

Clinicians and their cameras: policy, ethics and practice in an Australian tertiary hospital

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Abstract. Medical photography illustrates what people would prefer to keep private, is practiced when people are vulnerable, and has the power to freeze a moment in time. Given it is a sensitive area of health, lawful and ethical practice is paramount. This paper recognises and seeks to clarify the possibility of widespread clinician-taken medical photography in a tertiary hospital in Australia, examining the legal and ethical implications of this practice. A framework of law, state Department of Health policy and human rights theory were used to argue the thesis.

Clinicians from 13 purposively chosen wards were asked to participate in an anonymous survey and confidential in-depth interviews. Questions were generated from the literature and local knowledge on the topics of ‘occurrence’, ‘image use’, ‘quality of consent’, ‘cameras and technology’, ‘confidentiality’, ‘data storage and security’, ‘hospital policy and law’ and ‘cultural issues’. One hundred and seventy surveys and eight interviews were analysed using descriptive statistics and theme and content analysis, then triangulated for similarity, difference and unique responses.

Forty-eight percent of clinicians surveyed take medical photographs, with the majority using hospital-owned cameras. However, one-fifth of clinicians reported photographing with personal mobile phones. Non-compliance with written consent requirements articulated in policy was endemic, with most clinicians surveyed obtaining only verbal consent. Labelling, storage, copyright and cultural issues were generally misunderstood, with a significant number of clinicians risking the security of patient information by storing images on personal devices.

If this tertiary hospital does not develop a clinical photography action plan to address staff lack of knowledge, and non-compliance with policy and mobile phone use, patients’ data is at risk of being distributed into the public domain where unauthorised publication may cause psychological harm and have legal ramifications for the hospital, its patients, and staff.

What is known about the topic? While professional medical photography has been widely used for recording patient condition, evidencing care and teaching, little is known about the use of digital photographs taken by clinicians in Australian hospitals. Our research demonstrates that the ubiquitous nature of personal camera phones is encouraging clinicians to practice medical photography on personal devices. Clinicians who take photographs of patients have practical, legal and ethical issues to negotiate. Without careful management of these images, especially on personal devices, accidental and deliberate misuse is possible.

What does this paper add? This paper adds to knowledge of clinician-performed medical photography practice: no other study has reported on the subject across multiple wards in an Australian tertiary hospital. This paper defines key areas of inquiry relevant to the topic, documents poor knowledge and compliance with hospital policy and highlights areas of risk to patients, staff and hospital.

What are the implications for practitioners? It is likely that the behaviours and knowledge of digital photography documented in our research site are similar to that in other hospitals. Practitioners, managers and policy makers need to be aware of the ethics and regulations regarding consent, use, storage, disposal and ownership of patients’ digital images to ensure the practice follows ethical and legislated guidelines.

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The presence of digital cameras on almost every electronic device in the modern era means there are rarely moments in life that are not recorded. This proliferation of digital cameras also

gives clinicians a high degree of autonomy in the acquisition of medical photographs. Medical photography, also known as clinical photography, is extremely useful in clinical diagnosis,

capturing transient symptoms, enhancing inter-clinician communication and evidencing care, and is used extensively in clinical education,^{1–3} but the practice needs to be managed with caution. Medical photography captures what people would prefer to keep private,⁴ is practiced when people are vulnerable⁵ and has the power to ‘freeze a moment in time long after an illness has passed’.^{6–8} Clinical photography differs from other imaging by providing a permanent record of an undignified experience with patient identification.⁸ We explored its occurrence, as well as the legal and ethical phenomenon of clinician-taken photography in an Australian tertiary hospital.

Clinicians who take medical photographs have equivalent legal, and possibly greater ethical, responsibilities than do professional medical photographers. Patients who undergo clinician-taken medical photography can become unequal partners with a doctor, believing they need to comply with photography as part of their treatment, or worse, that they must agree with clinical photography to get the best possible care.⁸ As the distribution of electronic data through the internet, social media and mobile devices is becoming easier, appropriate consent for medical photography (and its subsequent use) is a fundamental consideration.^{9–11} Additionally, lawful data privacy, protection, storage and disposal are critical.

We identified the presence of widespread clinician-performed medical photography in an Australian tertiary hospital and examined some of the legal and ethical implications of this practice using a framework of law, ethics and hospital policy to evaluate the risk to patients.

Methods

This study was located in a 350-bed tertiary referral hospital in Australia. The anaesthetic department, emergency department, high-risk foot service, intensive care unit, division of surgery, ophthalmology, all surgical wards, all general medical wards, rehabilitation ward, obstetrics and gynaecology division, maternity unit and the renal ward, were purposive research sites based on known, or suspected clinician-taken medical photography.

