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VIEWPOINT

Social media use and paediatric practice: Hippocratic help, hype or harm?

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Social media is increasingly a part of our personal and professional life and is here to stay. Here, I reflect on issues surrounding the use of social media (SMU) in the digital health context by clinicians in Australian paediatric health care. I aim to briefly highlight some inherent multifactorial and contextual ethical considerations which mainly relate to professionalism; including boundaries, obligations to patients and families within the therapeutic alliance, and balancing the help, hype and harm of SMU in clinical practice. I conclude that digital health and SMU are ubiquitous, and can be beneficial if used circumspectly with Hippocratic principles that have been updated for the modern era and are grounded in ancient moral codes. Unfettered SMU however, without adherence to ethical and legal guidelines is problematic, and may expose patients, families and clinicians to significant risk of harm and moral vulnerability. Justifiable, explicit, consistent and regularly reviewed boundaries, both professional and personal, are ethically advisable. These should reflect, and adapt to, the rapidly evolving nature of social media as imprudent digital health and SMU without proportionate limits, may undermine still relevant Hippocratic tenets, and the primacy of *doing no harm*.

Key words: developmental; education; ethics; general paediatrics.

What Does Hippocrates Have to Do With It?

The Hippocratic Oath (HO) has provided a time-honoured tradition of ethical principles to guide medical practice. Traditionally, this has been adhered to by the physicians and disciplines who pledge to uphold it. Notably, medical schools and universities now variably promote their own version of the HO.[1] Customarily, there are no consequences for breeching the oath, except implicitly though peer review. While medical negligence legislation quantifies and sanctions harm to a patient by a medical practitioner.[2] The contemporary shift in health-care delivery to digital platforms has meant that while the therapeutic relationship remains core to patient care, health-care professionals (HCPs) are not only physicians, but rather a heterogeneous interdisciplinary group of clinicians. All have varying duties to the patient and to themselves yet they are part of a wider multidisciplinary team, and may have diverse conceptions of the relevance or purpose of any oath in a changing therapeutic environment.[2]

A 2017 study canvased the views of 2674 physicians and medical students of varying age and experience regarding the relevance of the HO today.[1] Clinicians over 65 years were more likely to opt to keep it, although 20% felt it should be revised. In the younger age group (under 34 years), 40% wished to keep

but revise it, and 16% felt it was irrelevant and should be discarded.[1] Thus, the HO may be perceived as more relevant by older physicians, but less relevant by younger ones and other HCPs within a multidisciplinary team.

A 2021 article in the *Medical Journal of Australia* (MJA) asked 'Would Hippocrates be on Twitter'? The author Rebecca Szabo, argues persuasively that Hippocratic values remain relevant, and HCPs should become collators, curators and disseminators of health information; not just producers – which has been their traditional role. She states that broad and ethical sharing of medical knowledge is fundamental to the Hippocratic ethos and should be part of the 'moral compass' of HCPs.[3] Szabo recommends more education on responsible social media use (SMU) to fill the void; critical appraisal of SM sources, the limitations of SMU and lastly to 'future proof' SMU, so we can harness the positive elements and limit the negative.[3]

Indeed, social media platforms have been called a 'digital town hall' for all modes of health-care exchange.[2] X, formerly Twitter, is just one of the multifaceted forms of social media embraced worldwide and favoured by HCPs and scientists to communicate with the public, media (and politicians) to share current information and translational research (see Table 1).[4] X, which changed its name in July 2023, is also controversial as the platform is now privately owned by Elon Musk, a self-proscribed 'free speech absolutist',[5] and has frequently been co-opted by self-interested parties for rapidly spreading mis/disinformation. Posts, previously 'tweets' were limited to 280 characters (Unicode Glyphs) but now anything, including video content can be posted. With the X app, this accelerates quick reactionary posts and responses (or 'xeets' as some have suggested). This promotion incisive, polarising comments and content designed to foment.

