Patient Education and Counseling 105 (2022) 1561–1570

Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pec

The aspects of healthcare quality that are important to health professionals and patients: A qualitative study

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ARTICLE INFO

Article history:
Received 15 March 2021
Received in revised form 10 October 2021
Accepted 11 October 2021

Keywords:
Healthcare quality
Quality culture
Quality assessment
Quality improvement

ABSTRACT

Objective: Existing quality of care frameworks insufficiently integrate the perspectives of physicians, nurses and patients. We collected narrative accounts from these three groups to explore if their perspectives might add new content to these existing definitions.
Methods: Ninety-seven descriptions of "good" and "poor" care episodes were collected from a convenience sample of physicians, nurses and outpatients at eight regional hospitals. Two coders classified the narrative contents into themes related to *structures*, *processes* and *outcomes* of care.
Results: The physicians, nurses and patients raised the following "quality of care" aspects: *Successful communication* among staff, with patients and care companions; staff *motivation*; frequency of *knowledge* errors; prioritization of patient-preferred outcomes; institutional emphasis on building "quality cultures"; and organizational implementation of fluid system procedures.
Conclusion: Respondents primarily referred to care *processes* in their descriptions of "quality of care." "Hippocratic pride" (in response to care successes) and "Rapid reactivity" (in response to (near) failures) emerged as two new *outcome* indicators of high-quality care.
Practice implications: This study provides a first qualitative fundament for understanding the components of "quality of care" from a triangulated frontline perspective. Future research needs to validate our findings with quantitative data to explore their usefulness for completing existing quality frameworks.
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1. Introduction

Over the last 40 years, numerous definitions, conceptual frameworks, improvement tools and metrics have been developed to meet the needs of providers and policy makers to set and achieve quality goals in healthcare. Patients and the public are increasingly aware that the quality of care can vary among providers. They are also interested in what constitutes good quality of care and how to obtain it. The growing adoption of technologies such as Patient Reported Outcome Measures (PROMS) now allows consumers to play a greater part in judging care based on what they experience, and help empower them to make better informed choices [1].

One of the most widely accepted classifications of health care quality was developed by the US National Academy of Medicine. [2] It defines six pillars of high-quality care: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity (see Table 1). Despite this apparent consensus, in practice these domains are considered unevenly. Many quality assessment programs only focus on effectiveness and safety, a few include timeliness and patient-centeredness, and still fewer address the efficiency and equity of care. [3] This selective implementation under-specifies the measured construct of "quality of care" and makes it difficult to draw inferences about the quality of care a hospital provides. [4].

In addition, physicians, nurses, and patients vary in the value they place on different care aspects. [5–14] For example, while clinicians and patients tend to agree that clinical skill, rapport and health-related communication behaviors constitute key elements of "quality care," patients view empathy, courtesy, respect, and "enough time" for care encounters as more important than providers

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https://doi.org/10.1016/j.pec.2021.10.016
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Table 1
Six Pillars of "High-Quality Healthcare" [2].

Pillar #1	**Safety** - High-quality care avoids preventable harm to patients.
Pillar #2	**Effectiveness** - High-quality care is based on scientific knowledge and given to all who could benefit / not given to who is not likely to benefit (i.e. avoiding underuse and misuse, respectively).
Pillar #3	**Patient-centeredness** - High-quality care is respectful of and responsive to individual patient preferences, needs, and values and ensures that patient values guide all clinical decisions.
Pillar #4	**Timeliness** - High-quality care minimizes wait times and harmful delays for both those who receive and those who provide care.
Pillar #5	**Efficiency** - High-quality care avoids waste of any kind (e.g. equipment, supplies, ideas, energy).
Pillar #6	**Equity** – High-quality care does not discriminate care recipients based on their personal characteristics (e.g. gender, ethnicity, geographic location, socioeconomic status).

[8,13]. Both clinicians and patients make implicit or explicit judgments of quality at the frontline of care. But if we do not attain consensus among the elements that make up their judgements, it is difficult to identify what actually comprises high versus low quality care.

This exploratory qualitative study aims to identify important aspects that these three essential "frontline" stakeholders – physicians, nurses and patients – share in common when they judge care episodes as "good" or "poor" in quality.

2. Methods

2.1. Design and study population

This study utilized a qualitative survey design. A convenience sample of physicians, nurses and outpatients was recruited in-house by the director of the regional hospital association (EOC) from the hospital's records of outpatient attendance in summer 2018. The survey was conducted both online and in paper format across all eight regional hospitals of the Italian-speaking Canton of Switzerland. Participation was voluntary and anonymous, and restricted to individuals above the age of 18. Each participant signed informed consent. No identifying names or other details that could have removed anonymity were used. The Institutional Review Board of the Università della Svizzera italiana (USI) gave ethical approval for this study.

2.2. Data collection

A modified form of the "critical incident technique" was used for data collection. [5,15–17] A "critical incident" was defined as "any episode of patient care in which one or more specific actions by a physician [or nurse] had one or more specific beneficial or detrimental effects on a patient." [5] Each physician, nurse and patient who agreed to participate in this study was asked to provide two such written critical incident reports in the questionnaire. One was to describe an "exceptionally good" and one an "unacceptably poor" quality of care episode that they had either participated in or witnessed during the previous five years. For each report, the study participants were asked to describe in depth: a) the context of the episode of care, b) specific actions of clinical staff, and c) the outcome of the care encounter. In addition, the usual demographics were collected (see questionnaire in Appendix A).

2.3. Data analysis

The qualitative incident reports were analyzed by two independent coders using a directed content analysis approach. The coders used line-by-line coding to categorize the narrative data deductively with the use of a coding scheme that had been developed and validated in previous studies. [16,17] Inspired by the Donabedian [10] quality-of-care model, the coding scheme allotted care aspects into one of three broad domains: (1) *structures* (i.e., attributes of the setting in which the care occurred, such as available facility resources and staffing), (2) *processes* (i.e., what was actually done in giving and receiving care), and (3) *outcomes* (i.e., the effects of the described care episode on the patient, institution, and/or healthcare system).