A mixed methods design was employed, producing both qualitative and quantitative data to investigate the eight literature-generated topics: ‘occurrence of photography’, ‘image use’, ‘quality of consent’, ‘cameras and technology’, ‘confidentiality’, ‘data storage and security’, ‘hospital policy’ and ‘law and cultural’ issues.⁸

Doctors and nurses were invited, via email and public notices, to complete an anonymous survey developed from a questionnaire designed by Taylor, Foster *et al.*¹² Nineteen questions were posed and, modifications to the original questionnaire were made to include technology choice and inquiry relevant to Australian law and cultural diversity.¹² Questionnaires were distributed in hospital recreation areas and staff mail boxes. Subsequently, semi-structured interviews with volunteer respondents clarified and added nuance to the survey results. The interviews, composed of 13 open-ended questions, aimed at providing qualitative data and information that could not be gathered through observation.¹³

The survey results were analysed using basic descriptive statistics collated into Microsoft Excel, and the interviews were analysed using the literature-generated topics. Where a response

directly discussed one of the eight literature-generated topics, the text was highlighted and a code was assigned.

Results

Of a total eligible population of 738 staff comprising 151 doctors (20.5%) and 587 nursing staff (79.5%), 170 completed the survey with three ineligible responses. Eight interviews were conducted with medical and nursing staff, with equal numbers of males and females.

Occurrence

Of the 167 survey respondents, 80 (47.9%) took photographs of patients, with all interviewees either taking photographs or, in the case of a senior nurse manager, allowing staff to take photographs. All eight interviewees commented that they had witnessed other staff taking photographs. Although most clinicians only photographed 1–5 times per year, a minority of clinicians in the surgical department, hyperbaric unit, high-risk foot service, emergency department, ophthalmology and the maternity department photographed with greater frequency.

Image use

The survey revealed that 70 of 80 (87.5%) clinicians who took photographs did so for the patients’ medical file. Education was the next most-likely reason to take photographs, with 41 of 80 (51.2%) clinicians photographing for teaching or education purposes. Eight main reasons to take photographs were discovered, including the documentation of significant cases such as trauma, surgery or oncology; to document transient symptoms; for wound tracking, including to reduce unnecessary changes of costly wound dressings and the reduction in discomfort to patient when dressings are removed unnecessarily; education; publication; tele-health for both inter-clinician communication and inter-hospital communication; personal record and patient memories.

Consent

Consent was extensively addressed in both the survey and interviews. Forty-two of 70 (61.8%) clinicians who photographed for the patients file indicated they always got consent. However, Table 1 shows that not all participants obtained consent all the time, with verbal consent the most frequent mode of consent.

The practice of verbal consent was raised by nursing and medical staff, who commented during interviews that they were concerned about the practice. One nurse recounted an event congruent with survey findings that not all staff obtained written consent:

Table 1. Consent type

Purpose of medical photography	Number of clinicians and consent type				Total
	Written	Verbal	No consent	No data	
Patient file	11	46	7	5	70
Education	11	24	1	5	41
Personal record	2	7	0	2	11
Other	11	0	0	1	12
Publication	1	1	0	1	3

'I don't think people put significant enough emphasis on the consent process. I have often told people you know 'make sure you have got consent' and they will go 'oh yeah, yeah, but it's just for education'.' (Nurse 4, S7, L5)

Cameras and technology

All current capture devices used digital technology, with 65 of 80 (81.2%) survey participants using hospital cameras, and six of 80 (7.5%) using personal cameras. Of the eight (10.0%) staff who did not use these devices, seven used a mobile phone. One doctor said:

'The reason we take our own photographs is that the medical photographer is not always accessible, and that's always a challenge. Before digital photography it was always with the [professional] photographer but with digital technology you can take three or four and choose the best one.' (Doctor 4, S12, L12)

When interviewed about the availability of digital cameras in the hospital, seven of eight clinicians noted having good or high levels of access to a hospital-owned camera. However, a nurse talked about the impact of camera availability in the operating theatres:

'And when that camera has not been available, the surgeon just says, put it on my mobile phone and for quite a while we had no hospital camera.' (Nurse 3, S5, L12)

Records management and copyright

Survey participants indicated fifteen different ways to label photographs. Twenty-seven of 80 (33.8%) participants commented that the most common way was to place a patient sticker on the back of the photograph, occasionally adding the date, recognising that if the images were for education, they should not bear any identifying information. The majority of surveyed staff who stored images, printed them for the patient file or stored them on a hospital hard drive. However, a small number stored images on personal devices like mobile phones, memory sticks and personal computer hard drives.

