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SCIENTIFIC CONTRIBUTION

The ethics of clinical photography and social media

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Abstract Clinical photography is an important tool for medical practice, training and research. While in the past clinical pictures were confined to the stringent controls of surgeries and hospitals technological advances have made possible to take pictures and share them through the internet with only a few clicks. Confronted with this possibility I explore if a case could be made for using clinical photography in tandem with social media. In order to do this I explore: (1) if patient's informed consent is required for the publication of any clinical images that depicts her, irrespective of whether the patient can be identified from the image or not, (2) if social media is an adequate place for clinical images to be displayed, and finally (3) if there are special considerations that should be taken into account when publishing clinical images on social media.

Keywords Clinical photography · Informed consent · Medical publishing · Patient protection · Social media

Introduction

In 2008 a Swedish nurse was suspended from her job after posting on her Facebook profile pictures of a brain surgery in which she was participating (Salter 2008). Two years afterwards, the US Johnson County Community College decided to expel four nursing students for posting on Facebook pictures of themselves posing with a human placenta (Gibson 2011). In a similar scenario a Mexican anaesthesiologist was fired from a hospital in 2012 for publishing on her Facebook account pictures that depicted a child being immobilized prior to an operation, the amputated legs of an elderly woman, and various surgery pictures where the patients' faces were visible (Vivas 2012).

The anaesthesiologist's case reached the front pages of Mexico's newspapers and generated a public outcry, mainly for two reasons. The first was that the doctor did not have the patients' informed consent for taking the pictures and posting them on the internet and the second was that the captions that she added to some of the clinical images were derogatory. To the amputated legs' picture the anaesthesiologist added the caption "we are having feet for breakfast". The caption was interpreted as the doctor comparing the elderly patient to a nonhuman animal that was butchered for human consumption. To the picture of the immobilised child she added the caption "we do a better job than hitmen" in reference to the Mexican news about members of drug cartels torturing their adversaries and other victims.

The above cases make clear that the overlapping of social media and healthcare practice raises many ethical questions that are important to address in order to guarantee the safety and protection of patients and all personnel involved in their treatment. In this paper I will address whether there is room for clinical photographs to be used on social media and what are the conditions that must be fulfilled for their use to be moral. In order to achieve this I will discuss: (1) whether patient's informed consent is required for the publication of any clinical images that depicts her, irrespective of whether the patient can be identified from the image or not; (2) if social media is an adequate place for clinical images to be displayed; and finally (3) if there are special considerations that should be taken into account when publishing clinical images on social media.

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Clinical photography

Clinical photography refers to the practice of using photography in healthcare contexts to depict the state, treatment and progression of a patient's condition. It is used in some specialities such as dermatology, oncology, plastic surgery, pathology, orthopaedics, emergency medicine, and the treatment of inter-sex patients (Bhangoo et al. 2005; Yavuzer et al. 2001; Rijt and Hoffman 2013; Berle 2002, 2004, 2008; Creighton et al. 2002; Salerni et al. 2012). The visual records that clinical photographs create render valuable information about patients' diseases, traumas, deficiencies, and other maladies (Macintosh 2006). The main objective of such pictures is to help in making treatment decisions, in the assessment of medical conditions, and also in recording the progression of certain treatments.

Clinical photographs can be taken by clinical photographers or other healthcare providers. The difference between these is that whereas clinical photographers are specifically trained and qualified for taking medical photographs, the expertise of other healthcare providers varies in relation to the photographic knowledge that each one possesses (Institute of Medical Illustrators 2008; Fleming and Bellamy 2004).

