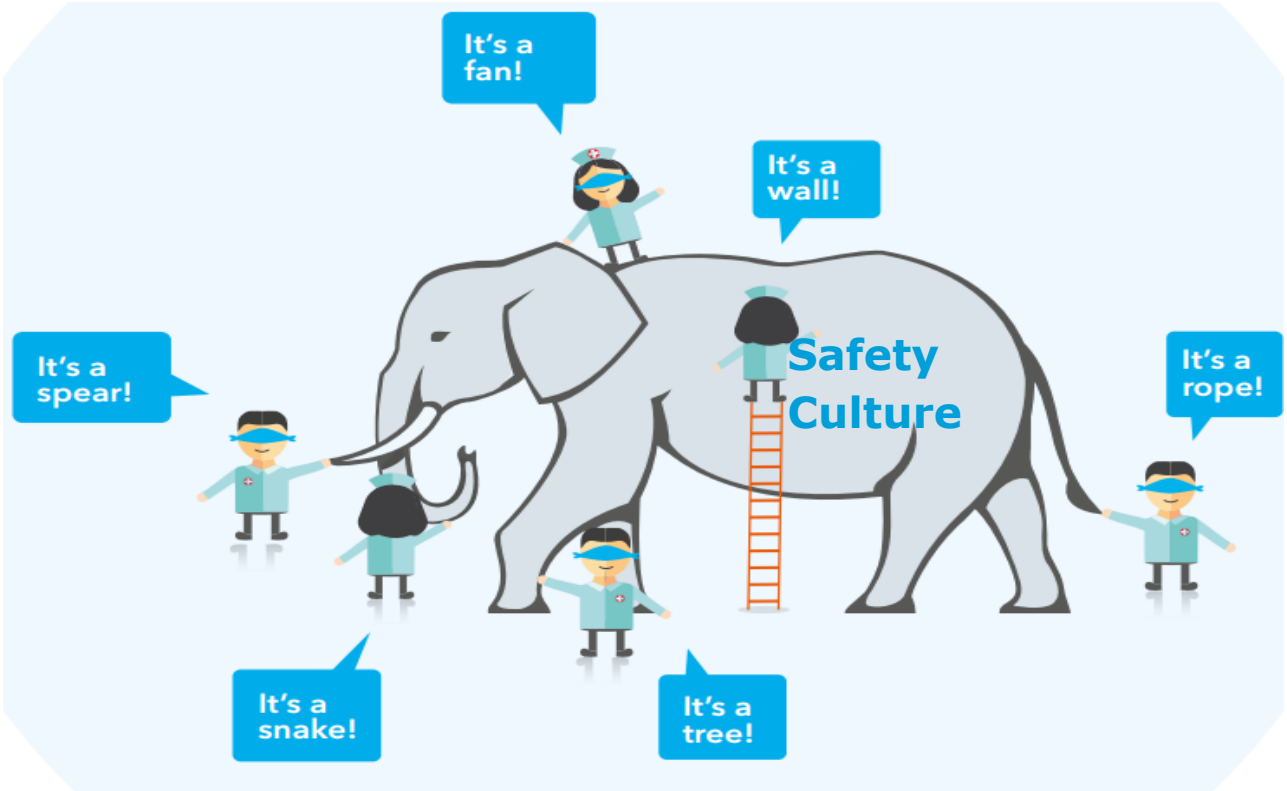
Underlying assumptions – Unconscious, taken-for-granted beliefs, perceptions, thoughts, and feelings (ultimate sources of values and actions)

Adapted from Schein's Levels of Culture (1992)

What is the right time to assess our safety culture?