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Table 1 Social media is defined as any interaction online that involves a conversation, networking, sharing content or images, whether professional or personal[26]

Social media purpose	Platform examples
Social networking	Meta (formerly Facebook), X (formerly Twitter), Weibo, WhatsApp, WEChat
Professional networking	LinkedIn, Xing, Meetup, Lunchmeet
Membership or interest groups	Doctors.net
Media/content sharing	Instagram, WhatsApp, YouTube, Flickr, TikTok
Discussion forums	Reddit, Whirlpool
Content production	Blogs – Tumblr, Blogger. Microblogs – Twitter
Information/knowledge aggregation	Wikipedia (crowd edited)
Virtual reality/gaming	Second Life and booking sites/Apps. HealthEngine, Whitecoat

To highlight a persistent misconception about Hippocrates and the HO itself, may be prerequisite to discussing SMU itself: We actually know little about Hippocrates himself despite the power his name holds even today.[6] It is established that Hippocrates was a Physician in the classical Greek tradition and was well-known in his time; he was born in 460 BCE in Kos, died in 375 BCE and was featured in Plato's writings.[7] He was an *Asclepiad*, one born into a multigenerational family of physicians. The HO itself, was not written solely by Hippocrates[3,5]; nor was it ever derived as a static, immutable approach to medical ethics. Rather, it developed as a prevailing ethos that was refined over the centuries. Notably, it was not mentioned as an entry requirement to a degree or practice until 1558, or used as a sworn medical oath for medical graduands until 1804.[7,8] So, it is not situated in a particular historical period and culture. This has raised debate about whether the HO (or any such framework) is a fit set of principles to guide modern-day physicians facing a rapidly evolving, technology-driven and digitally enhanced landscape. For instance, a classical Hippocratic statement such as 'I will neither give a deadly drug to anybody who asked for it, nor will I make a suggestion to this effect' is not literal. This is from the classical version of the Hippocratic Oath, translated from the Greek by Ludwig Edelstein. (The Hippo- cratic Oath: Text, Translation, and Interpretation, by Ludwig Edelstein. Baltimore: Johns Hopkins Press, 1943). Although analogous statements do exist in more modern versions (The modern version of the Hippocratic Oath was written in 1964 by Louis Lasagna, Dean of the School of Medicine at Tufts University).

Regardless, the Oath alone is arguably inadequate contemporaneously as the cornerstone of medical professionalism and ethics, especially in view of the increasingly rapid production and dissemination of knowledge amplified by the internet.

In 1950, for instance, it was deemed achievable for a doctor to learn and know 'everything', with a 50-year rate of doubling of medical knowledge. By 2020, the rate was estimated to be 73 days, and that was prior to the rapid upsurge of information during COVID-19, some valid and some discredited.[9,10]

Given the overwhelming influence of social media on human health and behaviour with the historic lapse in Hippocratic relevance, it might be necessary *and* sufficient to develop a re-envisioned Hippocratically infused ethical framework for SMU, to avoid jettisoning germane ethical principles altogether. It could also be crucial to producing high-quality knowledge, prospective clinical practice, ethical institutions and research.[11]

Help, Hype or Harm?

There is little doubt that the use of social media has benefited both clinical practice and scientific research in numerous ways. Such platforms allow for rapid access to and sharing of information. This has had dual benefits. Patients and families can readily access information about their health care, seek wider knowledge and connect with other families experiencing similar health conditions and garner community connection and support. Additionally, clinicians are able to ask timely, specific, scientific questions of global experts, seek alternate medical opinions for rare conditions or novel therapies in children, and rapidly disseminate disciplinary advances and translate research into the public domain.

However, scientific researchers may experience pressure to rapidly disseminate scientific data,[12] even when trials are early phase and initially only assessing safety. This early information can be misleading and may distort community perceptions of the benefits of novel therapies. This can lead to therapeutic 'mis-estimation' where the potential benefits of novel research are implicitly enhanced and the possible harms of the trial therapy downplayed. Gene therapy, for example, even when still in phase 2 trials, may be imbued with high expectations of success. Families desperately hope their child may be enrolled in a limited trial, and clinicians strive to recruit children with few other treatment options, such as those with rare cancers or Duchenne Muscular Dystrophy. This may diminish the equipoise required for valid clinical trials and unconsciously minimise the potential for harm to the patient/trial participant.[13]

