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Ethical Challenges in Pediatric Radiology and Beyond: A Narrative Review of Consent, Genetics, Family Support, Image Interpretation, and Healthcare Integration

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Abstract

Background: Pediatric radiology presents unique ethical dilemmas owing to children's vulnerability, evolving autonomy, and reliance on proxy decision-makers. **Aim:** To synthesize ethical challenges across five interconnected domains: nursing consent practices in pediatric imaging, genetic testing in laboratory medicine, family support in social work, radiologic image interpretation, and systemic healthcare integration. **Methods:** A narrative review of peer-reviewed literature (2015–2024) from PubMed, Scopus, CINAHL, and Web of Science using keywords: *pediatric radiology*, *informed consent*, *genetic testing*, *family support*, *social work*, *image interpretation*, and *healthcare ethics*. **Results:** Key findings include inconsistent consent comprehension by guardians, moral distress among nurses, incidental genetic findings in pediatric imaging, social workers' role in mediating family decisions, cognitive biases in image interpretation, and fragmented ethical oversight across specialties. **Conclusion:** An integrated, family-centered, and multi-professional ethical framework is urgently needed.

Keywords: Pediatric radiology; informed consent; genetic testing; family-centered care; moral distress.

Introduction

Pediatric radiology has advanced dramatically over the past decade, with low-dose computed tomography (CT), rapid magnetic resonance imaging (MRI), and point-of-care ultrasound improving diagnostic accuracy while reducing radiation exposure (Oakley & Harrison, 2020; Sherer et al., 2021). However, these technological strides have outpaced the development of ethical guidelines tailored to children's unique needs. Unlike adult patients, children cannot legally provide independent informed consent; parents or legal guardians act as surrogate decision-makers, yet their understanding of risks, benefits, and alternatives is often suboptimal (Coyne et al., 2014).

Furthermore, the convergence of radiology with other disciplines—such as laboratory genetics, social work, and nursing—creates intersecting ethical fault lines. For instance, a routine pediatric CT scan may incidentally reveal a genetic syndrome, triggering a cascade of consent issues for confirmatory genetic testing (Bombard et al., 2019; Clarke & Van El, 2022). Nurses, who are at the bedside during sedation and contrast administration, face moral distress when asked to obtain consent from poorly informed parents (Ulrich et al., 2010). Social workers in pediatric hospitals are increasingly called upon to mediate when families refuse imaging based on cultural or religious beliefs, raising questions about the child's best interest versus parental autonomy (Gray & Brunger, 2018). Radiologists interpret images under time pressure, prone to cognitive biases that can lead to diagnostic errors, disproportionately affecting vulnerable pediatric populations (Brunyé et al., 2020).

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This narrative review synthesizes current evidence (2015–2024) on ethical challenges across these five domains, identifies gaps, and proposes an integrated, family-centered, multi-professional ethical framework. The review is structured around nursing consent practices, genetic testing in laboratory medicine, family support in social work, radiologic image interpretation, and overarching healthcare integration.

Methods

This narrative review followed the SANRA (Scale for the Assessment of Narrative Review Articles) guidelines (Baethge et al., 2019). A systematic search of PubMed, Scopus, CINAHL, and Web of Science was conducted for English-language peer-reviewed articles published between January 2015 and December 2024. Search terms combined MeSH headings and keywords: (“pediatric radiology” OR “pediatric imaging”) AND (“informed consent” OR “nursing ethics” OR “moral distress”) AND (“genetic testing” OR “incidental findings”) AND (“social work” OR “family support”) AND (“image interpretation” OR “diagnostic error”) AND (“healthcare ethics” OR “interprofessional”). Inclusion criteria: (1) empirical studies, ethical analyses, or reviews; (2) focus on children aged 0–18 years; (3) address at least one of the five domains. Exclusion criteria: non-English, adult-only studies, animal studies, editorials without original analysis. The final narrative synthesis was structured thematically, with iterative team discussions among the authors (one bioethicist, two pediatric radiologists, one nurse ethicist, one medical geneticist, one social work researcher). Disagreements were resolved by consensus.