Blind men and an elephant



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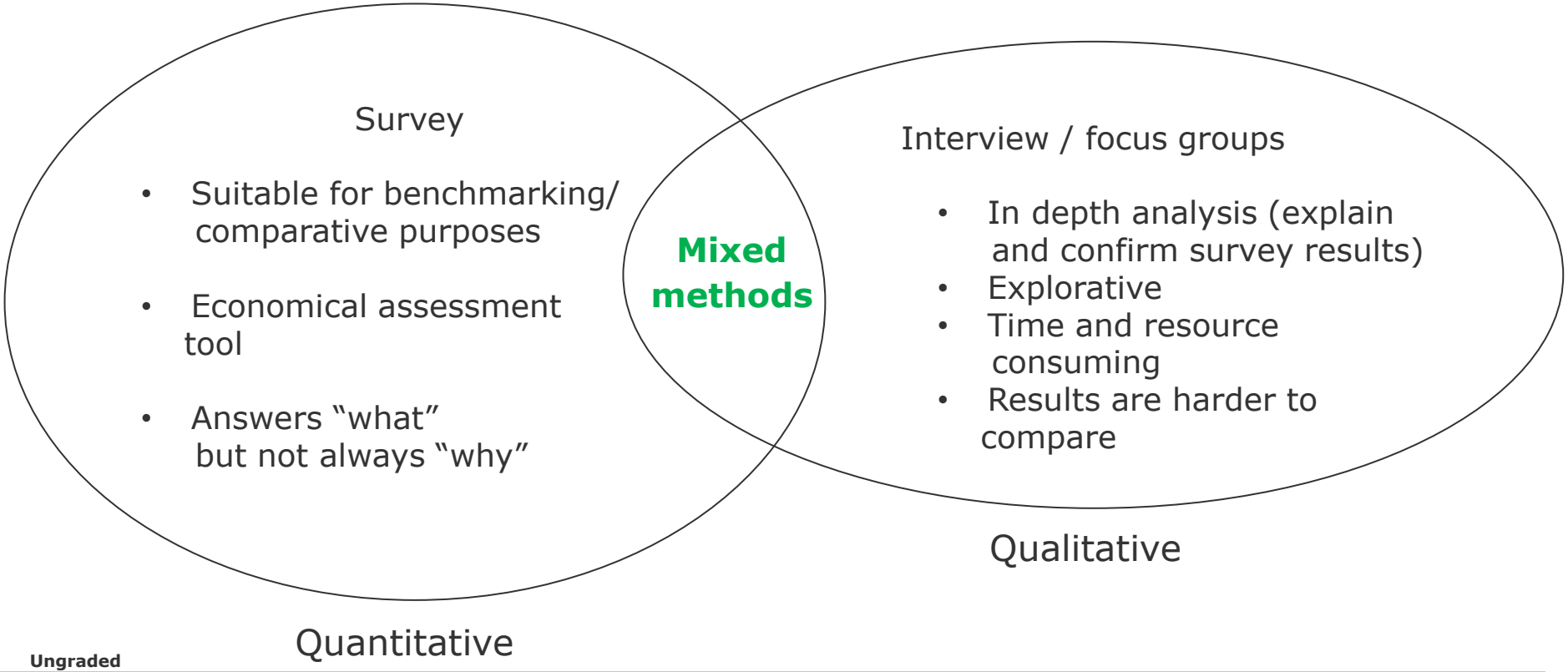
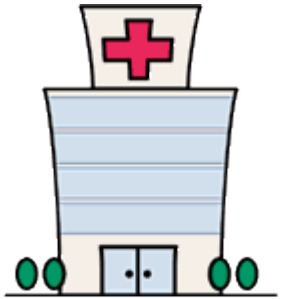
Mixed methods: quantitative and qualitative methods



Our example finding from a UK hospital: "Communication breakdowns that lead to delays of care are uncommon"

Unit 1

Mean score: 2.7 of 5.0



Interview findings

Barriers are ranging from individual staff's communication skills to the lack of handover:

Staff unavailability, poor quality of individual staff communication, difficulty in sharing information across a busy unit of staff working different shifts, different priorities between occupations, bed pressures, ...

Unit 2

Mean score = 2.9 of 5.0

Interview findings

Barriers are between nursing and medical staff:

Nursing staff perceived that the best way to communicate about patient information was verbally, whereas medical staff perceived that written communication was sufficient.

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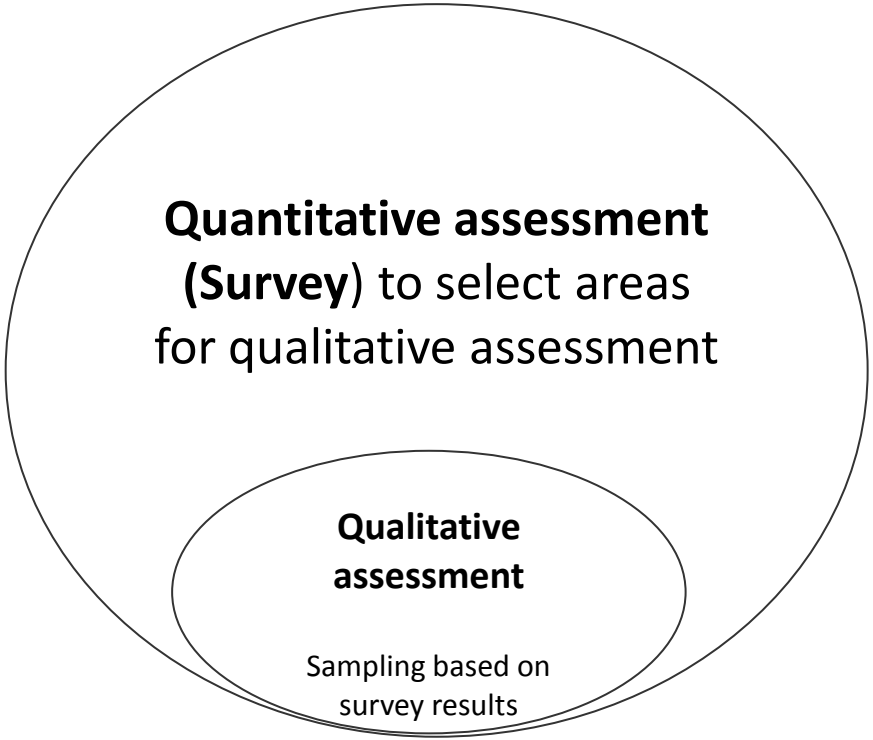
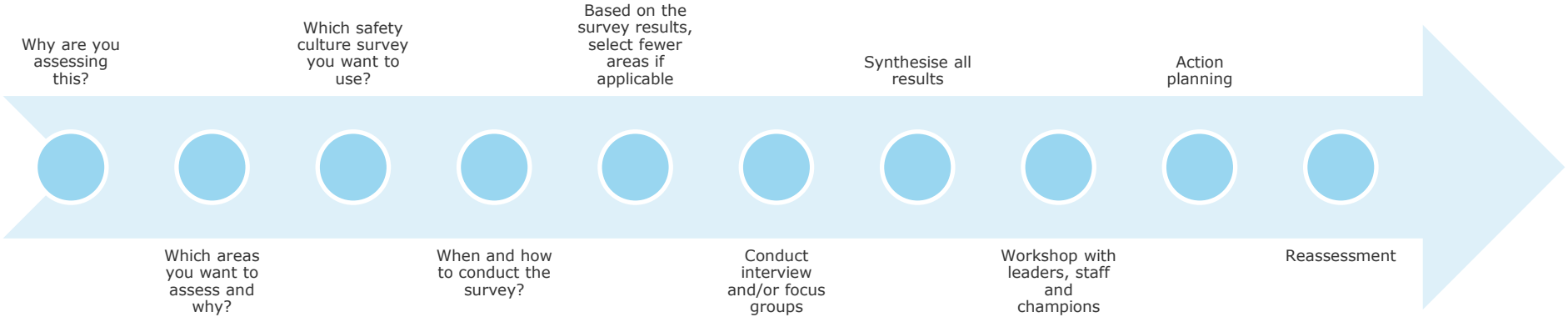
Sequential mixed methods