For clinicians, 'who' is *in* the paediatric clinical encounter has fundamentally altered. In the past, a triadic therapeutic relationship included the child, parent/s and clinician, carers now often come prepared with knowledge or research obtained from internet searches about their child's condition. Globalisation effectively imports external parties into the clinical encounter, some with agendas unrelated to the child's interests. Information from parent blogs and support groups, specific condition advocacy websites, and news media sites is common. Some of these may be validated by evidence, whereas others may involve misinformation. There is no digital quality filter, and internet search engines use coding algorithms. Digital platforms serve content to their audience with the sole aim of maximising time spent on the platform, creating an 'echo chamber' for like-minded viewpoints. Meta, for instance, is vulnerable to this phenomenon in reinforcing information about one potentially erroneous view. Meta groups promoting vaccine hesitancy and resistance have increased over the COVID-19 pandemic.[10] There is also variability in health literacy and discernment of those searching online. Parents and families do not generally rank the veracity or hierarchy of evidence in the same way as HCPs (see Fig. 1). This discordance in perception of what is helpful and what is harmful can lead to therapeutic distrust and dissent, resulting in a loss of focus on the child.
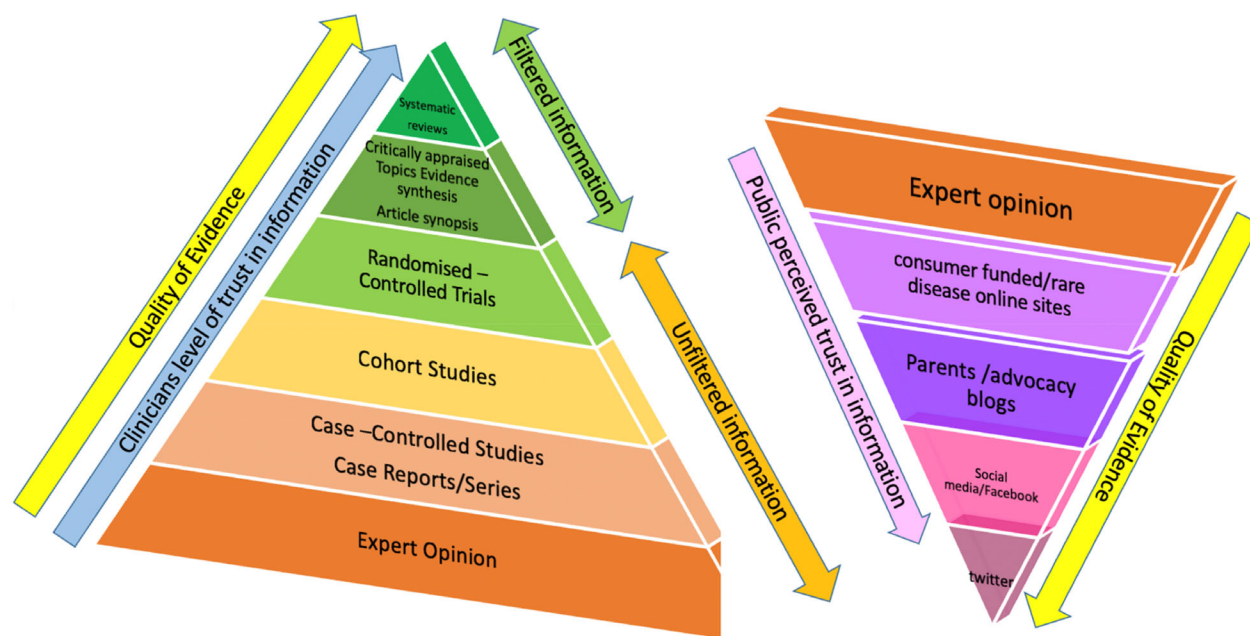
Fig. 1 The scientific Hierarchy of Evidence *versus* that perceived in the public domain as valid/trusted.

Recent sentinel UK cases such as that of Archie Battersbee are illustrative. Archie's parents sought support and crowdfunding via social media to prevent the NHS from withdrawing ventilatory support following his brain death from an acquired brain injury in 2021. Their plea extended through the UK courts over a hyped and traumatic 8-month period involving multiparty conflict. It finally led to review by the European Human Rights Commission. Although the family's plea to intervene and prevent the withdrawal of Archie's mechanical ventilation was ultimately denied, the exposure to external legal groups, religious bodies and public interest and scrutiny was immense. Archie, though unresponsive, arguably became a means to others' ends. The outcome, a ruling to cease Archie's life support, sadly offered no moral relief for either party. Questions remain, regarding the parents' role in harnessing social media as a powerful form of disruptive activism in relation to trust; in medical expertise, shared decision-making and the foremost interests of the child.[14,15]

Hype can also be generated by professional websites with links to Instagram, Meta or X from 'experts' who seek to advertise services or benefit from direct-to-consumer approaches and private insurance schemes. YouTube videos can convey emotional patient stories promoting hope for novel or experimental health interventions. Professionals in a public system contrastingly have to adopt a more cautionary guideline approach to interventions.