Although clinical photography, in a proper sense, is aimed directly to the patients' care, as described above, there is another recognised and regulated way of using clinical photographs. This is where the pictures taken are not used for the direct benefit of the patient, but are used for medical education and research purposes (clinical photographs can also be used as a medico-legal documents, for example in child abuse or domestic violence cases). This subsidiary use makes the pictures available, by publishing them through different sources, to an audience that may not be directly involved in the treatment of the patient depicted. When employed for such aims clinical photography benefits society in at least three ways: by educating more clinicians, by allowing and promoting research, and by advising and educating the general population about health issues. The use of clinical photographs for the patient's care has been called *primary use of clinical photography,* while their use for medical education and research has been called *secondary use of clinical photography* (General Medical Council 2011).

Informed consent and clinical photography

One aspect that changes between other practices of photography and the practice of primary purpose clinical photography is that the latter is ruled by the stringent demands of privacy, confidentiality and informed consent that the medical practice requires.[1] In healthcare contexts the moral significance of obtaining informed consent from competent patients, before a medical procedure begins, is grounded on the role that it plays in safeguarding personal autonomy. The act of asking for informed consent, and acting in consequence, recognises that patients are entitled to accept or decline any particular intervention that could affect their lives; and as such protects their freedom to develop, elect and act on their own reasons and intentions, while limiting possible controlling influences from external forces (Ploug and Holm 2013).

There are three conditions, generally accepted, that must be fulfilled for informed consent to be valid. The first is that the patient is given adequate information regarding the procedure to be performed, and that she understands the information. The second is that the patient must be competent to reason about the possible outcomes of accepting the proposed procedure, and on the basis of such judgements be able to decide whether or not to accept it. The third is that the patient's consent is not forced, manipulated or improperly influenced by healthcare providers or others. If these three conditions are satisfied then consent can be regarded as informed and valid (Ploug and Holm 2013). When patients are intentionally or accidentally misinformed about the procedures, incompetent or improperly influenced there should be a strong presumption that the patient's choices did not originate from her own reasoning and intentions, and therefore such consent should be regarded as invalid.

In healthcare practice the process of obtaining informed consent for taking and using clinical images varies in relation to whether the pictures are for primary or secondary purposes.[2] When medical treatments require taking primary purpose clinical photographs it is valid to infer that patient's consent for the treatment of her condition is extensive for taking the necessary clinical images, except when otherwise expressly stated by the patient. This presumed consent is grounded on the fact that the patient seeks medical attention for a certain condition, and that taking such pictures is part of what makes the medical attention

[1] In this article I will not elaborate on the connection between my arguments and particular data protection laws (that most of the times are grounded on the concepts of privacy and informed consent) because that would vastly exceed the scope of the paper and also because I want to focus on the ethics of clinical photography independently considered of state regulations. Nevertheless, for an interesting discussion of the US Health Insurance Portability and Accountability Act see Sobel (2007) and Rothstein (2013), and for a discussion on data protection regulation in the EU see Fears et al. (2014).

[2] I think, other things being equal, that the arguments that I advance here also apply for the type of consent required for the use of radiological images and pathology images for primary and secondary purposes.

possible (this also means that the presumed consent does not extend to taking pictures that are not part of the treatment). Despite the fact that this presumed consent is valid healthcare providers should carefully explain to the patient, where possible, why taking such images is necessary for her treatment. The former requirement is not pro bono but it necessitates from the fact that patients should have adequate information regarding their *treatment*. Finally, the images produced during a patient's treatment are part of her medical record and should be treated in the same manner as other information disclosed under the doctor-patient relationship.

After clinical images for primary use have been produced and used, the next question is whether patients' informed consent is required for publishing them for secondary purposes. On the one hand, all regulatory bodies (in the publishing and educational area) agree that further patients' informed consent is required when the patient depicted could be identified from the clinical images. The most obvious way in which a picture may identify a patient is by depicting the patient's face or other personal trademark signs like tattoos or scars (British Medical Association 2011; General Medical Council 2011; International Committee of Medical Journal Editors 2010).