Survey participants were asked to indicate how long images were stored. Only 6% reported they would dispose of the images as dictated by the hospital Records Disposal Schedule. During interviews, staff were both concerned and confused about the correct method of labelling, storage and disposal of images, with several staff noting privacy concerns that caused them to reduce the number of images they took. A doctor commented:

'I was actually wondering about the legal side, 'cos I noticed you mentioned, everyone has phones that can take photos, these days and there have been times when, I will be tempted to take a photo with my own cameras, but I was like 'ahh' what happens then? Where do you put that information? I have got really no place to put it and I do not fancy have it sitting around on a hard drive I have no control over (Doctor 2, S8, L8).

Storing images on a mobile phone was also considered by one nurse:

'I am sure the doctors have got no other way of downloading so they have been putting it [the photo] from their cameras to their personal reference. But when going through their cameras, sometimes they have photos of other cases, so it seems to be the common place where some of these surgeons are storing their images.' (Nurse 3, S9, L5)

Survey participants were asked about the copyright of images taken by clinicians. Only 33 understood that the Health Department owned the images, with 65% of participants incorrectly attributing copyright.

Ethics

Kant's Humanity Theory, in conjunction with National Health and Medical Research Council (NHMRC) ethics guidelines, was used to evaluate the ethical considerations of clinicians undertaking medical photography. Our study is primarily concerned with the major trends and the majority of behaviour, and considers clinicians to be 'rational beings' and capable of moral deliberation.¹⁴ Ethical practice can be defined by Humanity Theory and Hippocratic Oath to 'do no harm', thus the ethical considerations of this topic can also be defined in terms of risk (of harm) to patients. Risk is defined by NHMRC as the potential for harm, discomfort and inconvenience, and involves the likelihood that harm will occur and the severity of that harm, including consequences.¹⁵

The most common reason the majority of clinicians take photographs is to aid the patient. On the surface this action appears in accord with the moral good of the Hippocratic Oath and Kant's view of good will, where the patient is an 'end' rather than a 'means to an end'.¹⁴ When using hospital-owned cameras, obtaining informed consent and using the images only as specified, clinicians are conforming to the Hippocratic Oath and Kant's theory. Under normal circumstances the only harm patients may suffer is low-risk 'inconveniences' that are not harmful and have no consequences.¹⁵ When clinicians fail to obtain written informed consent, use the images for a purpose beyond the terms of the consent, or store photographs on a personal device, the risk to the patient increases from 'inconvenience' to 'potential for harm', and the severity increases from low to high. This is because there is potential for the photographs to be distributed into the public domain where they cannot be retrieved.⁸

Discussion

Medical photography has been affected profoundly by the digital camera revolution, and the widespread increase in clinician-taken medical photographs is directly attributable to the proliferation of digital technology. Approximately half of the clinicians who participated in this research take their own clinical photographs. This is done for various reasons including as a time-saving measure when the clinical photographer is not available or when expediency is paramount. With a few exceptions, clinicians understand that consent must be obtained, however most obtain only verbal consent, suggesting they either do not understand written informed consent in relation to medical photography, or choose to ignore hospital policy. Despite the availability of hospital-owned cameras, 20% of clinicians reported using mobile phones.

Staff who never get consent are acting unethically. In addition, it can be argued that the staff who photograph on mobile phones and fail to delete the images, risk the pictures being used beyond the original purpose. Retaining images on mobile phones encourages the showing of the images at a later date. When viewed in a clinical setting the images can provide immeasurable clarity of a patient's condition, but when viewed over a dinner table or during a casual conversation in a public venue the same images could constitute a form of entertainment, a practice clearly at odds with ethical conduct, rendering the patient a 'means to an end'.¹⁴ It could be argued that taking a non-identifiable image of a patient removes the potential for recognition and harm, and therefore that consent is not required. However, while it may be possible to remove all identifying features of the patient, often the pathology itself can provide recognition. In addition, 'recognition' requires further debate, and acknowledgement that it includes patients recognising themselves.¹⁶ Further study of medical photography using mobile devices is required to clearly establish patient perceptions. Ultimately, patients will be the arbiter of what constitutes ethical practice.

Conclusions

We believe the surveyed site is facing endemic policy non-compliance in the area of consent for clinical photography. If this hospital ignores staffs' lack of policy compliance and mobile phone use, patients' personal information is at risk of being irreversibly distributed into the public domain. Such unauthorised publication may cause psychological harm to the patient and have legal ramifications for the hospital and its staff.^{17,18} The current lack of compliance for consent, capture, storage and disposal of images, in conjunction with misconceptions regarding copyright, puts patients' personal information at risk with a high potential for harm given that the security and distribution of electronic information is only as good as the least dependable individual.¹⁹ Today's media no longer considers medical information private, and anyone with access to an internet-capable device can become a publisher. The great risk of leaving images on a mobile phone is that if the information is lost or transmitted to an unauthorised source, the images could be published across the world in seconds.

While this research revealed that 47.8% of staff has taken photographs of patients in the last year, this figure is probably an underestimate as the research relied on clinicians self-reporting behaviour that may be non-compliant with current policy. We speculate that this tertiary hospital is probably not different to others around Australia where the dissonance between practice and policy in the collection and management of medical photography is common.