Selective Dorsal Rhizotomy (SDR), for instance, is a spinal surgical procedure gaining credence nationally and internationally to manage spasticity in the lower limbs of some children with cerebral palsy. The procedure involves selectively severing specific spinal dorsal nerve tracts to reduce excessive tone in the muscles that are inhibiting the child's ability to stand and walk. In the United States, this treatment is funded by private insurance, and specialists may actively self-promote, claiming benefits for a wider cohort of children than would be eligible for SDR in

Australia. Severing these nerve filaments is irreversible, so exactitude is crucial. Parents who contact a self-proclaimed expert practitioner directly via a website, without a referral or transfer of care can be exposed to financial and psychological harm.[16] Harm to the child occurs if the surgery does not achieve the hoped-for benefits, or if parents are unable to afford the extensive and costly US rehabilitation programme, and then seek more resource-limited rehabilitation within Australia's public health system. Clinicians may feel moral disquiet when their advice regarding the child's best interests is ignored or they are cut-out of interprofessional communication and patient handover. This may undermine the long-term therapeutic relationships for a child who will require life-long health care.[17]

The metaverse is also portent on the digital horizon. Facebook itself has recently changed its name to Meta. Although yet to be conceptually defined, this is envisioned as a 3D shared virtual space with persistent digital objects where we can socialise, work, entertain and learn. Virtual/ augmented reality, blockchain, digital twins, artificial intelligence and machine learning will likely transform clinical practice and human health.[18] Medical technology and artificial intelligence (AI) could enable a massive digital and data ecosystem where we interact with avatars for interventions, imaging or research.[18] It might also enhance health challenges to privacy and equity or promote gaming and addiction such as internet gaming disorder, which is a growing challenge for the health of children.[19] Although the 'brave new' metaverse is not yet here, we should embed shared moral values now, to prepare both ethically and legally.[20]

Safe SMU

The potential professional harms of SMU are well-addressed by professional bodies such as the Australian Health Professional

Table 2 Areas of Social Media Use (SMU) with ethical (and medico-legal) concerns and suggested approaches[21,29]

Value	Potential concern	Suggested approach
Privacy (person-focused – how an individual shares information about themselves)	Security can never be guaranteed. Social media sites, blogs and feeds may be read by patients, employers, colleagues and regulatory or professional bodies.	Prior to posting, consider how you would feel if other parties saw what you had written and disseminated it to strangers. Even if anonymised, the post may be recognisable by patients or colleagues. Review your privacy settings for each of your social media profiles regularly and update settings.
Confidentiality (information focused – what/how information has been shared about someone in a trust relationship	Communicating patient information or details of a clinical case, or an image of a patient's condition (even if 'deidentified') with others online breaches confidentiality without consent of the person/patient (whether living or dead). Most breaches occur inadvertently.	Reflect carefully before you post comments, images or videos on any SM platform (even professional sites may allow other users). Consider potential unintended consequences, like identification via photo backgrounds, and the sum of posted information leading to identification. Photos of medical conditions or anatomical parts of the body still require consent of the patient (even if no facial features are shown). Remember, a digital footprint is immortal, and even seemingly harmless comments about your working day, for instance, can be perceived differently by others viewing them.
Cultural Sensitivity - social and clinical	As a registered HCP, your opinions on clinical issues are influential. Posting comments on social media that promote personal views that intersect with contested social issues may impact others' sense of cultural safety and lead to patients feeling 'othered' or discriminated against. Consider the historical health context and how certain groups, such as Aboriginal People, have been underserved at the individual, community and population levels.	Avoid social media posts that could conflate some social behaviours with moral goodness or badness. For example, a comment like 'abstinence is the best way to avoid HIV and monkeypox' may make a young person feel unable to reveal their sexuality to their treating clinician. Seek to redress inequity and not to reinforce it. Promote health with inclusive and non-discriminatory messaging that builds trust for more vulnerable patients and groups.
Professional boundaries	Blurring of behaviour can occur with SMU. Communication should be respectful, courteous and effectively shared. How you express yourself should not differ from a face-to-face clinic interaction to an online one. Friend requests via personal Facebook or Instagram profiles, or direct messages should not be encouraged or engaged in. Grievances should be settled through robust institutional processes that support patients and families, away from social media.	Politely and clearly inform any patient, parent or family member that personal SM connection is not appropriate and redirect them to the appropriate expert professional profile or to the care coordinator of the department or practice.
Professional respect and etiquette	Harassing, denigrating or making unsubstantiated or defamatory comments	Treat colleagues fairly and with courtesy and respect.