On the other hand, it is not universally accepted that healthcare providers need to ask for the patients' informed consent for using previously consented clinical images for secondary purposes when such images do not reveal the patients' identity. Those who hold that asking again for informed consent is not necessary (for the use of previously consented clinical images for secondary purposes that do not reveal the patient's identity) argue that: informed consent is grounded on the fact that patients have a legitimate claim to allow or decline interventions that *could affect their lives*. Publishing truly anonymised primary purpose clinical images, as secondary purpose clinical images, cannot affect the patients' lives. Therefore there is nothing immoral when healthcare providers publish truly anonymised clinical images without requesting the patients' informed consent. It is important to highlight that for the previous argument to work patients should not know that healthcare professionals will publish the anonymous images. This is so because if a patient knew that the images were going to be published then she could claim that such act *affects her life* and that that should be a sufficient reason for asking for her consent prior to the publishing.

At this point someone could claim that even if the previous argument is correct the doctor-patient relationship entails confidentiality and this is enough to deter the unconsented publication of such images. The person defending this view would assert that all information exchanged within the doctor-patient relationship is confidential, that publishing such images breach the confidentiality pact, and thus healthcare professionals should not do so.

Against this confidentiality argument Tranberg, Rous and Rashbass have claimed that "there is a strong argument that the duty [of confidence] does not apply to anonymous information, even if collected within the doctor-patient relationship, as information can be confidential to a patient only if it can be identified with him or her" (Tranberg et al. 2003, p. 106). For these authors the doctor-patient confidentiality pact is not breached when the information revealed under confidence is disclosed but cannot be associated with the patient that disclosed it. Thus the confidentiality pact only entails the non-disclosure of the subject's condition in addition to the subject's identity; but it does not entail the disclosure of the subject's condition when it does not reveal the subject's identity. If the former is correct then it could be concluded from Tranberg et al.'s position that there is no need for the patient's informed consent for publishing previously consented clinical images when by their own nature, or editing, they do not reveal the patient's identity (Tranberg et al. 2003).

Confronted with this scenario I believe that there are two ways in which to respond to the preceding arguments and show that informed consent is required for publishing *any clinical image*. First, we need to reassess if the confidentiality pact is breached by the disclosure of anonymous data, not from the traceability of the information disclosed but from the confidentiality pact as a contract. If we take a contractualist stance I think we could claim that the patient depicted is wronged by not being asked for her informed consent in the sense that the contract—*X agrees with Y not to disclose this particular information*—is breached unilaterally by the clinician, no matter that the information is untraceable to the source. The next hypothetic scenario may help to exemplify why: in a society where both women and men wear a garment that only discloses the eyes, a sighted man and a blind woman make an explicit sex video. Both agree, prior to the recording, that the only condition for making such video is that only the man is allowed to see it. In addition to the fact that the garment conceals their identity let us also suppose that no one else actually knows how their bodies look like. After the recording has been made the man decides to publish the video online without seeking her approval. Before publishing the video he *anonymizes* it by blurring their faces, deleting the sound, and removing or altering anything that could allow others to identify the couple. Now the question is: has he breached the confidentiality pact made between them? On Tranberg et al.'s account he has not breached it because the images cannot be traced back to her and therefore he has not disclosed confidential information.

Although it is true that no harm can come to the couple because of the published video, the woman has been wronged in that the non-disclosure pact was breached unilaterally by the man. From a contractualist standpoint it does not matter that there are not *tangible consequences* from the act of breaching a contract; breaking the contract is *per se* morally wrong insofar as both contracting parties agree not to do so.

The second argument that can be advanced against publishing unconsented clinical images for secondary purposes is that it violates the patient's privacy. Parent defines privacy as "the condition of not having undocumented personal knowledge about one possessed by others" (Parent 1983, 269). On this account patient's privacy is diminished in so far as others gain access to non-public facts about her that she did not want to be known by those who gained access. At this point we need to explain how the disclosure of anonymous facts can violate patient's privacy. In fact *X* can violate *Y's* privacy without being necessary that *X* knows *Y's* identity, insofar as *X* violates *Y's* privacy if she gains cognitive access to some fact(s) about *Y* that are undocumented.