Steps to assess safety culture using mixed methods



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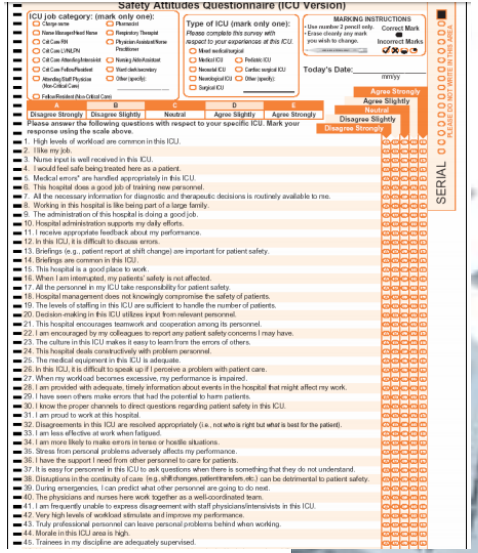
Which survey should we use?



Safety Attitudes Questionnaire (ICU Version)

ICU job category: (mark only one):

Type of ICU (mark only one):

MARKING INSTRUCTIONS

Today's Date: mm/yy

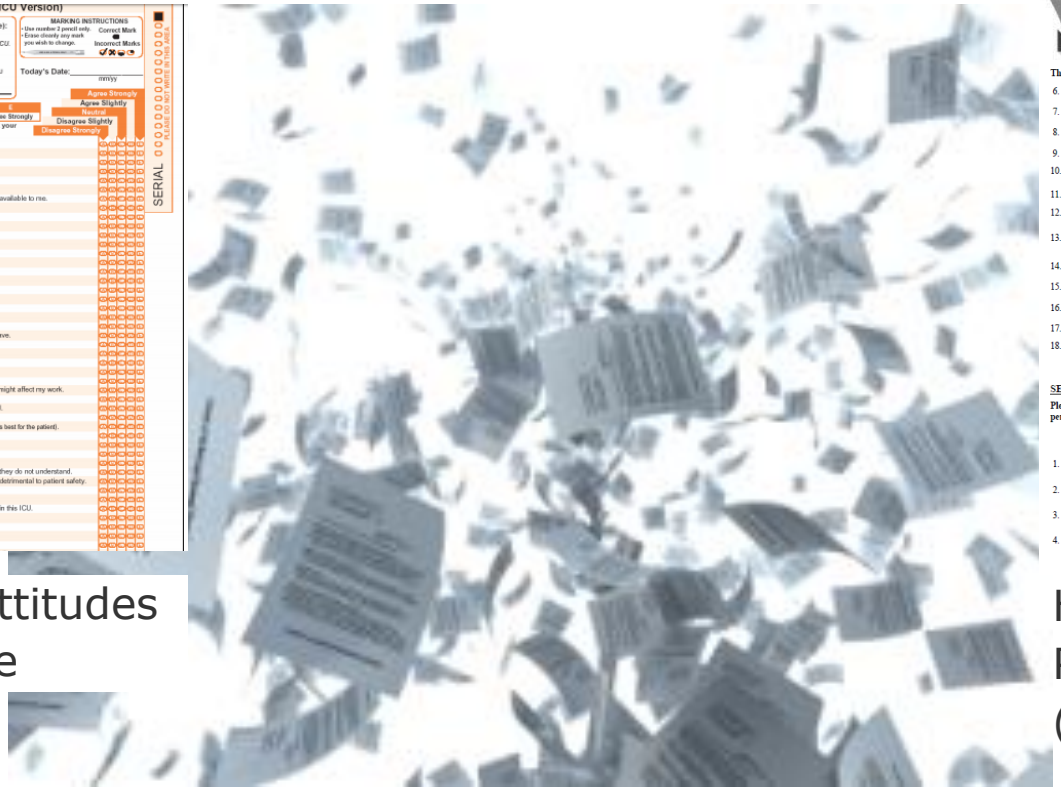
Please answer the following questions with respect to your specific ICU. Mark your response using the scale above.