(Continues)

Table 2 (Continued)

Value	Potential concern	Suggested approach
	regarding colleagues or the organisation online.	
	Airing professional or personal grievances should be avoided.	Communicate judiciously with other colleagues who may already be providing care.
	Beware of providing clinical advice to patients who make direct approaches, or giving expert opinion when the patient is primarily under the care of another clinician without contacting them first.	Work and give recommendations and comments only within your designated scope of expertise and practice, based on consideration and benchmarked peer review.
Anonymity	If you are identified as a physician or HCP on any publicly accessible SM site, you should not post anonymously nor state your name openly.	Be transparent and demonstrate integrity. Always consider your duty to the patient, the health community and also of maintaining public trust in medicine and health more widely
Conflicts of Interest (COI) – financial and non-financial.	Any COI such as financial or commercial relationships, for instance, with pharmaceutical companies or sponsors for trials can undermine trust of the patient or family. Even deeply held beliefs or world views can be considered as non-financial conflicts in some decision-making contexts.	Openly and pre-emptively declare any COI and what would be reasonably considered by others to be a bias.
		Act to mitigate bias by recusing yourself, or asking a delegate to stand in.
Complaints and grievances	Patients, parents and families are increasingly using social media sites to post complaints, comments and grievances regarding their health-care providers. Unfavourable comments perpetuate online, even years later.	Responding or engaging directly online can potentially worsen the problem.
	Such derogatory or negative feedback can feel unjustified, misleading and intermittently abusive or defamatory.	Service providers can remove obscene or defamatory material, if notified.
		Seek ethical/medico-legal advice re correcting misinformation.
		Your institution's public relations department together with the clinical ethics service can develop support strategies with you.
Public health messaging	Controversial views regarding public health initiatives' safety or efficacy may be inconsistent with codes, standards, professional guidelines or public health campaigns. Contradictory views about best available evidence-based recommendations can reinforce disinformation campaigns and legitimise false health claims which may endanger children and health communities.	Use situational humility in practice. Interrogate self-beliefs and their basis, and demonstrate caution when posting any comment that may breach professional responsibilities.
		Sharing or 'liking' content that is not scientifically valid, may implicitly endorse false claims or promote misinformation.

HCP, health-care professional; SMU, social media use.

Regulation Agency (AHPRA) and the Medical Board of Australia (MBA). These sites are worth reviewing regularly for updates in this rapidly evolving digital environment.[21] In essence, the responsible and safe use of digital technologies and social media should mirror real-life professional and Hippocratic practices embedded in benchmarked clinical care. Most paediatric

clinicians well recognise the risks of blurring professional boundaries or sharing personal information with patients either in the clinic or online. Requests to 'friend' a patient or family online via Meta or Instagram should be eschewed, as this heightens the risk of breaches in confidentiality and professional etiquette with a wider digital audience. Since 2003, and the advent in the US of the Health Insurance Portability and Accountability Act and in Australia, 1988 Privacy Act, health-care entities are legally only allowed to disclose protected health information to facilitate 'treatment, payment and health care operations'.[22]

Evidence abounds however, that harmful behaviours are proliferating online. Identity deception, harassment and socio-political polarisation are prevalent dynamics on the web.[23] Anonymity seemingly breeds incivility. Following targeted commentary threads online can be compelling, yet morally and emotionally distressing and detrimental to wellbeing. Moreover, few platforms are able to reign in commentary once it cascades out of control.[23] Ultimately, remembering social media acts more like a two-way mirror, and that there is a person behind any digital wall of seeming anonymity is key. In essence, being unable to 'e-see' others, does not preclude others can 'e-see' you. Being cognisant of this can support modelling of respectful behaviour, sound patient advocacy, scientific education and research dissemination.