Consistent with previous studies, [16,17] the "structures" category was further classified into aspects related to *facility resources* (e.g. available or lacking physical resources such as materials, equipment or rooms), *system procedures* (e.g., good or poor procedural structures such as protocols, record-keeping structures, etc.), and *human resources* (e.g. (un)available staff or specialists, (un) trained staff). *Processes* encompassed *intrapersonal (motivation, knowledge*, and *technical skills*) and *interpersonal* care processes. [18] The *interpersonal* care processes were assessed as five core communication competencies that have been summarized under the acronym "SACCIA" (Sufficient, Accurate, Clear, Contextualized, and Interpersonally Adaptive communication; see Table 2 for descriptions) [19–21].

As in our previous studies, [16,17] *outcomes* were classified into seven positive and negative micro- to macro-level care consequences: (1) *Physiological* outcomes (e.g. successful treatment, ended suffering, rapid recovery, survival / pain, prolonged suffering, preventable harm, death), (2) *Psychological* outcomes (e.g. care perceived as less exhausting, healed psychological condition / mourning, depression), (3) *Relational* outcomes (e.g. relational reconciliation, family engagement / conflict, relational degradation), (4) *Cognitive-emotional* outcomes (e.g. gratitude, trust, clarity / frustration, mistrust, confusion), (5) *Behavioral* outcomes (e.g. patient compliance / non-adherence), (6) *Institutional* outcomes (e.g.

Table 2
Five "SACCIA" Communication Core Competencies for Successful Communication [19,21].

Sufficiency	The extent to which care participants convey, extract, and exchange a sufficient amount of information, in order to arrive at a shared understanding.
Accuracy	The extent to which care participants convey correct information, interpret information correctly, and utilize their communication with each other, to validate the accuracy of their communicated message contents.
Clarity	The extent to which care participants express and interpret verbal and nonverbal messages clearly (i.e., unambiguously), in order to reduce uncertainty and prevent misunderstandings.
Contextualization	The extent to which care participants frame their communication within local interactional circumstances such as discrepant goals, hierarchies, time pressures, cultural differences, or environmental noise, which either facilitate or create barriers to shared understanding.
Interpersonal Adaptation	The extent to which participants recognize and adapt to implicitly (nonverbal) and explicitly (verbal) expressed needs and expectations of their conversational counterparts, to maximize the likelihood of shared understanding.

high / low efficiency, reputation, system adjustments, staff satisfaction), and (7) *System-wide* outcomes (e.g. good or poor outcomes related to healthcare in general, such as a public health benefit / risk or a general (mis)trust in healthcare systems).

After comprehensive training with similar data from a previous qualitative study, the two coders analyzed the narrative incident reports line-by-line, deductively applying the categories prescribed by the coding scheme. Data that could not be coded into the scheme were identified and then analyzed inductively, to determine if they represent either a new category or a subcategory of an existing code.

Given the qualitative nature of this investigation, no inter-rater reliability was computed. Instead, after completing their independent analyses of all reports, the coders met to determine consensus agreement on the few cases (n = 12 of 551) with partially discrepant codes. Upon conclusion of the coding, the corresponding author used SPSS (v. 25) for basic statistical analyses of the coded data (i.e. frequencies of the coded categories, as reported in the results section below).

3. Results

A total of 53 respondents participated in this study. The doctors (n = 16), nurses (n = 16) and patients (n = 21) provided a total of 97 narrative descriptions of "exceptionally good" (n = 53) and "unacceptably poor" (n = 44) care episodes. The coders identified 551 characteristics of "good" and "poor" quality care in narrative care descriptions (Table 2). The structure dimension of care (n = 38/551; 7%) was mentioned less frequently. The characteristics most often related to care processes (n = 275/551; 50%) and outcomes (n = 238/551; 43%).

3.1. Structural aspects of care quality

The few times structural characteristics were addressed, participants highlighted different features of good versus poor quality care (see Table 3). Physicians most often pointed to the *availability of staff and training* (n = 7/12, 58%), as exemplified by the following statements: "The patient came in during a time slot with little staff and an exceptional influx of patients**";** "I was very worried about the poor training of our student nurses, who are too theory- and too little practice-oriented."

Nurses seldom mentioned structure-related components of care; when they did, it was mainly to point to *poor organization* in very general terms (n = 6/8, 75%), as illustrated by this excerpt: "The patient came in because he had suffered a distortion while playing soccer. He waited about 50 min in pain, although he had already been seen by a nurse."

For patients, the most common structural feature was *consistent, well-organized care* (n = 16/18, 89%). For example, a son wrote about his mother:

> "She had an aortic valve replacement with serious postoperative complications. She was in convalescence at an external clinic and hospitalized following alleged endocarditis. They immediately weaned her from tracheostomy and the nasogastric tube, followed by prompt prophylaxis for endocarditis and hyperproteinic and vitaminic restorative care. She had a rapid recovery and was discharged after about a month."

3.2. Process aspects of care quality

All three groups attributed both *intrapersonal* (i.e., motivation, knowledge, skills) and *interpersonal* (i.e., communication competencies) factors to *process* aspects of good and poor quality care (Table 3).

3.2.1. Good quality care processes

For episodes of good quality care, there were marked differences between the groups. Physicians gave more emphasis to *intrapersonal* factors (i.e., motivation, knowledge, skills; n = 34/56, 61%). For example, they stated: "A neonatologist colleague came to the hospital even though that day he was not on duty" (motivation); "I had a very

Table 3
Structure, Process and Outcome Ratings.