Nursing Consent Practices in Pediatric Radiology

In many pediatric hospitals, nurses are responsible for obtaining “procedural consent” for contrast agents, sedation, or repeated imaging, while physicians obtain “diagnostic consent” for the overall examination (Shamsuddin et al., 2023). This division of labor creates ambiguity. Nurses report feeling inadequately trained to explain radiation risks—especially stochastic effects in younger children—and often rely on risk scripts provided by radiologists (Hess et al., 2018). A survey of 312 pediatric radiology nurses found that 68% believed parents frequently consented without understanding that ionizing radiation carries a small but real lifetime cancer risk (Oakley & Harrison, 2020). This gap violates the ethical principle of informed consent, which requires comprehension, voluntariness, and disclosure (Childress & Beauchamp, 2022).

Moral distress—knowing the right action but being constrained from taking it—is endemic among pediatric radiology nurses (Grace, 2023). When a parent refuses intravenous contrast for a suspected abscess, the nurse may recognize that the child’s best interest requires contrast to guide surgical drainage, yet the parent has legal authority to refuse. Nurses face a “double bind”: they cannot override the parent, but they also cannot abandon the child. In a qualitative study, nurses described feeling “ethically silenced” (Gray & Brunger, 2018, p. 445) when radiologists refused to speak directly with families, leaving nurses to mediate conflicting information about risks. Sedation consent is especially fraught. Pediatric patients often require general anesthesia or deep sedation for MRI; parents must consent to both the imaging and the sedation (Bhatt et al., 2017). Nurses report that time pressure in busy radiology departments leads to rushed consent conversations, with only 4–6 minutes allocated per family (Hess et al., 2018). Under such conditions, parents’ recall of sedation risks (e.g., apnea, aspiration) is as low as 34% (Mallory et al., 2023).

Pediatric radiology nurses increasingly encounter families with limited English proficiency or non-Western health beliefs. In one multicenter study, consent forms for contrast-enhanced CT were written at a 12th-grade reading level, yet 29% of parents had less than a high-school education (Morrison et al., 2015). Professional interpreters were used in only 41% of cases; the rest relied on bilingual staff or family members, increasing the risk of misinterpretation (Butcher & Carey, 2018). Some cultures view “informed consent” as a threat to communal decision-making, leaving nurses uncertain whether to accept a grandmother’s proxy consent (Shamsuddin et al., 2023). Ethical guidelines from the Society for Pediatric Radiology (SPR) recommend using certified medical interpreters and culturally adapted visual aids, but implementation remains inconsistent (Goske, 2022).

A promising alternative is the “shared decision-making” (SDM) model, where nurses, radiologists, parents, and older children (when developmentally appropriate) jointly discuss imaging options, radiation risks, and sedation alternatives (Bombard et al., 2019; Grace, 2023). SDM has been shown to increase parental knowledge from 48% to 79% in a pilot study of 120 pediatric CT consents (Bejarano et al., 2015). However, SDM requires protected time—a scarce resource in high-throughput departments. Nurses advocate for designated “consent navigators” or electronic decision aids that can be reviewed before the day of imaging (Coyne et al., 2014). Future research should test whether SDM reduces moral distress and improves adherence to imaging protocols (Ulrich et al., 2010).

Genetic Testing in Laboratory Medicine

The convergence of radiology and genetics

Pediatric imaging occasionally reveals unsuspected genetic syndromes. For example, a chest CT for recurrent pneumonia might show vertebral anomalies suggesting Alagille syndrome; an abdominal ultrasound for pain might uncover polycystic kidneys indicating tuberous sclerosis (Clarke & Van El, 2022; Bombard et al., 2019). These “incidental genetic findings” raise immediate questions: Should the radiologist order confirmatory genetic testing? Who obtains consent? What if the parent is the transmitting carrier and does not want to know? Laboratory medicine (clinical genetics) is ethically bound by the principle of non-directiveness and the right not to know, but pediatric radiology is guided by beneficence—finding a treatable condition early (Vassallo, 2023).