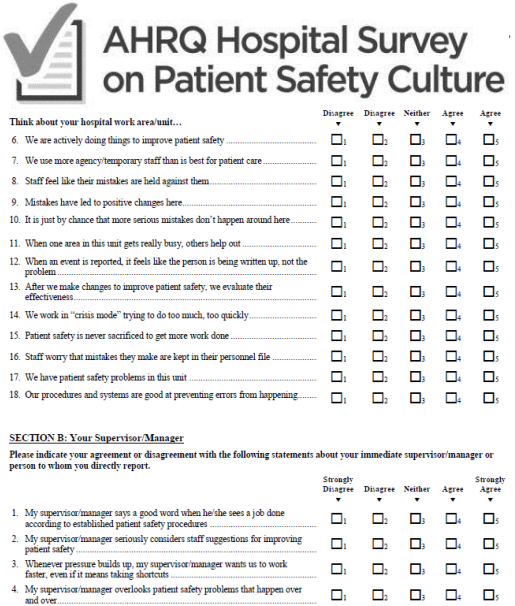
	A	B	C	D	E
	Disagree Strongly	Disagree Slightly	Neutral	Agree Slightly	Agree Strongly

1. High levels of workload are common in this ICU.
2. I like my job.
3. Nurse input is well received in this ICU.
4. I would feel safe being treated here as a patient.
5. Medical errors* are handled appropriately in this ICU.
6. This hospital does a good job of training new personnel.
7. All the necessary information for diagnostic and therapeutic decisions is routinely available to me.
8. Working in this hospital is like being part of a large family.
9. The administration of this hospital is doing a good job.
10. Hospital administration supports my daily efforts.
11. I receive appropriate feedback about my performance.
12. In this ICU, it is difficult to discuss errors.
13. Briefings (e.g., patient report at shift change) are important for patient safety.
14. Briefings are common in this ICU.
15. This hospital is a good place to work.
16. When I am interrupted, my patients' safety is not affected.
17. All the personnel in my ICU take responsibility for patient safety.
18. Hospital management does not knowingly compromise the safety of patients.
19. The levels of staffing in this ICU are sufficient to handle the number of patients.
20. Decision-making in this ICU utilizes input from relevant personnel.
21. This hospital encourages teamwork and cooperation among its personnel.
22. I am encouraged by my colleagues to report any patient safety concerns I may have.
23. The culture in this ICU makes it easy to learn from the errors of others.
24. This hospital deals constructively with problem personnel.
25. The medical equipment in this ICU is adequate.
26. In this ICU, it is difficult to speak up if I perceive a problem with patient care.
27. When my workload becomes excessive, my performance is impaired.
28. I am provided with adequate, timely information about events in the hospital that might affect my work.
29. I have seen others make errors that had the potential to harm patients.
30. I know the proper channels to direct questions regarding patient safety in this ICU.
31. I am proud to work at this hospital.
32. Disagreements in this ICU are resolved appropriately (i.e., not who is right but what is best for the patient).
33. I am less effective at work when fatigued.
34. I am more likely to make errors in tense or hostile situations.
35. Stress from personal problems adversely affects my performance.
36. I have the support I need from other personnel to care for patients.
37. It is easy for personnel in this ICU to ask questions when there is something that they do not understand.
38. Disruptions in the continuity of care (e.g., shift changes, patient transfers, etc.) can be detrimental to patient safety.
39. During emergencies, I can predict what other personnel are going to do next.
40. The physicians and nurses here work together as a well-coordinated team.
41. I am frequently unable to express disagreement with staff physicians/clinicians/nurses in this ICU.
42. Very high levels of workload stimulate and improve my performance.
43. Truly professional personnel can leave personal problems behind when working.
44. Morale in this ICU area is high.
45. Trainees in my discipline are adequately supervised.