		Physicians			Nurses			Patients			All
		Good	Poor	Total	Good	Poor	Total	Good	Poor	Total	
Structure		4	8	**12**	1	7	**8**	12	6	**18**	**38**
Facility resources		2	1	3	–	–	–	–	1	1	4
System procedures		–	2	2	1	5	6	11	5	16	24
Human resources		2	5	7	–	2	2	1	–	1	10
Process		56	33	**89**	48	33	**81**	54	51	**105**	**275**
Intrapersonal		34	11	**45**	16	13	**29**	27	18	**45**	**119**
	Motivation	14	2	16	12	7	19	15	5	20	55
	Knowledge	13	8	21	3	4	7	9	10	19	47
	Skills	7	1	8	1	2	3	3	3	6	17
Interpersonal (SACCIA)		22	22	**44**	32	20	**52**	26	**33**	**59**	**155**
SACCIA Competencies	**S** = Sufficiency	2	6	8	6	3	9	6	7	13	30
	A = Accuracy	3	4	7	–	3	3	1	6	7	17
	C = Clarity	1	1	2	1	2	3	–	–	1	6
	C = Context	11	5	16	14	10	24	2	6	8	48
	Functional	5	0	5	5	2	7	1	4	5	17
	Relational	1	1	2	2	2	4	–	1	1	7
	Chronological	5	3	8	7	4	11	1	1	2	21
	Environmental	–	–	–		2	2	–	–	–	2
	Cultural	–	1	1	–	–	–	–	–	–	1
	IA = Interpersonal adaptation	5	6	11	11	2	13	17	14	31	55
Outcome		33	32	**65**	44	46	**90**	39	44	**83**	**238**
Physiological		17	11	28	8	12	20	20	19	39	87
Psychological		1	1	2	–	–	–	1	1	2	4
Cognitive/emotional		3	4	7	13	7	20	9	11	20	47
Relational		1	3	4	7	3	10	1	2	3	17
Behavioral		–	1	1	2	–	2	–	5	5	8
Institutional		10	11	21	14	23	37	8	6	14	72
System-wide		1	1	2	–	1	1	–	–	–	3

competent team at my disposal" (knowledge); "During an exam, I detected bleeding from the patient's active and very important duodenum. I had a nurse specializing in endoscopy particularly good and careful and experienced. It was thanks to her collaboration that I managed to achieve hemostasis, and that the patient survived" (skills).

Nurses slightly more often mentioned *interpersonal* factors (n = 32/48; 67%). Particularly, they raised "team collaboration**,"** "good medical-nursing collaboration**,"** "involvement of interpreters," and "a relationship of trust" as indicators of good interpersonal care processes. For patients, the intra- and interpersonal dimensions carried equivalent importance with respect to perceptions of good quality care.

Physicians primarily associated good care processes with providers' *motivation* (n = 14/34, 41%), exemplified by statements such as "strong professional values," "highly patient-centered," "exceeding the call of duty," and *knowledge* (e.g. "exceptional clinical acumen," "observance of evidence-based guidelines**;"** n = 13/34, 38%). With regard to *interpersonal* care processes, physicians mostly identified "contextualized communication" (e.g. timely communication; communication with the right target; obtaining the help of foreign language aids) with good quality care (n = 11/22; 50%). The following excerpt exemplifies this notion:

> "The clinicians seized all possibilities to attend to the palliative patient in the ward. The patient was ready to die, but he 'was waiting' for his son. Numerous healthcare workers had gotten involved, and there was very little time to arrange for immediate arrival of his son. Fortunately, the son arrived on time and the patient could say goodbye. About 30 min after his son's arrival, the patient died."

Nurses also primarily considered "contextualized communication" as a defining aspect of a good interpersonal care process. In addition, they mentioned "interpersonal adaptation" (n = 32/48; 67%), which involved "listening to the concerns of the patient," "talking to relatives," "accepting the patient's desire to die at home," and also "listening to the nurse's request to support a relative." Nurses less frequently identified *intrapersonal* processes (i.e. motivation, knowledge, skills) as a component of good quality care (n = 16/48; 33%). The few times they did mention intrapersonal factors, they primarily related to *motivational* strengths (n = 12/16; 75%), such as showing a "professional attitude," "a dedication to support the patient in the moment of crisis," and "great creative effort" in caring for patients with severe disability.

Patients considered *intrapersonal* and *interpersonal* care processes as equally important indicators of good quality care. Among the *intrapersonal* care processes, they most frequently identified *motivation* (n = 15/27; 56%) as a factor. The particularly highlighted "kind and polite" healthcare staff that expressed "extreme sympathy and courtesy" to them. For example, one patient pointed out: "I could not find the office. So I called, and the assistant on the phone explained with patience where I needed to go. At the end, she even came downstairs to meet me at the street." Among the *interpersonal* care processes (i.e. communication competencies, see Table 2), patients by far considered "interpersonal adaptation" as the most important aspect of "good quality" care (n = 17/26, 65%; see Table 3), which is exemplified by the following excerpt:

> "During the five days I was at the hospital, I felt treated, comforted, and attended to in an affectionate way, with infinite dedication by the healthcare staff. This helped me recover and not drown in fear. Their extraordinary care provision made me write a letter of thanks to the whole team."

3.2.2. Poor quality care processes

In their narrative descriptions of "poor quality" care processes, all three groups gave more emphasis to *interpersonal* (n = 75/117; 64%) than *intrapersonal* (n = 42/117, 36%) factors. Physicians mainly attributed insufficient, inaccurate, poorly contextualized and non-adaptive communication with "poor quality" care (see Table 2; n = 22/33, 67%). For example, they mentioned: "The patient was examined insufficiently, particularly with respect to his medical history, where a syncope was left out, which led to the miss of an acute coronary syndrome" (insufficiency); "The incorrect drug was prescribed" (inaccuracy); "There was a long time lag until they acted upon the specialist's intervention request" (poor contextualization); "Despite the specific request of the parents, no urinalysis was performed, and then later, the parents' suspicion of urinary tract infection was confirmed" (non-adaptive communication). Among the *intrapersonal* processes (i.e. motivation, knowledge, skills), physicians considered *knowledge* (82%; 8/11) as a key indicator of "poor quality" care, which involved omitting indicated treatment, making a wrong diagnosis, prescribing or injecting the wrong drug, and underestimating the gravity of a patient's condition.