Although Tranberg et al. advance their position in order to *favour* medical education and research (by making anonymised clinical images available) true respect for patients' privacy and the doctor-patient confidentiality pact means that patients are entitled to decide if they want, or not, to help other people by making their clinical images available for educational or research purposes. At this time is important to point out that a recent study has shown that patients are likely to accept the use of their clinical images for research and teaching purposes (Lau et al. 2010).

Now, another problem with Tranberg et al.'s position is that in practice it reduces healthcare providers' accountability. This happens because we cannot know if published pictures that do not disclose the patient's identity were obtained by violating the patient's right to refuse being depicted. Suppose that patient *X* is going to have surgery, under general anaesthesia, and the attending doctor wants to film it for teaching purposes. No matter that the doctor explains to *X* that the video is going to be completely anonymous and that it would really help medical and nursing students the patient refuses to grant her consent. Despite this the doctor decides to tape and use the film because she knows that it cannot be traced back to the source and the patient will never know that it is *her clinical video* that it is being used for teaching purposes. In this scenario there is no way in which the clinician can be made accountable for making and exhibiting the film, and therefore for not respecting the patient's right to refuse *being depicted*. In healthcare context written or recorded informed consent should be mandatory, even for the use of anonymised images, because it serves as a safeguard against the violation of the patient's autonomy and privacy. From a moral standpoint the fact that consent is given orally or written is irrelevant but for accountability purposes written or recorded consent should always be preferred.

Some interim conclusions are: (1) when a patient has given her informed consent for the treatment of a condition it is valid to presume consent for taking primary purpose clinical images given that they are required for the treatment of the medical condition (unless the contrary is clearly stated), (2) healthcare providers always need to ask for the patient's informed consent for using primary clinical pictures in any secondary way, (3) the information disclosed through clinical images is part of the doctor-patient confidentiality pact and it should not be disclosed even if by its own nature it is anonymous or could be anonymised, and (4) informed consent serves as a tool for making healthcare providers accountable for violating patients' right to refuse being depicted.

Social media

Social media can be defined as a group of Web 2.0 applications that allows users to create, exchange and modify digital content (texts, images and recordings) in accordance to their interests (Kaplan and Haenlein 2010). While web-page design and construction requires specialized knowledge, social media companies have development intuitive and friendly interfaces that are much more easy to use. Social media is so popular that users of Facebook, Instagram, Pinterest, Twitter, Tumblr, and Google+ are counted in millions, and they continue growing (DeCamp et al. 2013).

In social media people can disclose personal, professional or personal/professional information. For example, a medical student can post on her F*acebook wall* what she is reading for a university class, the latest football results or an instructional video for some medical procedure that she found on YouTube. Whereas the nature of the content that is published on social media depends on the users, the scope of distribution of the information that is published depends on the amount of people with which the users are interconnected and the privacy settings of each platform. It is important to notice that the legal rights of the published information depend on the terms of use of each particular platform; for example, Facebook state that: "For content that is covered by intellectual property rights, like photos and videos (IP content), you specifically give us the following permission, subject to your privacy and applications settings: you grant us a non-exclusive, transferable, sublicensable, royalty-free, worldwide license to use any IP content that you post on or in connection with Facebook

(IP License). This IP License ends when you delete your IP content or your account unless your content has been shared with others, and they have not deleted it (Facebook 2012)".

Clinicians and other healthcare providers are an active part of social media and in academia much has been discussed about healthcare professionals' "e-professionalism"; but as previously noted news about healthcare providers posting and sharing patients confidential information are not uncommon (Thompson et al. 2008; Moubarak et al. 2011; Kaczmarczyk et al. 2013; Chretien and Kind 2013). In these circumstances, it is imperative to question what are the moral conditions for sharing clinical photographs through social media (Payne et al. 2012).