SERIAL

The Safety Attitudes Questionnaire





AHRQ Hospital Survey on Patient Safety Culture

Think about your hospital work area/unit…

	Disagree Strongly	Disagree	Neither	Agree	Agree Strongly
6. We are actively doing things to improve patient safety	1	2	3	4	5
7. We use more agency/temporary staff than is best for patient care	1	2	3	4	5
8. Staff feel like their mistakes are held against them	1	2	3	4	5
9. Mistakes have led to positive changes here	1	2	3	4	5
10. It is just by chance that more serious mistakes don't happen around here	1	2	3	4	5
11. When one area in this unit gets really busy, others help out	1	2	3	4	5
12. When an event is reported, it feels like the person is being written up, not the problem	1	2	3	4	5
13. After we make changes to improve patient safety, we evaluate their effectiveness	1	2	3	4	5
14. We work in "crisis mode" trying to do too much, too quickly	1	2	3	4	5
15. Patient safety is never sacrificed to get more work done	1	2	3	4	5
16. Staff worry that mistakes they make are kept in their personnel file	1	2	3	4	5
17. We have patient safety problems in this unit	1	2	3	4	5
18. Our procedures and systems are good at preventing errors from happening	1	2	3	4	5

SECTION B: Your Supervisor/Manager

Please indicate your agreement or disagreement with the following statements about your immediate supervisor/manager or person to whom you directly report.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1. My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures	1	2	3	4	5
2. My supervisor/manager seriously considers staff suggestions for improving patient safety	1	2	3	4	5
3. Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts	1	2	3	4	5
4. My supervisor/manager overlooks patient safety problems that happen over and over	1	2	3	4	5

Hospital Survey on Patient Safety Culture (AHRQ survey)

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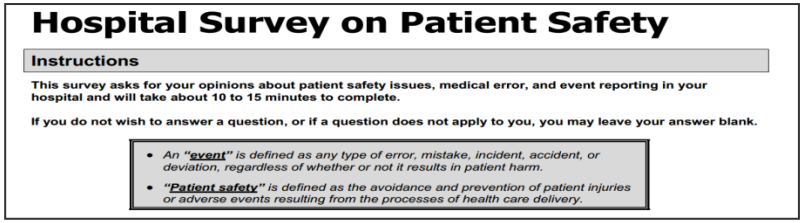
Elements of safety culture

- Safety Climate
- Teamwork
- Perceptions of management commitment to patient safety
- Stress Recognition
- Job Satisfaction
- Working Conditions
- Compliance and attitudes to procedures, policies, rules and guidelines
- Conflicting Goals
- Incident reporting and learning
- Organizational learning



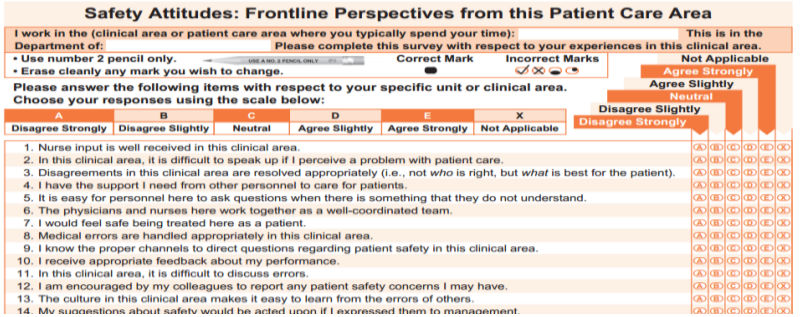
Hospital Survey on Patient Safety

Instructions

This survey asks for your opinions about patient safety issues, medical error, and event reporting in your hospital and will take about 10 to 15 minutes to complete.

If you do not wish to answer a question, or if a question does not apply to you, you may leave your answer blank.

- An ***"event"*** *is defined as any type of error, mistake, incident, accident, or deviation, regardless of whether or not it results in patient harm.*
- ***"Patient safety"*** *is defined as the avoidance and prevention of patient injuries or adverse events resulting from the processes of health care delivery.*



Safety Attitudes: Frontline Perspectives from this Patient Care Area

I work in the (clinical area or patient care area where you typically spend your time): This is in the Department of: Please complete this survey with respect to your experiences in this clinical area.

- Use number 2 pencil only. Correct Mark Incorrect Marks
- Erase cleanly any mark you wish to change.

Please answer the following items with respect to your specific unit or clinical area.
Choose your responses using the scale below:

A	B	C	D	E	X
Disagree Strongly	Disagree Slightly	Neutral	Agree Slightly	Agree Strongly	Not Applicable

Not Applicable
Agree Strongly
Agree Slightly
Neutral
Disagree Slightly
Disagree Strongly

1. Nurse input is well received in this clinical area.
2. In this clinical area, it is difficult to speak up if I perceive a problem with patient care.
3. Disagreements in this clinical area are resolved appropriately (i.e., not *who* is right, but *what* is best for the patient).
4. I have the support I need from other personnel to care for patients.
5. It is easy for personnel here to ask questions when there is something that they do not understand.
6. The physicians and nurses here work together as a well-coordinated team.
7. I would feel safe being treated here as a patient.
8. Medical errors are handled appropriately in this clinical area.
9. I know the proper channels to direct questions regarding patient safety in this clinical area.
10. I receive appropriate feedback about my performance.
11. In this clinical area, it is difficult to discuss errors.
12. I am encouraged by my colleagues to report any patient safety concerns I may have.
13. The culture in this clinical area makes it easy to learn from the errors of others.
14. My suggestions about safety would be acted upon if I expressed them to management.