Nurses considered poorly contextualized communication (see Table 2) between staff and with patients and family members as the most frequent *interpersonal* process indicator of "poor quality" care (n = 10/20, 50%). For example, they elaborated cases where "the patient's symptoms were not treated properly because the physician assumed the patient was pretending or exaggerating," or where "clinicians discharged the patient without considering that the patient did not have the resources at home to actually follow the discharge instructions." *Motivation* emerged as the most frequently mentioned *intrapersonal* process characterizing poor quality care among nurses (n = 7/13; 54%). Nurses particularly reported "carelessness" and "unprofessional treatment of patients" as problematic motivational factors, such as "rushing patients out to free their bed."

Patients considered non-adaptive interpersonal communication (see Table 2) as the core *interpersonal* process indicator of "poor quality" care (n = 14/33; 42%). For example, a patient reported: "I was almost afraid of the nurse, she treated me like I was a troublesome person hindering her job." Second to interpersonal adaptation, patients indicated insufficient communication (e.g. when others were insufficiently informed; n = 7/33, 21%), inaccurate communication (e.g. when documentation was read wrong or staff communication was not engaged to validate the accuracy of treatments/diagnoses; n = 6/33, 18%), and poorly contextualized communication (e.g. when conflicts overshadowed safe treatment, patients were treated against their will and/or exposed to unreasonably extensive wait times; n = 6/33, 18%) as interpersonal "poor quality care" processes. Among the *intrapersonal* care processes, patients most frequently identified *knowledge* (i.e. human error, such as false diagnosis, wrong treatment, wrong-site surgery, misjudgment; n = 10/18, 56%) as a key indicator of "poor quality" care (see Table 3).

3.3. Outcome aspects of care quality

Physicians (n = 28/65, 43%) and patients (n = 39/83; 47%) most frequently associated *physiological* outcomes with "good" (e.g. successful treatment/surgery, stabilized/saved life, rapid recovery, complete healing) and "poor" (e.g. patient exposed to safety risk, patient not treated, prolonged suffering, worsened condition, death) quality care, followed by *institutional* (e.g. efficiency, system adjustments/corrections, reputation) and *cognitive-emotional* outcomes (e.g. increased / decreased trust, satisfaction, gratitude, peace, calmness). Nurses primarily mentioned *institutional* outcomes (n = 37/90; 41%), followed by *physiological* (n = 20/90; 22%) and

Table 4
Good quality care process indicators as prioritized by physicians, nurses and patients.

Priority	Physicians	Nurses	Patients
#1	Good motivation	Contextualized communication (SACCIA)	Interpersonally adaptive communication (SACCIA; i.e. communication that is responsive to ad-hoc cognitive, linguistic and emotional needs of the conversational counterpart)
#2	Good knowledge	Good motivation	Good motivation
#3	Contextualized communication (SACCIA)	Interpersonally adaptive communication (SACCIA; i.e. communication that is responsive to ad-hoc cognitive, linguistic and emotional needs of the conversational counterpart)	Good knowledge

cognitive-emotional results for the patient (n = 20/90; 22%). *Relational* (e.g. upset family, effective therapeutic relationship), *psychological* (e.g. depression, care less exhausting, difficulty mourning), *behavioral* (e.g. (non-)compliance, doctor-switching) and *system-wide* (e.g. general mistrust/loss of reputation for the entire healthcare system) outcomes were stated less frequently (see Table 3).

3.4. New findings

We identified two new concepts among the care outcomes that were mentioned by the physicians, nurses and patients in our study: First, all groups repeatedly highlighted that good quality care was found in healthcare teams or professionals who shared a *feeling of pride* about outstanding clinical successes they achieved in their care provision. Because the data under this new category resonate a celebrative achievement of the Hippocratic Oath, we labeled this *process-dependent* outcome aspect of high-quality care "Hippocratic pride." Previous research has emphasized the importance of facilitating professional pride, self-regulation and ownership as the means to accomplishing care improvements [23]. However, in our study, Hippocratic pride was celebrated *after* extraordinary care successes (not for care improvements), and notably, the sensation of this "deserved" pride was regarded as an indicator of high-quality care by physicians, nurses, and even by patients. For example, physicians stated: "We had proven excellence**";** "we all felt very, very good**";** "we did well**";** "it led to heightened self-esteem and satisfaction among us providers." Similarly, nurses noted: "It was humbling to see**";** "it was a success story**";** "it felt truly meaningful**";** "we felt a sense of pride for the good work done." And patients asserted: "The providers must have felt satisfied with the great care they delivered"; "my providers must have felt eternal gratitude for having worked so hard to help me and to realize a dream that seemed impossible at first, considering all the difficulties and numerous failures we had encountered."