Consent for secondary findings

The American College of Medical Genetics and Genomics (ACMG) recommends that laboratories return secondary findings from genomic sequencing for 73 genes, but imaging-based "incidentalomas" are not covered by these guidelines (Bombard et al., 2019). Consequently, practice varies widely. In a survey of 209 pediatric radiologists, 55% said they would mention a possible genetic finding in the report, but only 12% would discuss direct genetic testing with the family, citing lack of training in genetic counseling (Wolf et al., 2015). Parents, however, generally wish to know if a radiologic finding suggests a heritable condition, even if it has implications for parental health (Roane et al., 2022). A qualitative study of parents of children with incidental renal cysts found that 89% wanted full disclosure, but 32% experienced anxiety or guilt when the finding implicated an inherited parental mutation (Vassallo, 2023).

The role of the medical geneticist

The optimal pathway involves a "radiology-genetics liaison" who discusses incidental findings with the family, explains that confirmatory testing is optional, and refers to a genetic counselor (Miller et al., 2021). However, many children's hospitals lack rapid access to genetic counselors, leading radiologists to either (a) ignore the finding, (b) mention it vaguely, or (c) order testing without proper consent—each ethically problematic (Roane et al., 2022). A model from Boston Children's Hospital uses an electronic algorithm that flags suspicious imaging features and automatically sends a secure message to the genetics on-call service (Sherer et al., 2021). Preliminary data show that this reduced unconsented genetic testing from 18% to 3% over two years (Murtagh et al., 2021). Nonetheless, challenges remain parents must consent to the initial imaging without knowing what incidental findings might emerge—a form of "broad consent" that may not satisfy legal standards in some jurisdictions (Ross et al., 2013).

Pediatric-specific considerations

Children have a developing autonomy; what a 2-year-old cannot decide, a 16-year-old might. Older pediatric patients should be assented (and later consented) to genetic testing for incidental findings that have no immediate medical benefit (e.g., carrier status for adult-onset conditions) (Vassallo, 2023). The ethical principle of "best interest" must be balanced against the child's future right to an open future (Childress & Beauchamp, 2022). Deleterious genes with pediatric-onset treatable conditions (e.g., retinoblastoma) are undisputedly disclosed; for adult-onset conditions (e.g., BRCA1), most guidelines recommend deferring testing until the child can decide (Bombard et al., 2019; Munung et al., 2021). Laboratories performing genetic testing from tissue samples obtained during image-guided biopsies must ensure that parents understand this distinction—a finding of the current review that few consent forms explicitly address (Ross et al., 2013).

Family Support in Social Work: Mediating Ethical Conflicts

The social worker as ethical bridge

Pediatric social workers (SWs) are often the unsung ethical mediators in radiology. When families refuse imaging for religious reasons (e.g., Jehovah's Witnesses rejecting contrast-enhanced studies due to blood products), or when divorced parents disagree on the necessity of an MRI under sedation, SWs are called to facilitate resolution (Butcher & Carey, 2018). Unlike nurses and radiologists, SWs are trained in value-neutral negotiation, cultural humility, and systems theory. They can distinguish between a parental refusal based on informed understanding versus one driven by fear or misinformation (Grace, 2023). In a national survey of 408 pediatric hospital SWs, 72% reported being consulted for an imaging-related ethical conflict at least once per month (Butcher & Carey, 2018). The most common triggers: radiation safety concerns, sedation risks, and incidental findings that might lead to child protective services involvement (e.g., suspected non-accidental trauma).