A re-envisioned form of the HO or a framework underpinned by ethical principles which interdisciplinary clinicians of all ages and stages could engage with may have a place in the clinical encounter.[2] In contemporary practice, solely stating 'Don't Do It', while sometimes necessary, is (now) not sufficient. There is now no defensible, ageist excuse for Luddism (Luddism was a movement that emerged in the 19th Century in England, led by workers and artisans protesting against the threat to their jobs of emerging industrialisation and the use of machinery in production processes, for example, looms and threshers. Luddite is a modern term for someone unable to adapt and uptake internet technologies).

The Mayo Clinic has published a simple 12-word social media policy, a succinct aphorism that can be committed to memory and addresses the salient issues[3,24]:

'Don't lie, Don't Pry

Don't Cheat, Can't Delete

Don't Steal, Don't Reveal'

We could judiciously add 'Don't Explete', to encourage civility in all online interactions, no matter how seemingly anonymous. And 'Be discrete'; to promote reflexivity and confidentiality given the viral nature of social media and the rapid spread of information via various platforms.

Adopting the precautionary principle cogently for safe SMU may be worthwhile. That is a 'strategy for decision-making when physicians and patients lack evidence relating to the potential outcomes associated with various choices'. According to this version of the principle, which can be reasonably extended to the potential harms of cavalier SMU, 'one should take reasonable measures to avoid threats that are serious and plausible'.[25] Most clinicians would agree that the possible harms of unfettered SMU, both personally and professionally, fulfil these criteria.[26]

The Medical Defence Union UK, has a useful web page which is relevant to Australian clinicians.[27] In the Australasian context, the Australian Medical Board has a comprehensive guide for clinicians on how to meet their obligations under Australian law. It provides contextual examples of problematic SMU and helpful strategies to protect both the clinician and the patient[21] (see Table 2).

Paediatric-specific issues of SMU

Irrespective of the therapeutic cohort – adults or children, all parties should carefully consider the perpetuity of their digital footprint, as while content can be removed, digital traces remain. There are also specific paediatric health-care obligations. These primarily relate to children's dependency, and our reliance on parents to act as their surrogate health decision-maker depending on their age and development. Essentially, parents hold their child's autonomy in trust, yet this agency or autonomy may develope slowly, incomletely or not at all for some children developed, or will not due to developmental conditions or delay.

The purpose of sharing information or images pertaining to a child should be interrogated carefully in regard to a child's future agency and preferences. Maintaining an 'open future' for a child requires that neither parents nor clinicians should make decisions that might constrain a child's future options.[28] Media content sharing, particularly images or videos of children shared by parents online has been called 'sharenting'. Sharing content regarding a child's condition or health can be emotive and powerful in garnering followers and rewards in the form of social and emotional support and also commercial goods in some instances. Paediatric institutions must uphold the child's interests when sharing their image publicly to raise funds, for example, on social media for telethons. Even where a parent has consented, the dignity, personhood and assent (if possible) of the child should be primary.

Conclusion

Paediatric HCPs arguably have a greater obligation than their adult colleagues to protect sick children, young people and their families. Integral to children's wellbeing however, is that of the clinicians who care for them. Hippocratic principles like *first do no harm* are still pertinent to HCP use of social media, but we must go further, both to curtail risky and unprofessional behaviour and to maintain interprofessional integrity as well as parent and public trust in clinicians and medicine itself. Clinicians must also harness the positive aspects of SMU to fill harmful voids increasingly filled by misinformation. Being proactive in adapting, adopting and amending HCP professional standards, practices and policies can protect and enhance the therapeutic alliance and patients' and families' perceptions of medical professionalism and expertise. This may be a step towards repairing and (re)building trust with patients, families and colleagues. It could also redirect SMU away from what here has been called, Hippocratic harm and hype, towards a future-fit form of Hippocratic help.

Acknowledgements

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