Second, all three groups of participants valued when healthcare professionals or institutions responded quickly to correct errors and failures that happened during a care episode. We called this high-quality care outcome "Rapid reactivity." At first, this concept may resonate with existing research that has discussed the notion of *rapid response teams* improving the quality of care. [24,25] However, in our study, "rapid reactivity" emerged as a post-hoc response to care that was compromised by errors or failures. In other words, it constituted a corrective mechanism *after* errors or failures had occurred during a care episode, in the form of post-hoc system adjustments that were pursued rapidly to prevent repetitions of the same or similar incidents in the future. Even when structures and/or care processes were of *poor* quality, rapid reactivity was mentioned as an outcome indicator of *good* quality care. For example, participants mentioned things such as "quick resumption of a case that had been overlooked," transparent pursuit of clarity, in close contact with the patient," "retraining staff," "immediate root cause analysis and quality review," and "immediate corrections to prevent future repetitions." Thus, while sounding similar, the concept is distinct from "rapid response" as it has been discussed in the literature in the context of care improvements. "Rapid reactivity" rather reflects the notion of *high-reliability organizations* making a strong response to weak signals of failure. [26].

4. Discussion and conclusion

4.1. Discussion

We found that physicians, nurses, and patients primarily considered *processes,* more often than *structures* or *outcomes*, as definitional indicators of health care quality. This finding is consistent with earlier studies [16,17] and of practical relevance, given that the methodological basis of quality improvement is to redesign *care processes* to yield better outcomes.

Physicians regarded care processes as "exceptionally good" if providers demonstrated good knowledge and motivation, and if they contextualized their communication with each other and with patients adequately. Nurses found care processes "exceptionally good" when providers communicated with each other, patients and families in a *contextualized* and *interpersonally adaptive way,* and also if they demonstrated good *motivation.* Patients placed a high value on being treated like a person: They considered care processes as "exceptionally good" when providers communicated with them in an *interpersonally adaptive* way (e.g. with interest, personal reassurance, patience, empathy, according to their current needs), but also when staff caring for them appeared motivated.

In summary, all three groups independently raised *good motivation* among the most frequently raised aspect of "good quality" care. Both physicians and nurses regarded *contextualized communication* as critically important. Physicians and patients both raised

Table 5
Poor quality care indicators as prioritized by physicians, nurses and patients.

Priority	Physicians	Nurses	Patients
#1	Poor knowledge (cognitive/ judgment errors)	Communication is not contextualized well enough for attaining a shared understanding (e.g,. compromised by hierarchical barriers, untimely, poorly timed; SACCIA)	Communication is not adaptive to each other's needs in order to attain shared understanding (SACCIA)
#2	Communicated content is insufficient for attaining shared understanding (SACCIA)	Poor motivation (unprofessional attitude)	Poor knowledge (cognitive/ judgment errors)
#3	Communication is not adaptive to each other's needs in order to attain shared understanding (SACCIA)	Poor knowledge (cognitive/ judgment errors)	Communicated content is insufficient for attaining shared understanding (SACCIA)

Table 6
What constitutes "quality care"?

Priority	Activity	"Quality of care" practice recommendations based on our preliminary study
1. Processes	**Interpersonal (SACCIA)**	**(1) High-quality care ensures consistent *successful communication* between staff and with patients.**
	S = *Sufficiency*	**Do:** ✓ Be informed and prepared. ✓ *Know* all available information and have it *available.* ✓ Make sure that you have extracted sufficient information from all available resources (e.g. records, care companions, previous providers and/or care institutions). ✓ Communication merely *starts* with sending information – a *shared understanding* of that information emerges *between* all involved care participants. Thus, *always* validate message receipt and *ensure* that a shared understanding was accomplished. ✓ Ensure that all involved staff share complete and consistent information, e.g. that everything is documented, that the documented information is received by the intended recipients and understood as intended. ✓ *Listen* and *talk to* patients and care companions. ✓ Explain things *well*. ✓ Practice *transparent* communication. ✓ *Ensure* patient consent. ✓ Make sure to inform other staff, patients and care companions *promptly and constantly* about what is happening and what is involved in the patient's treatment. ✓ Nonverbal communication conveys significantly more information than verbal communication. Therefore, pay close attention to the messages you are transmitting through your nonverbal cues and to the nonverbal cues of the person you communicate with (colleagues, patients and care companions), such as their facial expressions, tone of voice and body language. People "leak" information through their nonverbal cues and this information may be critically important for you to know.
		Avoid: A lack of communication, i.e. *insufficient information exchange,* is one of the most frequent causes of preventable patient harm. Therefore: × Include rather than omit information. × Never assume that others have read your written communication. × Never assume that communication has taken place. × *If* communication has taken place, never assume that it led to a shared understanding.
	A = *Accuracy*	**Do:** ✓ Always make sure that your conveyed message contents are understood correctly. ✓ Validating the accuracy of what is said with others enhances safety and quality of care. ✓ If you are unsure whether others have understood you correctly, make sure they do. ✓ Try to avoid communicating only by phone – face-to-face communication enhances the accuracy of communicated content and shared understanding. ✓ Appropriate redundancy (i.e. repeated instructions or questions through various channels, e.g. both oral and written or both verbal and nonverbal) enhances accurate communication – particularly in the context of handoffs and discharge conversations. ✓ Use your communication with colleagues, patients and care companions to validate the accuracy of your clinical and interpersonal perceptions. ✓ Four eyes see more than two: Communication is a reliable *interpersonal validation process* to ensure safer care, so use it for this purpose.
		Avoid: The validating function of interpersonal communication can heighten care accuracy and patient safety (e.g. correct diagnosis, accurate treatment) in interactions with colleagues, patients, and care companions. Therefore: × Never assume that patients or care companions name their home medications correctly – use communication to validate the accuracy of their named medications. × Never assume that discharge instructions and handoff communications are understood accurately. × *Never* assume – use your communication to validate the accuracy of your assumptions.
	C = *Clarity*	**Do:** ✓ Make sure task assignments are clear and understood clearly. ✓ Be precise in your communication. ✓ *Speak up* – If you are uncertain, use your communication to reduce your uncertainties and clarify them.
		Avoid: × Avoid nonverbal, verbal and written communication that may be difficult to read/ decipher or that may be perceived as ambiguous. × Never skip over messages (e.g. a communicated messages, or even a pop-up window in an electronic system) if you are unsure what the message means – *clarify* what it means.
	C = *Contextualization*	**Do:** ✓ Make sure everyone's care objectives are in alignment. ✓ Make sure you communicate with the right target (i.e. person or department), particularly when passing on information. ✓ Make it easy to ask for help. ✓ Involve care companions as partners for safer care. ✓ *Language barrier?* Then be quick to involve an interpreter. ✓ Be sensitive to and neutralize interpersonal or interprofessional hierarchies in the room. ✓ Always recognize the greater context of the patient's care/condition within which the interaction takes place (e.g. an upcoming or recent surgery; parallel health conditions such as depression or pregnancy; the context of a terminal care patient wanting to die). ✓ Recognize the context of who else is in the room when you communicate – are you free to speak what you need to say? ✓ *Anticipate.* Be speedy in coordinating information with other care participants. ✓ Communicate in a timely fashion – and be *responsive*.
		Avoid: × Never judge family members or "frequent flyer" patients based on your preconceptions about them – take them seriously for their current condition, not their past ones. × Never rush to free a bed – be cognizant that such (and similar) nonverbal behaviors communicate volumes about how little you care for the patient.