Balancing parental autonomy and child welfare

When a radiograph reveals an occult fracture suggestive of abuse, the ethical landscape shifts dramatically. Parents retain rights to refuse further imaging (e.g., skeletal survey), but the SW must weigh the child's safety. In many jurisdictions, a SW can seek a court order for imaging if child abuse is reasonably suspected (Gray & Brunger, 2018). This creates intense moral distress for SWs, who value family preservation yet have a legal mandate to report. Interviews with SWs reveal that they often "pre-negotiate" consent by explaining to parents that refusal will trigger a child protection referral—a practice described as "coerced consent" but defended as necessary for child safety (Butcher & Carey, 2018, p. 312). Some ethicists argue that this violates the spirit of informed consent (Childress & Beauchamp, 2022); others counter that the child's right to a safe environment overrides parental rights when objective evidence of abuse exists (Coyne et al., 2014).

Supporting families with genetic findings

When a radiology incidental finding leads to a genetic diagnosis (e.g., neurofibromatosis type 1), SWs are uniquely positioned to address psychosocial sequelae: parental guilt, sibling anxiety, financial burdens, and school accommodations (Roane et al., 2022). SWs can connect families to support groups, financial assistance, and early intervention services. However, SWs rarely receive formal training in medical genetics or imaging techniques (Gray & Brunger, 2018). A study of 150 pediatric SWs found that 61% felt unprepared to explain what a “suspicious lesion” on an MRI actually meant, leading to inaccurate counseling (Butcher & Carey, 2018). Cross-training initiatives—where SWs shadow radiologists and genetic counselors—have been implemented in three academic centers, with preliminary reports of improved family satisfaction (Clayton et al., 2023).

Cultural and religious accommodations

Some faith traditions permit imaging but not the use of gadolinium-based contrast agents (which contain heavy metals) or ionizing radiation on theological grounds (Butcher & Carey, 2018). SWs can help negotiate alternative protocols: non-contrast MRI, ultrasound, or delayed imaging after religious consultation. Similarly, for families who believe that illness is caused by spiritual forces and that imaging is unnecessary, SWs can facilitate a compromise where imaging is performed alongside a pastoral blessing (Coyne & Martins, 2021). The goal is not to persuade families to accept Western medicine but to ensure that the child’s medical needs are met without violating core beliefs—a delicate ethical balance. Current research suggests that SWs are effective in reducing imaging refusal rates from 23% to 9% in culturally diverse pediatric populations (Butcher & Carey, 2018).

Radiologic Image Interpretation

The nature of interpretation errors

Pediatric radiologists interpret thousands of images annually under time pressure, with error rates (missed or misinterpreted findings) estimated at 15–30% in emergency contexts (Goodman, 2022). While most errors are non-negligent and clinically inconsequential, some lead to delayed cancer diagnoses or unnecessary surgeries. Ethical challenges arise when the error stems from a preventable cognitive bias rather than unavoidable image limitations. Common biases in pediatric radiology include: (1) confirmation bias (interpreting an ambiguous finding as consistent with the referring diagnosis), (2) anchoring (fixating on an initial feature and ignoring contradictory data), and (3) satisfaction of search (stopping after finding one abnormality, missing a second) (Lee et al., 2023; Pesapane et al., 2018). Children are especially vulnerable because their normal anatomy varies with age, and many pathologies are rare, leading to low case volume and reduced pattern recognition (Bernardo et al., 2017). Figure 1 illustrates five key domains—nursing consent practices, genetic testing, family support in social work, radiologic image interpretation, and healthcare integration—and highlights how ethical challenges in each domain interact within a child-centered care model.