Primary use of clinical photographs and social media

Someone could think that the use of clinical photography in tandem with social media is the same as telemedicine, but it is not. There is an important distinction between these two that makes their evaluations different. The difference is that telemedicine is a real-time event constructed and configured in a way that there are built-in safeguards for protecting the distribution and storage of the clinical records. On the contrary, when primary purpose clinical photography is used in tandem with social media it has the *disadvantage* that the distribution, copy and storage of the information may be unknown to the healthcare providers and to the patients. This *disadvantage* may materialise as a result of a lack of understanding about the social media's privacy settings and *terms of use*. Healthcare providers and patients may be under the false impression that they completely control and own the information that they upload to social media.

Being this the case a first argument against the use of clinical photography for *treatment* purposes in addition to social media is that medical *treatment* should be bound to the strict controls of surgeries and hospitals, and it should not be extended to social media where these cannot be exercised. Even though this first argument might appear compelling, and normal healthcare circumstances might never require to use clinical photography in addition with social media, there might be scenarios where these stringent control requirements could be outweighed by the direct benefits that publishing a patient's picture on social media can have to the patient's treatment. Consider the following hypothetical scenario: suppose that you are the only one working the late night shift in a remote rural clinic when someone enters with what appears to be a poisonous spider bite that is causing her a lot of pain. You cannot identify the bite, which is necessary for giving the appropriate treatment, but you know that if you take a picture and post it in a tropical medicine Facebook group (that is only used by academics and physicians) someone might give you an answer. Should you take and post the picture? I think that the answer to this question depends on whether the patient is able to give her informed consent to sending the image. On the one hand, healthcare providers should seek the patients' informed consent before sharing the image on the internet for treatment purposes; because patients are entitled to prohibit the disclosure of their confidential information, even if this disclosure would result in making a lifesaving treatment available. On the other hand, when patients are incompetent healthcare providers (or the person taking the decision) should carefully consider whether the therapeutic benefits that could be gained from sharing the clinical images on social media would outweigh the possible harms that such action could bring to the patient.

Despite it being very simple I think the former hypothetical case shows that there could be circumstances where clinical photographs could be used in tandem with social media for the benefit of a patient. It is true that in the era of information technologies healthcare providers might encounter other *safer* options to share clinical images when needed; but this does not rule out that there could be circumstances where using social media might be the only option left.

A second argument against the use of clinical photography in tandem with social media for treatment purposes is that patients (or persons taking the decisions on their behalf) do not have the adequate information to give their informed consent. Given that healthcare providers and patients have a partial or total lack of knowledge of the *terms of use* and privacy settings of each social media platform then it could be argued that they lack an essential requisite (see first condition about informed consent) for making an informed decision. Thus they are not able to grant their informed consent for using clinical images on social media.

A first possible way to solve this problem would be for patients and healthcare providers to learn about the terms of use and privacy settings of each social media platform. The problem with this solution is that it is impracticable due to (1) the amount of social media platforms, (2) that the terms of use vary every now and then, and (3) that each social media platform offers different types of privacy settings and each user decides which settings to use.

A second way to solve this consent issue would be to inform the patient about the fact that the healthcare providers do not know the *terms of use* and privacy settings of the social media platform that they would use to send the images. Therefore, if the patient knows this fact then the condition of knowing the relevant information would be satisfied in a negative way (knowing that they do not know)

and then the patients could give, or not, their informed consent. Apart from the former healthcare providers should explain to their patients about the possible harms that disseminating a clinical image on social media may have. It should be clear that the former condition only applies to cases where the clinical images would reveal the patient's identity, because from truly anonymous clinical images no harm could come to them.

Finally, in order to reduce the possibility of future harms (when clinical images that disclose the patient's identity have been posted on social media for treatment purposes) healthcare providers should erase the clinical photographs as soon as possible. Even though healthcare providers cannot know if the image has been copied and redistributed, by someone else, this precautionary action should be taken.