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Table 6 (*continued*)

Priority	Activity	"Quality of care" practice recommendations based on our preliminary study	
	IA = *Interpersonal adaptability*	**Do:**	✓ Meet your colleagues, patients, and care companions with interest; take them seriously. ✓ Display an authentic desire to devote time to them. ✓ Listen and *respond* to their expressed needs and/or expectations. ✓ Think "with" your colleagues to optimize fluidity, collaboration and coordination (this will promote rapid care provision). ✓ *See* your patients. ✓ Discuss alternatives that might work better for them. ✓ Provide personal reassurance. Display trust, mutual respect, patience, genuine empathy, humanity, politeness, availability and kindness so that your colleagues, patients and care companions feel "treated like a human" and "welcome and considered."
		Avoid:	× Never overlook or disregard patients' and care companions' nonverbal expressions, they speak volumes. × Try to avoid communicating only in writing or only by phone. × Never skip seeing your patient or delegate seeing your patient to other staff, if avoidable. × Do not refuse to stop when a patient asks you to stop. × Never make care decisions against your patient's / care companions' expressed will. × Never enter a conversation having forgotten what your patient had told you previously – read up on your notes. × Do not corner patients or care companions with questions that lead into a dead end. × Never be rude, demeaning or inattentive when talking to your colleagues, patients or care companions. × Do not treat patients or care companions like a "number." × If avoidable, do not expose patients to excessive wait times – particularly if they are just coming in for a brief care visit.
2. Processes	**Intrapersonal**		**(2) High-quality care demonstrates exceptional staff *motivation.***
	Motivation	**Do:**	✓ Always demonstrate a professional attitude. ✓ Be a kind, sincere and collaborative colleague and provider. ✓ Make yourself available to colleagues, patients and care companions. ✓ Be an effective team member. ✓ Provide patients and care companions with exceptional assistance. ✓ Anticipate and *"think with"* your colleagues *for* the patient. ✓ Activate yourself to respond / (inter)act in a timely manner. ✓ Empower and engage yourself for care that centers on the patients' needs, their desired care objectives, and safety. ✓ Show that you truly want to solve the patient's problem. ✓ Try to be *exceptionally* fast and punctual. ✓ Be patient, thoughtful and dedicated. ✓ If needed and appropriate, go the extra mile for the patient – be *compassionate.* ✓ Remember the motivation with which you chose your profession – *live* that motivation.
		Avoid:	× Do not appear indifferent, arrogant, or snotty. × Do not "hide" from (i.e. make yourself unavailable to) colleagues, patients and care companions. × Avoid deficient attention. × Avoid "bad," non-sincere behaviors in front of / with patients and care companions. × Do not make a business out of patients (e.g. by selling them a wheelchair although not needed). × Do not take the path of least resistance (e.g. by putting the terminal care patient asleep if you sense that the family might want to see the patient so say good-bye; meet the elderly patient outside if you sense they cannot find the room). × Do not hesitate to take leadership.
			(3) High-quality care minimizes the frequency of *knowledge* errors.
	Knowledge	**Do:**	✓ Do your best to prevent judgment errors – adhere to evidence and validate the accuracy of your decisions with others. ✓ Validate *yourself:* Are you about to inject the wrong medication? Are you omitting indicated treatment? Are you about to suspend an indicated medication? Did you really prescribe the correct drug? Are you possibly underestimating the gravity of the situation? ✓ If possible and appropriate, think outside the box and be "evidence-based creative": *Can you co-treat a depression?* ✓ Engage in fast decision-making.
		Avoid:	× Avoid lack of reasoning. × Refrain from counterfactual thinking – *never* believe your experiences more than evidence-based guidelines.
3. Outcomes			**(4) High-quality care prioritizes the achievement of patient-preferred *physiological* and *cognitive-emotional* (e.g. *trust, peace, clarity)* outcomes.**
	Physiological	**Do:**	✓ Ensure that your patient is getting treated. ✓ Pursue *your patient's* care objective – in the end, *your patient* will be the one who will judge whether the care episodes met his/her definition of "success." ✓ Be quick to remove patients from safety risks (e.g. blood loss, risk of additional fractures, etc.). ✓ Treat patients promptly. ✓ If applicable, be quick to stabilize your patient. ✓ If applicable, give patients fast pain relief – make them comfortable.
		Avoid:	× Avoid care delays and prolonged pain / suffering. × Prevent unnecessary added exposure to radiation or (over-)medication.
	Cognitive-emotional	**Do:**	✓ Do your best to keep patients calm and peaceful. ✓ Make them feel safe, secure, and understood. ✓ Make sure patients have clarity about everything that has happened to them. ✓ Try to (re)establish the trust of patients and care companions. ✓ Convey to your patients that they are in competent hands. ✓ Ensure that your patients experience *great gratitude* for the care they received.