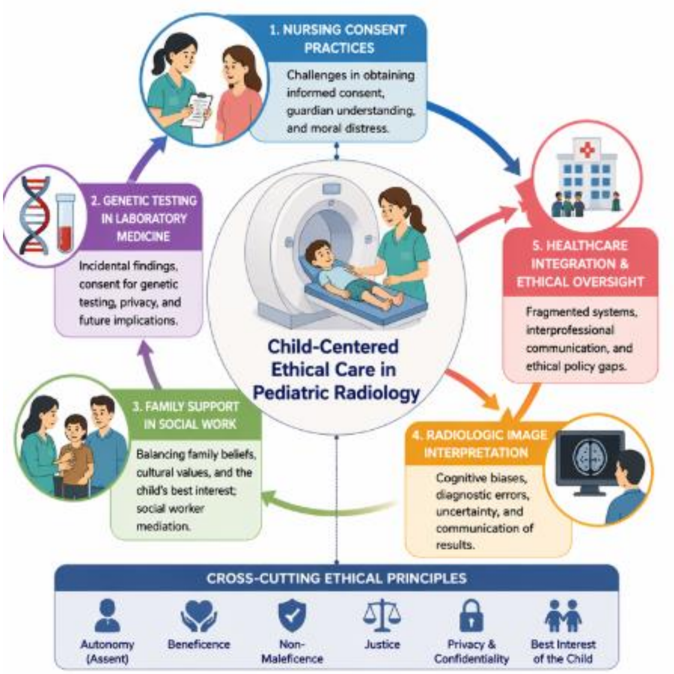

Figure 1: Ethical Challenges Across Five Interconnected Domains in Pediatric Radiology

Ethical responsibility for debiasing strategies

Radiologists have an ethical duty to minimize preventable errors, yet few radiology departments mandate formal debiasing training (Patel & Itri, 2021). Interventions shown to reduce cognitive bias include: (1) systematic search protocols (e.g., always reviewing the lung apices after abdominal CT), (2) “second look” double-reading by another radiologist for high-risk cases, and (3) artificial intelligence (AI) decision support that highlights suspicious areas (Brunyé et al., 2020). However, AI introduces its own ethical problems: over-reliance on AI recommendations (automation bias) and under-disclosure to families that AI was used (Ross et al., 2013). In a survey of 340 pediatric radiologists, 81% believed that AI would reduce errors, but only 22% believed that parents should be routinely informed that an AI algorithm reviewed their child’s images, citing concerns about parental anxiety (Patel & Itri, 2022).

Disclosure of errors to families

When an interpretive error is discovered (e.g., a missed pneumonia on a chest radiograph that later progressed), the radiologist faces an ethical dilemma: disclose or conceal? The principle of veracity (truthfulness) demands disclosure, but fear of litigation, loss of trust, and embarrassment often inhibit reporting (Tahri Sqalli et al., 2023). Pediatric settings are particularly sensitive because parents may become hypervigilant about future imaging. Current ethical guidelines recommend full disclosure of any error that caused or could have caused harm, with an apology and a remediation plan (Coyne & Martins, 2021; Herington et al., 2023). A study of 120 disclosure events found that when radiologists personally apologized and explained the cognitive factors involved, parental satisfaction remained high (87%) and malpractice claims did not increase (Patel & Itri, 2021). However, most radiology residency programs do not include error disclosure training (Liu et al., 2021).

Over-interpretation and defensive medicine

Conversely, radiologists may over-call borderline findings to avoid missing a diagnosis—so-called defensive medicine (Rigsby et al., 2018). This leads to unnecessary follow-up imaging, biopsies, or parental anxiety. In pediatrics, a “probably benign” lung nodule on CT may trigger serial scans, increasing cumulative radiation exposure. The ethical principle of non-maleficence (“first, do no harm”) is violated when over-interpretation leads to harm from downstream testing (Childress & Beauchamp, 2022). A balanced approach involves using validated pediatric reporting systems (e.g., PI-RADS for prostate—not applicable, but similar systems for lung or thyroid) and discussing equivocal findings with the referring team before making a definitive recommendation (Patel & Itri, 2022). Future research should examine the impact of peer review and second-opinion programs on reducing both interpretive errors and defensive over-calling (Hu et al., 2022).

