Case Reports and Reviews

Case Report

Bridging the Communication Gap: Enhancing Pediatric Disclosure Skills in Young Medical Professionals Through Training and AI

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- Received Date: 26 Sep 2025
- Accepted Date: 06 Oct 2025
- Publication Date: 10 Oct 2025

Keywords

communication skills; empathy training; generative AI; Mind Genomics; pediatric patients

Abstract

Delivering difficult news to patients is one of the most challenging aspects of medical practice, yet many young clinicians feel unprepared for these conversations. Without proper training, poorly delivered news can leave patients feeling confused, anxious, or distrustful—impacting their emotional well-being and the therapeutic relationship. This paper explores how medicine is evolving to better support clinicians in these moments. We examine practical strategies—such as communication frameworks, empathy training, and mentorship—that help doctors deliver hard truths with honesty and compassion. The discussion also highlights the emerging role of generative AI as a training tool, allowing clinicians to practice difficult conversations in realistic, low-stakes simulations before facing real patients. Ultimately, improving these skills isn't just about technique; it's about fostering trust, reducing patient distress, and making healthcare more human—even in its toughest moments.

Introduction

Due to various factors, young medical professionals often lack the knowledge necessary to convey negative news effectively to patients, especially when they are children and teenagers. Historically, medical training emphasized technical skills and knowledge, while communication and empathy received comparatively less attention [1]. Younger medical professionals may lack sufficient exposure to real-life situations requiring them to deliver bad news to patients, which may result in diminished confidence and uncertainty when navigating sensitive discussions [2].

The absence of knowledge presents a considerable challenge for medical professionals, as effective communication is crucial for establishing trust and rapport with patients. Failure to deliver negative news sensitively or effectively can adversely impact the patient's emotional well-being and overall care experience [3]. How bad news is communicated to children and young teenagers—who may be more vulnerable and less prepared to handle difficult information—can significantly impact their psychological health and long-term trust in healthcare professionals [4].

Medical schools and training programs are increasingly incorporating communication skills training into their curricula, recognizing the importance of this issue [5]. This encompasses role-playing scenarios in which students deliver negative news within a supportive environment, alongside workshops and seminars focused on effective communication techniques [6]. Institutions equip young medical professionals with the tools and knowledge to navigate challenging conversations, enhancing their ability to support needy patients.

Moreover, hospitals and healthcare organizations establish protocols and guidelines for delivering bad news to ensure that all staff handle these situations consistently and compassionately [7]. This approach can standardize communication practices and ensure that patients receive consistent, high-quality care, irrespective of who delivers the news. Creating a culture that values open and honest communication allows healthcare organizations to establish a compassionate care standard, benefiting patients and providers [8].

Alongside formal training and institutional support, young medical professionals gain significant advantages from mentorship and guidance provided by seasoned colleagues [9].

Citation: Sidhu AS, Janghu P, Moskowitz HR, Wingert S, Peralta N, Saharan S. Bridging the Communication Gap: Enhancing Pediatric Disclosure Skills in Young Medical Professionals Through Training and AI. Case Rep Rev. 2025;5(5):78.

Young professionals can enhance their communication skills by observing how experienced professionals navigate challenging conversations and actively seeking feedback on their abilities. Peer-to-peer learning is crucial for young professionals, improving their confidence and competence in conveying negative news with the necessary sensitivity and empathy [10].

Addressing the Issue: Managing the Behavior of the Three-Year-Old Child

Effectively communicating negative news to patients, particularly young children, presents a significant challenge in the medical field. Numerous young medical professionals lack the essential skills to communicate challenging information to pediatric patients, who often find it difficult to express their symptoms or comprehend their situations [11]. In response to this issue, healthcare organizations are establishing formal training programs, offering institutional support, and providing mentorship opportunities to assist young doctors in developing the communication skills necessary for effective interactions with young patients [12]. Equipping medical professionals with the tools needed to communicate compassionately with children enables healthcare organizations to guarantee that all patients receive the care and support they deserve, even in challenging circumstances. This continuous initiative to enhance communication practices in the medical field is essential for fostering trust, improving patient outcomes, and providing high-quality care to patients across all age groups [4].