Recommendations

The cornerstone of all best practice is the creation and implementation of effective, evidence-based policy. Institutions grappling with balancing the benefits and risks of clinician-taken medical photographs should research the prevalence of the practice within their workplace. Policy makers need to understand the value of medical photography to clinicians, the risks posed by picture taking and internet-capable mobile devices, and acknowledge that digital medical photography is already occurring and its

use will only increase as technology develops. A typical policy should address the consent, capture, production, reproduction, management, retention and copyright of the medical images. It should specifically address the capture of images on personal equipment, especially on smart phones and tablet devices, and outline penalties for non-compliant practice. In order effectively to manage images, institutions must have a production pathway recognising that images captured in the clinical setting must be reunited with the patients file. A production pathway may include purchasing digital asset management software to manage a medical image database, adapting current clinical systems to accept digital picture files or simply requiring that all clinical images are printed. Regardless of the chosen strategy, the production pathway should be carefully managed by a single department and monitored through quality-control auditing.

While technology has created the challenge of managing clinician-taken medical images it may also provide the solution. Emerging smart phone apps like PicSafe now incorporate the consent, capture, storage and retention of medical images within a single digital system. We suggest that in the area of digital medical photography, technology will always be a forerunner to legislation and policy development, thus the key to best practice medical photography management is creating a policy that recognises the national goal of a shared electronic health record and is flexible enough to incorporate future technologies.

Competing interests

Kara Burns is employed as a medical photographer.

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References

- 1 Cheadle K. Getting the full picture. *Emerg Nurse* 2008; 15: 12–7.
- 2 Dziadzio M, Hamdulay S, Reddy V, Boyce S, Keat A, Andrews J, *et al*. A still image of a transient rash captured by a mobile phone. *Clin Rheumatol* 2007; 26: 979–80.
- 3 Karim R, Hage J, Ahmed A, Kalam J, de Wit F, van de Sandt M, *et al*. Digital photography as a means of enhancing interconsultant communication in oncological cutaneous surgery. *Ann Plast Surg* 2002; 48: 180–3. doi:10.1097/0000637-200202000-00011
- 4 Jones B. 'Drop em blossom' – Clinical photography and patient dignity. *J Audiovis Media Med* 1996; 19: 85–86.
- 5 Berle I. Clinical photography and patient rights: the need for orthopraxy. *J Med Ethics* 2008; 34: 89–92. doi:10.1136/jme.2006.019166
- 6 Gardiner AP. Exposing the body—baring the soul. *J Audiovis Media Med* 2002; 25: 64–8.
- 7 Gilson CC. Confidentiality of illustrative clinical records. *J Audiovis Media Med* 1984; 7: 4–9.
- 8 Burns K, Belton S. 'Click first, care second' photography. *Med J Aust* 2012; 197: 265. doi:10.5694/mja12.10638
- 9 Johns MK. Informed consent for clinical photography. *J Audiovis Media Med* 2002; 25: 59–63.
- 10 Clever L. Obtain informed consent before publishing information about patients. *J Am Med Assoc* 1997; 278: 628–9. doi:10.1001/jama.1997.03550080038019

- 11 The Australian Institute of Medical Biological Imaging. Consent for clinical imaging guidelines. AIMBI; 2007. Available at http://aimbi.org.au/practice/documents/Consent_for_Clinical_Images_Guidelines.pdf [verified December 2010]
- 12 Taylor DM, Foster E, Dunkin CS, Fitzgerald AM. A study of the personal use of digital photography within plastic surgery. *J Plast Reconstr Aesthet Surg* 2008; 61: 37–40. doi:10.1016/j.bjps.2007.02.033
- 13 Liamputtong P. Qualitative research methods. Melbourne: Oxford University Press; 2009.
- 14 Dean R. The value of Kant's moral theory. New York: Oxford University Press; 2006.
- 15 National Health and Medical Research Council. National statement of ethical conduct in human research. Canberra: NHRMC; 2007.
- 16 Smith R. The importance of patients' consent for publication. *BMJ* 1996; 313: 16. doi:10.1136/bmj.313.7048.16
- 17 Creighton S, Alderson J, Brown S, Minto C. Medical photography: ethics, consent and the intersex patient. *BMJ* 2002; 89: 67–72.
- 18 Rundle G. Rundle: the world changed this week. And it's only Monday. *Crikey* (Melbourne); 29 November 2010. Available at <http://www.crikey.com.au/2010/11/29/rundle-the-world-changed-this-week-and-its-only-monday/> [verified 3 May 2013]
- 19 Gilson CC. Ethical and legal aspects of clinical recording. *Br J Hosp Med* 1994; 52: 225–9.