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Table 6 (*continued*)

Priority	Activity	"Quality of care" practice recommendations based on our preliminary study	
		Avoid:	× Avoid that your patients / care companions experience distress, anger, or frustration. × Make sure that patients do not lose trust in you or in your institution. × Prevent that patients get confused or even scared. × Be aware of the *therapeutic contract* the patient has with you – take care that they do not experience resentment.
			(5) High-quality care seizes optimal *institutional* results from both successful and unsuccessful care episodes.
	Institutional	**Do:**	✓ Actively contribute to establishing an institutional "quality culture" by (1) celebrating success stories that instill and maintain a healthy "Hippocratic pride"; and by (2) recognizing and reacting promptly to (near) failures with an immediate review/investigation competent response, and timely evidence-based adjustments to prevent potential further damage and repetitions of similar (near) failures in the future.
		Avoid:	× Do not disable a safe communication climate. × Do not seek out "bad apples"; *never* punish human errors. × Prevent that colleagues turn bitter. × Do not risk complaints and your institution's reputation.
4. Structure			**(6) Healthcare institutions can support the frontline practice of high-quality care by enabling fluid, well-organized system procedures.**
	System procedures	**Do:**	✓ Ensure that all staff is trained well. ✓ Ensure the availability of needed rooms, tools and materials. ✓ Monitor and remove expired materials from the facility. ✓ Try to alleviate time constraints as much as possible. ✓ Minimize wait times for patients. ✓ Ensure fluidity and consistency– all care participants value and benefit from well-organized care (e.g. when treatment is continuous, exams are organized quickly, surgeries are scheduled within a short time, service is anticipatory, test results and transfers are fast, pathology reports can be pulled quickly / found easily, control systems are functional, managers are accessible, and rooms are readily equipped).
		Avoid:	× Try *not* to distract care visits.

good medical knowledge as an indicator of good quality care. Finally, both nurses and patients regarded *interpersonal adaptation* as a core factor for the delivery of high-quality care (see Table 4).

Physicians regarded care processes as "unacceptably poor" if they were compromised by *poor knowledge*. They also judged care processes as poor if providers did not practice core communication competencies (mostly *sufficient* and *interpersonally adaptive* communication) with each other, with patients and their families. Nurses considered care processes as "unacceptably poor" if providers did not communicate with each other, patients and family members in a *contextualized* manner, and if care provision was compromised by providers' poor motivation and/or knowledge. Patients considered care processes as "unacceptably poor" if providers communicated with them in a *non-adaptive* way, disregarding or not even recognizing their needs and desires, if they communicated insufficient information, and/or if providers evidenced poor knowledge during care provision.

Interestingly, all three groups independently pointed to *unsuccessful communication* as a core indicator of "unacceptably poor" quality care (see Table 5). In other words, when a healthcare episode went badly, poor interpersonal communication was blamed. This finding is consistent with previous studies showing that unsafe communication is the dominant root cause of bad care outcomes. [22] Both physicians, nurses and patients also identified *poor knowledge* (cognitive/judgment errors) as one of the three most important indicators of poor quality care, whereas nurses also raised motivational issues (e.g. an unprofessional attitude).

With respect to the particular communication competencies, patients considered providers' *interpersonal adaptability* (see Table 2) as a key interpersonal process indicative of both "good" (if practiced well) and "poor" (if practiced inadequately) quality care. Similarly, nurses identified communication that takes into account contextual barriers to a shared understanding (e.g. hierarchies, timing issues) as the primary indicator of both "good" (if practiced well) and "poor" (if practiced inadequately) quality care. This also echoes previous findings [9] that clinicians and patients consider successful interpersonal communication a key element of high-quality care provision.

Outcomes ranked second behind *processes* in the volume of the coded data. Theoretically, outcomes may be *process-independent* (such as when a patient does not respond to a correctly prescribed treatment or medication). [10] Thus, care outcomes may not necessarily be direct indicators of good or poor quality care processes. However, our study suggested that outcomes can indeed be indicators of "good" and "poor" quality care in their own right: we found both process-dependent and process-independent care outcomes in the dataset.

Finally, we identified *Hippocratic pride* and *Rapid reactivity* as two new complementary components of a quality culture: one speaks to *successes* and the other speaks to responsiveness to *failures* of care. Together, they may represent new aspects of health care quality that deserve further attention in future research.

Our investigation is subject to three limitations. First, although we sampled frontline care participants across eight hospitals, the qualitative study design and the non-random sample do not allow for generalizations. We hope that this qualitative study will inspire future quantitative investigations that will replicate our findings with generalizable data drawn from larger, random samples. Furthermore, we chose to use the SACCIA framework [19–21] for coding the *interpersonal process* factors. We chose this particular framework over other models because it assesses interpersonal competencies detached from any particular care context. If we had chosen a different communication model for coding the interpersonal care processes, different communication-specific implications might have emerged from the results. Finally, the mere fact that *processes* were raised more frequently by our study participants than structures or outcomes as indicators of good and poor quality care does not imply that participants considered them as more or less important. Future research needs to utilize weighting or preference exercises to investigate which structures, processes, and/or outcomes are regarded as more or less important in defining good and poor quality care.

4.2. Conclusion

The question that motivated this study was the extent to which existing conceptualizations of "healthcare quality" encompass the perspectives of frontline care participants. Interestingly, the "quality of care" features we found in our study cannot be easily integrated with the most commonly used conceptualization (i.e. the IOM "pillars," see Table 1). Further research is needed to investigate how such integration could be achieved. For example, the care aspects that emerged from our preliminary study may constitute processes that contribute to these pillars of health care quality, turning them into distal outcomes. Alternatively, the IOM definition could be expanded to include the new aspects of quality suggested by this investigation. This might be done by the addition of more inclusive concepts, such as motivation, knowledge, and successful interpersonal communication, as well as institutional responsiveness to failures and providers' sense of pride. The fact that these aspects of quality were identified as crucial by physicians, nurses and patients in our study makes them worth considering. A conceptualization that leaves out these frontline participants' experiences runs the risk of being incomplete.