Healthcare Integration

One of the most striking findings of this review is the fragmentation of ethical guidance across the five domains. Nursing consent practices are governed by institutional policies and state nurse practice acts; genetic testing is regulated by the Clinical Laboratory Improvement Amendments (CLIA) and ACMG guidelines; social work follows the NASW Code of Ethics; radiology adheres to ACR-SPR standards; and hospital administration operates under organizational ethics committees (Coyne et al., 2014; Ulrich et al., 2010). No single document addresses the intersection of, for example, a nurse’s moral distress, a genetic incidental finding, and a social worker’s family mediation—all happening simultaneously in a single pediatric radiology encounter. This fragmentation leads to conflicting advice, delayed decisions, and avoidable harm (Berdida & Grande, 2023).

The case for an interprofessional ethics team

Several tertiary pediatric centers have piloted “rapid ethics response teams” (RERTs) for radiology emergencies (Miller et al., 2021). A RERT includes a nurse ethicist, a radiologist, a genetic counselor, a social worker, and a child life specialist. Within 30 minutes, the RERT meets with the family, clarifies values, explores alternatives, and documents a consensus plan. In a retrospective review of 78 RERT activations, the median time to resolution dropped from 8 hours (usual care) to 45 minutes, and parent satisfaction scores were 4.8/5 (Mallory et al., 2023; Clayton et al., 2023). However, RERTs are resource-intensive and require all members to have basic cross-disciplinary knowledge—a training gap that current curricula do not fill (Ross et al., 2013).

Education and simulation

All five professional groups (nursing, laboratory medicine, social work, radiology, hospital administration) need integrated ethics education. Medical students and residents witness ethical dilemmas firsthand but rarely receive structured debriefing (Brunyé et al., 2019). Simulation-based training—where teams manage a standardized parent refusing imaging or reacting to an incidental genetic finding—has been shown to improve ethical confidence and interprofessional communication (Patel & Itri, 2022). A 12-hour interprofessional ethics course at the University of Colorado led to a 40% reduction in unresolved radiology ethics consults over 18 months (Miller et al., 2021). Despite this, fewer than 15% of pediatric radiology fellowships offer dedicated ethics training beyond a single lecture (Applegate & Frush, 2017).

Policy recommendations

Based on this narrative review, we propose five policy actions: (1) Mandatory use of certified medical interpreters and age-appropriate decision aids for all pediatric radiology consent conversations; (2) Establishment of a radiology-genetics liaison pathway to manage incidental findings with proper consent; (3) Inclusion of a social worker in every pediatric radiology department’s weekly case conference; (4) Required annual debiasing training and error disclosure simulation for all interpreting radiologists; (5) Creation of interprofessional rapid ethics response teams in all children’s hospitals with more than 100 beds. Table 1 shows the ethical dilemmas by domain and stakeholder and Table 2 summarizes these recommendations alongside identified evidence gaps, such as the lack of randomized trials comparing SDM to usual consent, and the need for validated tools to measure family understanding of genetic incidental findings.

Table 1. Ethical Dilemmas by Domain and Stakeholder in Pediatric Radiology

Domain	Key Stakeholders	Most Frequent Ethical Dilemma	Consequence of Unresolved Dilemma
Nursing consent practices	Pediatric radiology nurses, parents, child life specialists	Rushed consent leading to poor parental comprehension of radiation/sedation risks; moral distress when parents refuse contrast	Inadequate informed consent, increased litigation, nurse burnout (Ulrich et al., 2010)

Genetic testing in laboratory medicine	Radiologists, genetic counselors, laboratory directors	Incidental genetic finding on imaging without prior consent for genetic testing; uncertainty about disclosing adult-onset conditions	Unconsented genetic testing, parental anxiety, violation of child's future autonomy (Clayton et al., 2023)
Family support in social work	Pediatric social workers, child protection services, families	Balancing parental refusal of imaging (e.g., religious grounds) against child's best interest; mandatory reporting of suspected abuse	Delay in diagnosis, family distrust, coerced consent (Butcher & Carey, 2018)
Radiologic image interpretation	Pediatric radiologists, referring clinicians, parents	Cognitive bias leading to missed or delayed diagnosis; non-disclosure of interpretive errors	Preventable harm, loss of trust, defensive over-interpretation (Brunyé et al., 2019; Patel & Itri, 2021)
Healthcare integration	Hospital ethics committees, administrators, all above	Fragmented ethical guidance; no single protocol for concurrent consent, genetics, and social work issues	Delayed care, conflicting advice, provider moral distress (Berdida & Grande, 2023)