A doctor must communicate in simple, clear language that a 3-year-old patient can understand. The physician should use age-appropriate language and concepts to clarify the situation for the child and their caregivers [13]. Furthermore, the doctor must exhibit patience, empathy, and understanding, as young children may experience fear or confusion when confronted with negative news [4]. Connecting with the child and their family fosters trust and encourages open communication during challenging discussions. Utilizing active listening skills and nonverbal communication enables the doctor to understand the child's needs and concerns better, resulting in more effective interaction [8].

Creating a comfortable and welcoming environment in the exam room is essential when preparing to speak with a 3-year-old patient. This approach can help alleviate the child's anxiety and enhance their receptiveness to shared information [13]. Utilizing visual aids, including pictures or props, improves the child's comprehension of the situation and fosters greater engagement in the conversation [11]. By customizing the communication strategy to align with the child's developmental stage and specific needs, the doctor ensures that the information is conveyed in a manner that is both accessible and significant to the young patient [12].

A doctor may need to involve the child's caregivers in the conversation to ensure that the information is fully understood and that the child's needs are being addressed. Through collaboration with the family and attentive consideration of their concerns, the doctor can establish a cohesive care strategy that prioritizes the child's emotional and psychological well-being [4]. The doctor must offer the family emotional support and resources to assist them in navigating the challenging situation and making informed decisions regarding the child's care [8]. The doctor, the child, and the family can build a trusting and supportive relationship that fosters positive outcomes for everyone involved through collaboration.

During communication, the doctor must maintain honesty and transparency with the child and their family. This involves clearly and straightforwardly providing accurate information about the child's condition, prognosis, and treatment options [13]. Addressing any questions or concerns from the child or their caregivers is essential, as is providing reassurance and support as necessary [12]. Maintaining open and honest communication allows the doctor to establish trust with the child and their family, resulting in a more positive and collaborative care experience [8].

The Capabilities of Generative AI

Generative AI technology has assumed a significant role in the medical field by assisting medical professionals in enhancing communication skills, especially when conveying difficult news to patients, including children and adolescents [14]. This technology simulates various scenarios and provides real-time feedback, serving as a virtual training coach for medical professionals [15]. Medical professionals can use generative AI to practice and enhance their communication skills in a safe and controlled environment before engaging with patients in real life [16].

Generative AI technology creates realistic scenarios in which medical professionals must deliver negative news to patients. It offers a platform for medical professionals to engage in challenging conversations, enabling them to cultivate the empathy and sensitivity necessary for effective communication with patients, particularly younger individuals [14]. The AI generates responses tailored to the specific reactions and emotions of the patient in the simulation, providing medical professionals with valuable insights for navigating similar situations in the future [16].

Generative AI simulates scenarios and serves as a coach, offering real-time feedback to medical professionals during training sessions. The AI analyzes medical professionals' language, tone, and body language, offering constructive criticism to enhance their communication skills [15]. This feedback is essential for medical professionals to identify their strengths and weaknesses, improving their effectiveness in communicating negative news to patients [14].

Moreover, generative AI can provide immediate answers to questions that medical professionals encounter while addressing real-world challenges. When medical professionals encounter uncertainty in their next steps or communication, the AI offers suggestions and guidance rooted in best practices and established guidelines [16]. This real-time support empowers medical professionals to feel more confident and prepared when delivering negative news, ultimately enhancing the patient experience [15].

Generative AI technology provides a robust solution for medical professionals to enhance their communication skills when conveying negative news to patients, especially younger individuals. Generative AI assists medical professionals in improving their communication skills and managing challenging conversations with empathy and sensitivity. It achieves this by simulating realistic scenarios, serving as a coach, and offering real-time responses to inquiries [14]. This advancing technology has the potential to revolutionize communication between medical professionals and patients, ultimately enhancing patient outcomes [16].

A Young Individual Converses with a Medical Professional Regarding a Health Concern

Young medical professionals today may lack the experience and intuition to deliver negative news to patients, particularly when addressing younger individuals like children or teenagers [4]. This gap in communication skills can lead to misunderstandings and increased anxiety for pediatric patients and their families [11].

AI offers insights into what to observe, presenting information in a clear and accessible manner [14]. Table 1 presents an example comparing AI-generated complaints and responses from adults and children. Adults articulate their symptoms with greater detail and specificity [17]. Conversely, the AI's interaction with information regarding children reveals that they articulate their discomfort using more straightforward language [13]. Adults often identify specific triggers or patterns related to their symptoms, whereas children tend to describe a general sense of pain or discomfort with less detail [12].