4.3. Practice implications

Overall, this exploratory study revealed a pattern in the conceptual constituents that physicians, nurses and patients commonly considered core aspects of "good" and "poor" quality care. These might be linked to the following preliminary set of "good practice" recommendations, pending further validation (see also Table 6):

1. Processes – *inter*personal: High-quality care is characterized by a consistent practice of interpersonal communication skills (see Table 2) that ensure successful interpersonal sense-making between healthcare professionals and with patients and their family members across all care contexts.
2. Processes – *intra*personal: High-quality care prevents and minimizes the likelihood of *knowledge* errors, and it conveys exceptional *motivation* during encounters with colleagues, patients and care companions (e.g. a professional attitude, speedy self-activation, thinking with each other, and "going the extra mile" *with* colleagues *for* the patient).
3. Outcomes: High-quality care prioritizes the achievement of beneficial process-dependent and process-independent outcomes (e.g. *physiological* and *cognitive-emotional* well-being of the patient, but also an institutional "quality culture" that practices *Rapid reactivity* in response to failures and *Hippocratic pride* in response to good care achievements).
4. Structures: High-quality care can be further enhanced if healthcare institutions establish system procedures that optimize "good" quality care perceptions – such as fluid care processes, consistency, efficient institutional organization, and minimal wait times.

End matter

Ethics and other permissions

This study was approved by the Ethics Committee of the Università della Svizzera italiana.

Funding

None.

CRediT authorship contribution statement

Annegret F. Hannawa: Conception and/or design of the work, Data analysis and interpretation, Drafting the article, Critical revision of the article, Final approval of the version to be published. Albert W. Wu: Critical revision of the article, Final approval of the version to be published. Anastasia Kolyada: Data collection, Data analysis and interpretation, Final approval of the version to be published. Anastasia Potemkina: Data collection, Data analysis and interpretation, Final approval of the version to be published. Liam J. Donaldson: Critical revision of the article, Final approval of the version to be published.

Data availability

The data underlying this article will be shared on reasonable request to the corresponding author.

Conflicts of interest

No known conflict of interests.

Acknowledgments

The authors would like to thank Adriana Degiorgi and her team at the Ente Ospedaliero Cantonale (EOC) for supporting the data collection for this study.

Appendix A

Survey

The Center for the Advancement of Healthcare Quality and Safety (CAHQS) at the University of Lugano (Switzerland) is conducting a research study about the quality of healthcare. The purpose of this study is to gain your opinion on what constitutes "exceptionally good" versus "unacceptably poor" quality of care. We thank you in advance for your participation in this survey, which will take you approximately 15–20 min to complete. We value your opinions and kindly ask you to be as honest as possible in your answers. Your responses are completely anonymous and will only be used for research purposes.

I. Your Healthcare Experience – Good Quality Care Example.

Please describe a GOOD quality care episode within the last five years that you have either experienced yourself or which you have heard about. By an "episode of care," we mean any significant experience you had with a health service in the context of addressing a health issue.

* **1. WHAT HAPPENED during this episode of care?**

…… (Space for long answers).

* **2. What were the CIRCUMSTANCES and FACTORS surrounding the described care processes (for example, system functioning, adherence to guidelines, cognitive functioning, communication, etc.) that made the episode "exceptionally good" in quality?**

…… (Space for long answers).

* **3. What were the CONSEQUENCES or EFFECTS for the patient in this GOOD quality care episode?**

…… (Space for long answers).

* **4. In which medical environment did this described care episode occur?** .

☐ Private hospital
☐ Public hospital
☐ Private Medical Practice
☐ Private clinic

*** 5. What was the role of COMMUNICATION in this care episode (either among providers, and/or between provider and patient), and how did it affect your quality rating of the described episode as "exceptionally good"? Please, explain in detail.**

..... (Space for long answers).

*** 6. How did you experience the GOOD quality care episode that you have just described?**

☐ It happened to you personally
☐ You assisted in it
☐ You heard about it
☐ Other (specify): _____

II. Your Healthcare Experience – Poor Quality Care Episode.

Now, please tell us about a POOR quality care episode within the last five years in which you have either participated or which you have heard about.

*** 7. WHAT HAPPENED during this episode of care?**

..... (Space for long answers).

*** 8. What were the CIRCUMSTANCES and FACTORS surrounding the described care processes (for example, system functioning, adherence to guidelines, cognitive functioning, communication, etc.) that made the episode "exceptionally poor" in quality?**

..... (Space for long answers).

*** 9. What were the CONSEQUENCES or EFFECTS for the patient in this POOR quality care episode?**

..... (Space for long answers).

*** 10. In which medical environment did this described care episode occur?** .

☐ Private hospital
☐ Public hospital
☐ Private Medical Practice
☐ Private clinic

*** 11. What was the role of COMMUNICATION in this episode (either among providers, and/or between provider and patient) and how did it affect your quality rating of the described episode as "exceptionally poor"? Please explain in detail.**

..... (Space for long answers).

*** 12. How did you experience the POOR quality care episode that you have just described?**

☐ It happened to you personally
☐ You assisted in it
☐ You heard about it
☐ Other (specify): _____

*** 13. What is your age?**

_____ years.

*** 14. What is your gender?**

☐ Male
☐ Female

*** 15. *For clinicians only:* What is your clinical specialization?**

***16. For how long have you worked in this job?**

_____ years.

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