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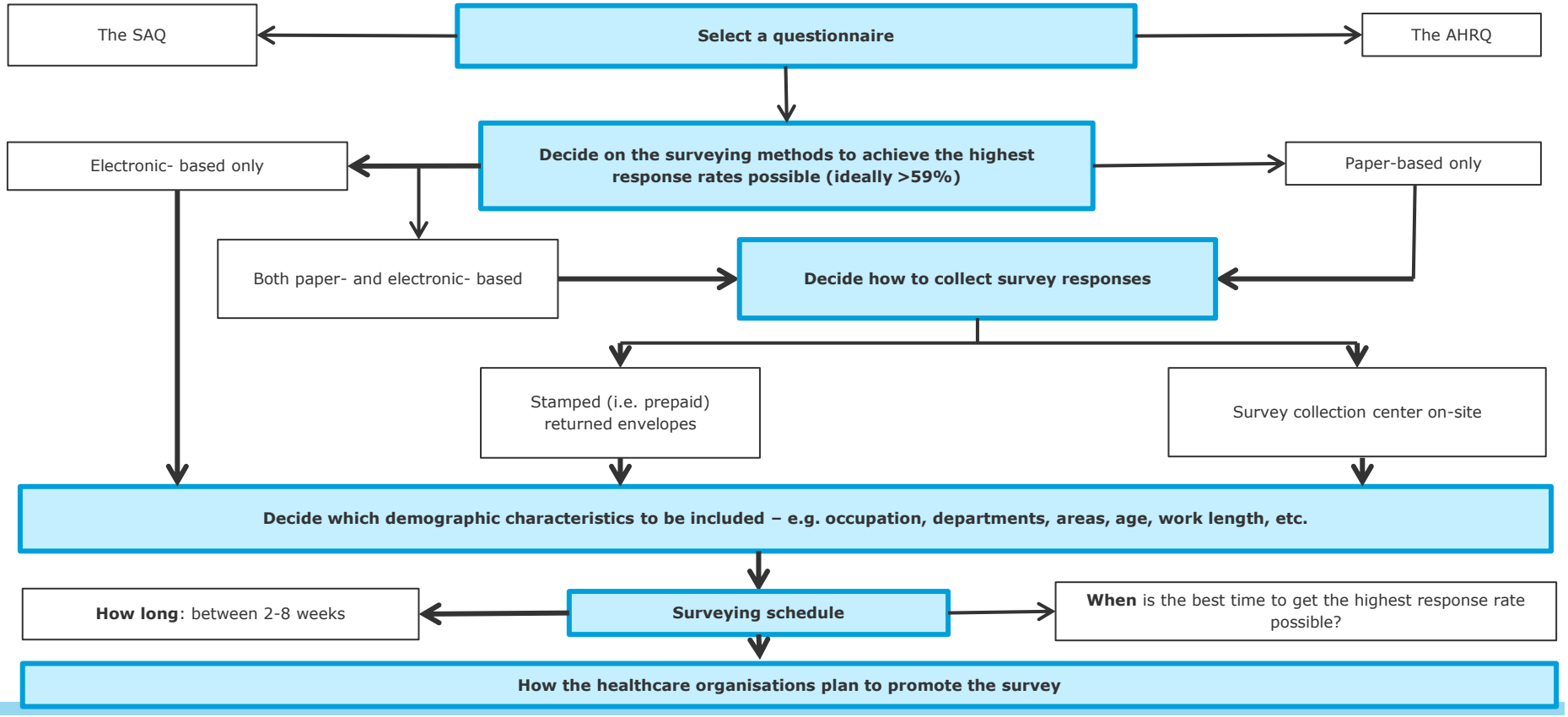
Things to consider prior to conducting a safety culture survey



Tips for analysing survey responses

- Non-response bias analysis
- Finding differences between areas being assessed, e.g. between units, between departments, between clinical areas, etc.
- Finding differences between groups of demographic characteristics, e.g. between occupational groups, between seniority levels, between age groups, between work lengths, etc.