Secondary use of clinical photographs and social media

Whereas using primary purposes images in addition with social media demands that *treatment* cases fallout *normal* medical practice, the case for using social media in addition to secondary purposes clinical images is pretty straightforward. Given that social media content is constructed around the users' interests healthcare providers might resort to it as a tool for medical teaching or for publishing research. We can easily imagine an orthopaedic specialist creating a Facebook profile where she uploads clinical images and gives a detailed account of the state, treatment options and expected outcome.

Social media has the advantage, over other publishing means, that it is accessible from everywhere in the world where there is an internet connection, a reasonable powerful computer, and there are non-governmental restrictions for accessing it. Clinical images used in tandem with social media can increase the scope of diffusion of knowledge and give access to state-of-the-art research to all those interested in the medical sciences. Two recent literature reviews of the current uses of social media for medical education found that they were related to improved knowledge, attitudes and skills (Hamm et al. 2013; Cheston et al. 2013).

Given that posting clinical images on social media is a type of publishing the previous conclusion about patient's informed consent does not vary. Healthcare providers need the patient's informed consent for posting any secondary purpose clinical images on social media. Even when publishing clinical images for secondary purposes on social media has the same aims as publishing them on other traditional means there is one aspect that radically changes from one to another, this is the type of control that is possessed over the distribution, reproduction and storage of the images. Whereas in the past the distribution, reproduction and storage of secondary purpose clinical images was limited to the physical existence of medical journals, and their accessibility, nowadays the internet era has radically changed the situation. Any image that is published on the internet can be copied and redistributed without the knowledge of the person that uploaded it. This means that in practice healthcare providers would not be able to retrieve or delete all the patient's clinical images if she recants her consent. Even when patients have the right to recant their consent it should be noted that it would be near to impossible to enforce such right. Thus when healthcare providers ask for the patient's consent they should also inform her that once a clinical image has been uploaded to a social media platform it can be copied, stored and disseminated without the knowledge of the person who uploaded the photo.

Finally, some social media platforms allow immediate interaction between social media users and the uploaded content, for example the comments section on Facebook's posts. Given that secondary purpose clinical images are intended to extend medical education and research the healthcare provider that uploads them should be vigilant that the interactions between social media users and the clinical images are accordant with such aims. This means that, as far as they are able, they should moderate the comments, and other interactions, in order to avoid derogatory remarks about the clinical images or the patients depicted. This is grounded on the idea that derogatory comments interfere with the educational and research objectives that encouraged the healthcare provider to upload the clinical images and also because they could preclude other people from participating.

Conclusion

In this paper I have argued that informed consent is mandatory for creating, using and publishing all primary and secondary purpose clinical images, and that a case can be made for the use of clinical photography for *treatment* and *educational* purposes in addition to social media when informed consent is properly obtained. The latter entails that on many occasions healthcare providers will need to disclose their ignorance about the *terms of use* and privacy settings of certain social media platforms. The ignorance of those facts does not entail a prohibition for using clinical photographs in tandem with social media, but it does entail that healthcare providers should carefully explain to patients about the possible risks that publishing an identifiable clinical image might carry. Finally, sending clinical images, where the patient might be identifiable, for primary purposes through social media should be a last ditch resort

given the lack of control that healthcare providers will have over the images after they have been published.

A second conclusion is that although the secondary use of clinical images in addition with social media is only a new method for medical teaching and for disseminating research (that also requires the patient's informed consent) there at least two relevant differences that are important to take in account when obtaining the patient's informed consent. The first is that although patients have the right to recant their consent, once an image has been uploaded to a social media platform retrieving all possible copies made becomes almost impossible and highly unfeasible. This fact should be carefully explained to patients, and clinicians should pay special attention to those cases where the images reveal the patient's identity. The second difference is that due to the way in which users can interact with the images healthcare providers that upload them should moderate, as far as they can, the interaction with the content in order for the educational goals to be obtained.

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