In addition to the communication behaviors summarized in Table 1, practical workflow changes tailored to preschool encounters are previewed in Table 2. The doctor's responses demonstrate a clear distinction in communication, offering customized explanations and treatment plans that align with the individual's capacity to understand and express their symptoms [8]. The doctor should use clear language and engage parents when discussing the child's concerns [4]. In contrast, adults may explore more complex medical explanations and treatment options [17]. The doctor seeks to address the patient's concerns and deliver appropriate care, irrespective of age [12].

Adults typically offer more detailed information regarding their symptoms, including the issue's duration and accompanying symptoms [17]. Children frequently articulate their discomfort in straightforward terms, lacking detailed explanations [13]. The doctor's responses to adults generally incorporate a greater use of medical terminology and a variety of treatment options [8]. Reactions to children are tailored to their understanding and may involve straightforward explanations of the condition and gentle remedies such as massages or specific medications [14]. Effective communication between doctors, adults, and children is essential to ensure understanding of the diagnosis and treatment plan [14].

Table 1: *Comparison of AI-simulated interactions between doctor and adult vs. doctor and 3-year-old child for identical symptoms.*

Symptom Description	Doctor's Response to Adult	Doctor's Response to Child
Persistent cough *Adult:* "I have been experiencing a persistent cough..." *Child:* "My throat hurts, and I keep coughing..."	"It sounds like you may have a respiratory infection. I will prescribe medication to alleviate symptoms."	"It sounds like you have a sore throat and a cold. I will give you some medicine to help you feel better."
Fatigue *Adult:* "I have been feeling extremely fatigued..." *Child:* "I'm always tired and don't want to play..."	"You might have a vitamin deficiency or anemia. I will run tests to determine the cause."	"You may feel tired because you lack sleep. I'll talk to your parents about a bedtime routine."
Abdominal pain after eating *Adult:* "I have sharp pain in my abdomen after eating..." *Child:* "My tummy hurts whenever I eat certain foods..."	"You might have a food intolerance or GI issue. I'll recommend dietary changes and possibly run tests."	"You may be sensitive to those foods. Let's avoid them and see if your tummy feels better."
Lower back pain *Adult:* "I have sharp pain in my lower back..." *Child:* "My back hurts and won't go away..."	"You may have strained a muscle. I recommend rest, ice/heat, and OTC pain medication."	"You may have a sore muscle. Let's try gentle massages and stretches to help you feel better."
Persistent cough with shortness of breath *Adult:* "I have a persistent cough and feel short of breath..." *Child:* "I can't stop coughing, and it's hard to breathe..."	"You may have a respiratory infection. I recommend rest, hydration, and possibly antibiotics."	"You may have caught a cold. Let's use a humidifier and drink fluids. I'll give you medicine for your cough."
Bloating & indigestion *Adult:* "My stomach feels bloated with indigestion..." *Child*: "My tummy hurts, and I feel like throwing up..."	"You may have acid reflux or gastritis. Avoid trigger foods, eat smaller meals, and possibly take medication."	"You may have eaten something bad. Let's try ginger ale and crackers, and I'll give you a gentle tummy massage."

Enhancements in Communication Methods for Doctors Interacting with Very Young Patients (Ages 6 and Under)

For pediatric clinicians, optimizing communication with young patients requires deliberate process improvements grounded in child development principles [13]. Research demonstrates that traditional medical communication approaches often fail to meet the needs of preschool-aged children, necessitating innovative adaptations [11].

Key Evidence-Based Enhancements

Interactive Communication Tools

Incorporating toys, picture books, and visual aids improves engagement and reduces distress during examinations [14]. For example, doll-based demonstrations increase procedural understanding by 40% compared to verbal explanations alone [13].

Specialized Clinician Training

Communication training programs emphasizing developmental appropriateness (e.g., using shorter sentences, concrete language) improve child cooperation by 58% [12]. Role-playing with standardized child patients enhances clinicians' nonverbal cue recognition [8].

Standardized Parent Communication Systems

Structured discharge instructions with pictograms reduce parental medication errors by 35% [18]. Digital portals allowing parents to replay explanation videos improve treatment adherence [19].

Nonverbal Communication Optimization

Clinicians who mirror children's posture and vocal tones build rapport 50% faster [20]. Anxiety decreases when clinicians position themselves at the child's eye level [21].

Play-Based Clinical Interactions

Clinics implementing "medical play" areas see 42% reductions in pre-visit anxiety [22]. Allowing children to handle safe instruments increases examination compliance [4].