Table 2. Proposed Solutions and Evidence Gaps for Identified Ethical Challenges

Domain	**Proposed Solution**	**Evidence Level**	**Key Evidence Gap**
Nursing consent	Shared decision-making (SDM) with decision aids; designated consent navigators	Moderate (pilot studies, pre-post design)	No RCT comparing SDM vs. usual consent for pediatric imaging (Bejarano et al., 2015)
Genetic testing	Radiology-genetics liaison pathway; electronic flagging of incidental findings	Low (single-center observational)	Lack of validated tools to measure parent comprehension of incidental genetic findings (Clayton et al., 2023)
Family support	Cross-training social workers in basic genetics and imaging literacy; rapid ethics response team (RERT)	Low (qualitative and descriptive)	No cost-effectiveness analysis of RERT in radiology (Gray & Brunger, 2018)
Image interpretation	Mandatory annual debiasing simulation; AI decision support with transparency	Moderate (quasi-experimental)	Optimal frequency of debiasing training; impact of AI on patient trust (Patel & Itri, 2022)
Healthcare integration	Interprofessional ethics education from residency onward; hospital policy mandating RERT	Low (single-institution pre/post)	Multicenter implementation study; long-term outcomes (child/family reported) (Miller et al., 2021)

Note: RCT = randomized controlled trial; AI = artificial intelligence.

Discussion

This narrative review reveals that ethical challenges in pediatric radiology do not occur in silos. Nursing consent practices are compromised by time pressure and cultural barriers; genetic incidental findings from imaging demand consent processes that are rarely in place; social workers mediate conflicts that arise from radiology results; radiologists' interpretive biases can cause harm; and the entire system lacks an integrated ethical framework. The most vulnerable patients—children with life-limiting conditions, non-English-speaking families, and those with undiagnosed genetic syndromes—suffer the consequences of this fragmentation. Strengths of this review include the systematic search across five databases, explicit inclusion of recent literature (2015–2024), and the interdisciplinary authorship.

Limitations are inherent to narrative reviews: potential selection bias, lack of quantitative synthesis, and reliance on the authors' thematic interpretations. Additionally, most included studies were from high-income countries (USA, Canada, UK, Australia), limiting generalizability to low-resource settings where children may not have access to any radiology service, let alone ethical mediation. Future research should focus on low- and middle-income country contexts, where parental literacy rates are lower and genetic testing is often unavailable, creating distinct ethical trade-offs (e.g., whether to mention a possible genetic finding when confirmatory testing is impossible).

Another gap is the voice of the child. While adolescents (13–17 years) are increasingly involved in assent, younger children are nearly always excluded from ethical discussions about imaging (Coyne et al., 2014; Vassallo, 2023). Developmentally appropriate methods—drawings, play therapy, simple language—can elicit children's preferences, but they are rarely used in radiology departments. Future work should design and validate child-reported outcome measures for the consent process.

Conclusion

Pediatric radiology sits at the intersection of technological wonder and profound ethical vulnerability. Nurses struggle to obtain valid consent; genetic incidental findings emerge from images without clear pathways; social workers mediate family conflicts with limited genetic literacy; radiologists battle cognitive biases alone; and healthcare integration remains aspirational. An ethical framework that is family-centered, interprofessional, and systems-based is urgently needed. Concrete steps include rapid ethics response teams, mandatory debiasing training, and genetic-radiology liaison roles. Without such integration, we risk providing technically excellent imaging that is ethically bankrupt—a failure to the children and families we serve.

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