Focus for qualitative assessment

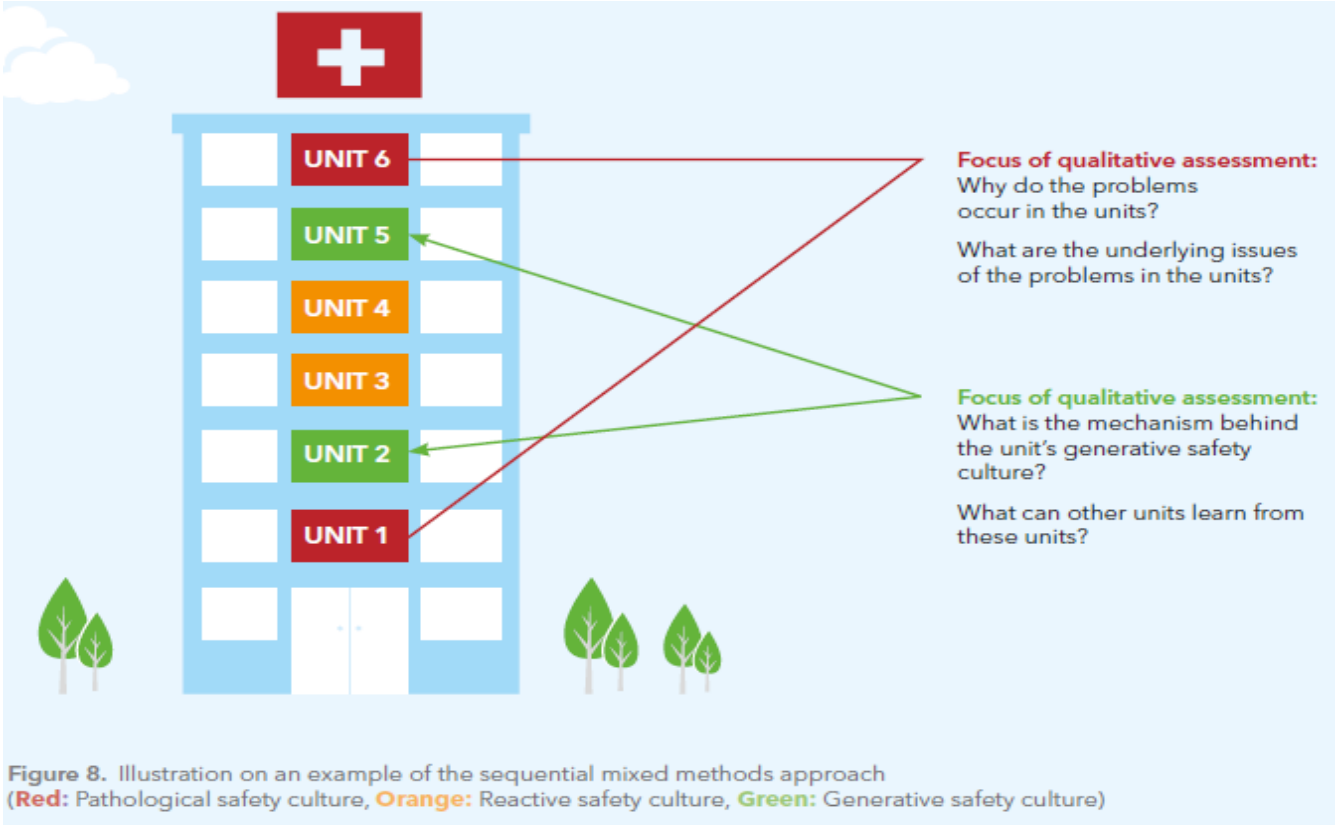


Figure 8. Illustration on an example of the sequential mixed methods approach
(**Red:** Pathological safety culture, **Orange:** Reactive safety culture, **Green:** Generative safety culture)

Preparation for qualitative assessment

- Who should conduct the qualitative assessment
- Who to be invited
  - How many
  - Varieties
- Length of the qualitative assessment
  - Individual interviews
  - Focus group
- How to recruit participants
- Scheduling individual interviews and/or focus groups
- Understanding of the survey results
- Understanding of the areas being assessed
- Preparing the participant information sheet and consent form

Tips for conducting individual interviews and facilitating a focus group

- Bracketing
- Good rapport
- Being cautious about directing
- Playing “poker face”
- Use of silence
- Rephrasing
- No interview or focus group is perfect