Implementation Science Considerations

Each innovation requires staged implementation with:

1. **Pilot testing** - Start with 1-2 exam rooms [23]
2. **Staff champions** - Identify early adopters to model changes [19]
3. **Feedback loops** - Rapid-cycle improvement using family input [24]
4. **Outcome tracking** - Measure both clinical (e.g., exam success) and experiential (e.g., distress scores) metrics [25]

Discussion

Effective communication with young pediatric patients, particularly 3-year-olds, represents a critical competency in medical practice that directly impacts care quality and health outcomes [4]. The evidence demonstrates that developmentally appropriate communication strategies can reduce procedural distress by 40-60% while improving treatment adherence [18, 25].

Key Evidence-Based Recommendations

Simplified Communication

Using concrete language at a preschool level (2–3-word phrases) improves understanding by 78% compared to standard explanations [13]. Avoiding medical jargon reduces anxiety behaviors during examinations by 35% [23].

Therapeutic Environment Design

Clinics implementing child-friendly modifications (e.g., toy stations, colorful murals) document 42% lower pre-visit anxiety scores [22]. Designated "comfort zones" with weighted blankets and noise reduction decrease panic episodes by 58% [26].

Table 2: *Evidence-based process innovations for 3-year-old patients.*

	Innovation	Basis	Implementation Challenge	Solution
1.	Developmentally-appropriate scheduling	Wait times >20 minutes triple distress behaviors [27]	Clinic workflow resistance	Pilot data showing 30% fewer no-shows
2.	Therapeutic waiting areas	Toy availability reduces cortisol levels by 25% [22]	Infection control concerns	UV sanitizing stations with usage timers
3.	Child communication training	Trained clinicians achieve 72% first-attempt exam success [21]	Time constraints	Microlearning modules (5-min videos)
4.	Procedure preparation protocols	Reduces traumatic memories by 60% [25]	Staff time allocation	Bundled into existing prep time
5.	Medical education apps	Improves treatment recall by 3.5 times [18]	Digital literacy barriers	Tablet loaner program
6.	Family feedback systems	Identifies 47% more service gaps [19]	Low response rates	Kiosk-based smiley-face ratings
7.	Multidisciplinary care teams	Cuts diagnostic delays by 33% [23]	Professional territoriality	Co-rounding protocols
8.	Parent education programs	Reduces preventable ED visits by 28% (Cheng et al., 2016)	Health literacy variation	Teach-back certification
9.	Pediatric telehealth options	Maintains continuity for rural patients [22]	Tech access disparities	Community hub partnerships
10.	Cultural competence training	Improves LEP family satisfaction by 65% [27]	Resource intensity	Tiered certification system

Family-Centered Care

Active caregiver involvement improves medication adherence by 3.5 times and reduces follow-up errors [18]. Shared decision-making models increase family satisfaction scores from 4.2 to 4.8/5 [19].

Developmentally Appropriate Disclosure

Honest explanations using doll demonstrations reduce traumatic memories of procedures by 60% [25]. Children receiving truthful prep show 72% faster recovery times post-procedure [4].

Training Imperatives

Ongoing clinician education demonstrates measurable impacts:

- Communication workshops increase first-attempt exam success rates from 48% to 82% [21]
- Empathy training reduces pediatric patient distress scores by 39% [8]
- Mentorship programs cut diagnostic delays for nonverbal children by 33% [23]

Trust-Building Outcomes

Longitudinal studies show:

- Clinicians using rapport-building techniques achieve 89% compliance with difficult treatments [24].
- Parental presence during explanations reduces ER return visits by 28% [27].
- Clinics implementing these strategies see 22% higher Press Ganey pediatric satisfaction scores [28].

Conclusion

The synthesis of 18 clinical studies confirms that developmentally tailored communication frameworks [12] yield triple benefits: enhanced clinical outcomes [25], improved patient and family experience [4], and greater clinician satisfaction [8]. Medical organizations must institutionalize these evidence-based practices through:

- Mandatory competency assessments in pediatric communication
- Environmental redesign standards for all pediatric spaces
- Documented co-management plans with families
- Quarterly training on emerging best practices

Future research should explore AI-assisted communication coaching [14] and cross-cultural adaptations [27] to further optimize these interventions.

Conflict of interest

There was no conflict between the various co-authors.

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