Analysis and synthesis of quantitative and qualitative results

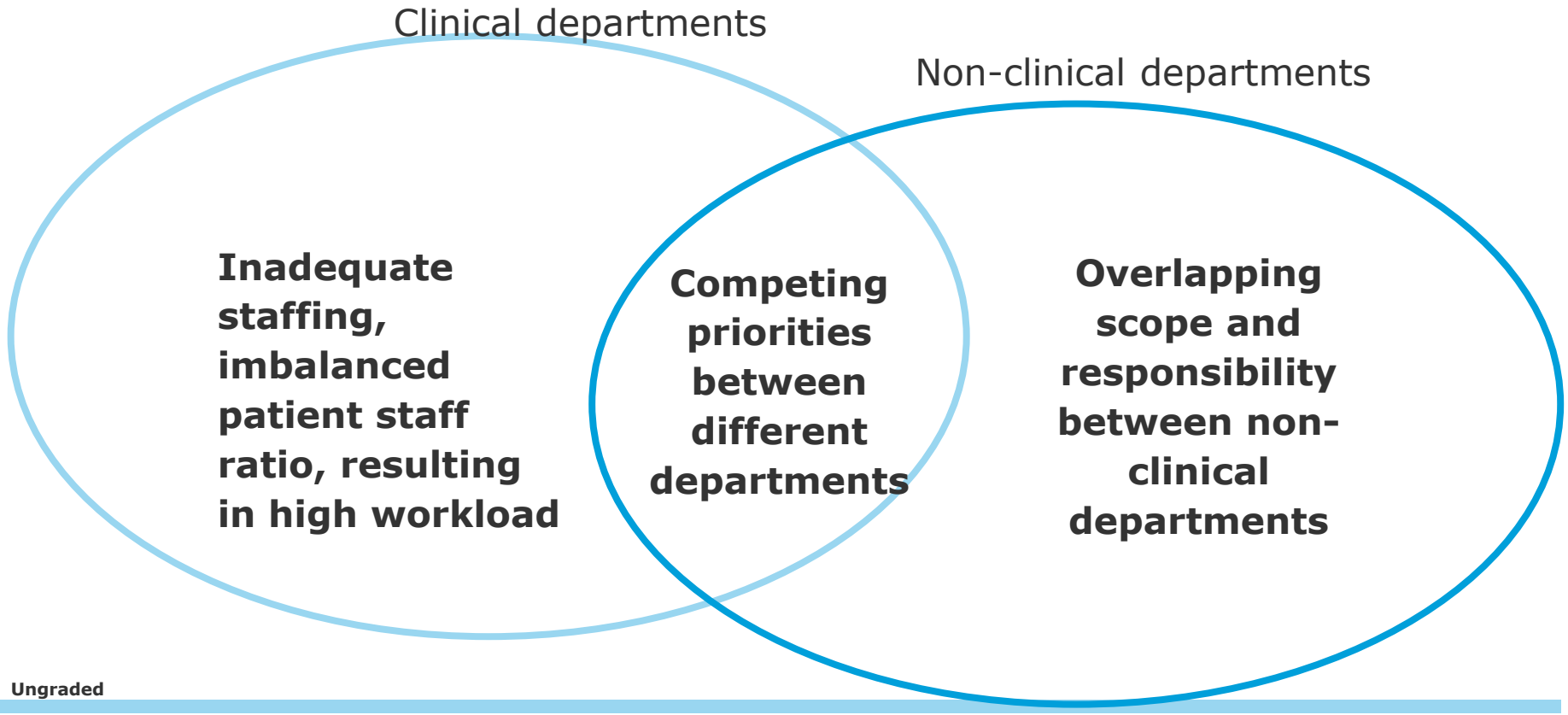
- identify common viewpoints
- identify individual or alternative viewpoints (e.g. positive deviants)

- identify patterns that support the findings of the survey
- identify patterns that do not support the findings of the survey

- identify areas of *strength* relating to the unit's safety culture
- identify areas for *improvement* relating to the units' safety culture

PATHOLOGICAL | **REACTIVE** | **CALCULATIVE** | **PROACTIVE** | **GENERATIVE**

Example findings from a Chinese hospital



Creating lasting change

- Senior leaders own processes
- Talk through results with staff
- Establish collective understanding of results and why
- Identify differences where you are and where you want to be
- Agree on quality measures/criteria
- Create an action plan including goals, resources, outcomes, and who will do what by when
- Scale and spread positive practices, while addressing areas for improvement
- Enable good processes, not good luck

Our safety culture position paper

- Download for free at: www.dnvgl.com/patientsafety

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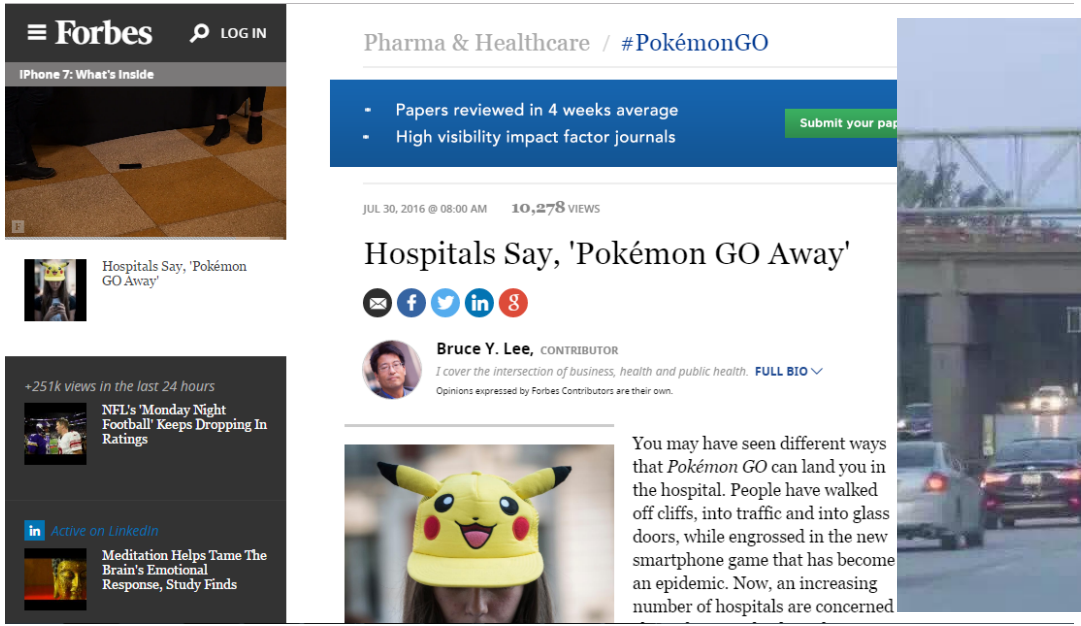
In the pursuit of safety, no idea is too ridiculous if it is effective



Thank you

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