

Peer Reviewed **Article of Interest**

COMMUNICATION AND PATIENT CARE IN RADIOGRAPHY

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ABSTRACT

Effective communication between radiographers and patients is very important for the successful execution of radiographic procedures. Examples of communication models and barriers to patient-centred communication are presented. Training in communication skills and techniques, qualitative research in communication and patient care, and using gender as an important variable in research studies in radiography may be useful in improving communication strategies in radiology departments.

Keywords: Patient-centred care, age, gender

LAY ABSTRACT

Communication between radiographers and patients should be effective to ensure patient compliance and satisfaction when undergoing imaging examinations.

INTRODUCTION

Communication may be defined as an exchange of information, feelings and thoughts through words and actions. Communication involves transaction between a sender and a receiver and creating messages. The process occurs in the context of physical space, social and cultural values, and psychological conditions. Communication is a dynamic complex process. There is no universal definition for this process, hence is defined in different ways depending on the context of the interactions of the persons who are involved.^[1] In healthcare, communication should be a two-way process between a patient and a healthcare professional. Unilateral communication may result in negative health outcomes. Effective communication requires that a patient's needs, concerns, and experiences are expressed and understood.^[2] Communication requires a receiver and a sender. The latter usually initiates the process of communication by sending a message for interpretation by a receiver.^[3] Communication is not unidirectional as it is an interaction between a sender and a receiver. Effective communication requires an exchange of ideas, thoughts and information for its intended purpose. A sender should therefore present information in a way that should result in a receiver understanding the communication. In healthcare effective communication requires understanding of patients' expressions and concerns and use of language that they understand.^[3]

Communication with patients should be therapeutic, purposeful and intentionally planned to promote patient health and well-being.^[2] Good communication is important in healthcare to achieve successful outcomes and offer in-

dividualised patient care and should be done with sincerity, kindness, and courtesy. Good communication is based on the education, skills, abilities and experience of a healthcare professional.^[2] Good patient communication in radiography leads to more accurate images being produced, reduced image rejection rates, increased efficiency of the department, and an increase in confidence among radiographers.^[4]

There are three communication models: linear, interactive, and transactional. Linear models of communication are usually one-way interfaces in which a sender communicates with a receiver without receiving feedback. Interactive models are two-way with feedback, but the feedback may be slow or indirect; and transactional models are two-way processes of communication with immediate feedback.^[5] The latter are preferred in radiography and healthcare in general since healthcare professionals (HCPs) seek to offer patient-centred care and include patients in decisions regarding their own health. In radiography, patient care may appear to be one-sided, but a mutual connection between a patient and imaging professional may help create patient satisfaction. Relationships between patients and imaging professionals are based on empathy and mutual respect as they are important for quality patient care.^[6] In radiography, patient-centred approaches to communication should be encouraged.^[7] Patient-centred communication is interactive: HCPs should treat each patient with dignity and respect.^[8] In radiography, patient-centred communication is not vague as it provides a positive patient experience, hence a patient is encouraged to return for x-ray examinations in the future.^[8] Communication in an x-ray department may

pose challenges due to language and cultural barriers during a communication process. It is also important for radiographers to note that when they speak to patients there are unspoken messages delivered through their facial expressions, posture movements and gestures.^[8]

As healthcare advances, HCPs should find ways to focus on the needs of patients and their families. Effective communication may be employed to help provide patient and family-centred care. Staff education and participation, staff meetings, patient surveys and feedback can provide feedback to help improve communication strategies.^[9]

Communication is important for effective patient care in radiography, therefore, factors that influence communication and barriers to patient-centred care should be examined.^[7] Communication in radiography may be influenced by individual traits and characteristics of a patient and a radiographer; the latter aims to produce radiographic images as well as having to concentrate on departmental activities.^[7] In the selection, training and education of radiographers, factors that influence patient-centred styles of communication must be considered.^[7]

Communication is the means of conveying information from one party to another. It is the act of receiving and sending messages through different modes such as verbal or nonverbal means.^[10] Verbal communication involves the use of words, which may be spoken or written. Imaging professionals have the responsibility to provide the best possible patient care, and effective verbal communication plays a large role in successful imaging interactions.^[10] Nonverbal communication is also important for patient care as it includes gestures, postures and other overt behaviour which express a person's thoughts or feelings.^[10] Effective communication involves use of a language a patient understands and active listening skills.^[11] If a radiographer and a patient do not share the same language, the use of an interpreter must be considered. If an interpreter is used, confidentiality and accuracy of the information must be maintained. People from different cultural backgrounds may share similar views, but may have different interpretations and meanings of specific issues.^[12] This results in difficulties in communication. In healthcare, differences in culture become an issue when a patient and a HCP do not share the same cultural beliefs and values. Cultural differences may result in a patient not understanding what is being explained by a HCP. A patient may be unwilling to disclose their feelings due to cultural and language barriers. This results in misunderstandings between a HCP and patient as the message becomes distorted.^[12] Effective communication helps to build a meaningful relationship between a patient and a healthcare provider and improves patient-centred care.^[11] Effective patient care requires an understanding of different cultural and social backgrounds of patients and the impact they have on patient experiences. For example, touching a patient may not be acceptable

in some cultures: a HCP must carefully explain what they are doing and provide reasons.^[12]

Effective communication between radiographers and patients plays an important role in the successful execution of radiographic examinations. Ineffective communication during radiological procedures may result in the production of inferior quality radiographs, repeat examinations, and patient delays thereby negatively impacting on patient care. Communication errors in radiography may lead to repeat examinations being performed resulting in increase dose to the patient. This paper examines the importance of communication for radiographic examinations and patient outcomes, as well as communication barriers between a patient and radiographer. Strategies for radiographers to improve patient care through communication are presented. The following are presented below: importance of communication in radiography; barriers to patient-centred communication; and strategies to improve communication and patient care.

IMPORTANCE OF COMMUNICATION IN RADIOGRAPHY

Patient-centred care refers to the use of clinical knowledge to patient care and responds to the preferences, needs and values of each patient. It involves including patients in decisions, discussions and the healthcare delivery process: patients are partners and collaborators in their care. The culture of patient-centred care requires inclusive participation and commitment of stakeholders in the healthcare delivery process such as leaders, managers, doctors and staff members; and the recognition that patients are capable of improving their experiences.^[13]

Patient-centered care is the practice of caring for patients in ways that are meaningful and valuable to each patient and their loved ones. It is organised around patients hence HCPs become partners with their patients and their families so that the needs, and desires of each patient can be identified which should result in patient satisfaction.^[11] It encourages radiographers to treat patients not only from a clinical perspective, but also from an emotional, mental and social perspective. It includes listening, informing, and involving patients in their care and ensuring all their needs are met. This type of care can improve a patient's experience and provide better communication.^[11] Effective communication is the trademark of patient-centred care in radiography. This is based on radiographers' understanding of patients' needs, concerns and expectations in their physical, psychological and cultural context to arrive at a shared understanding. Patient-centred care encompasses unique care which is centred on a patient and includes empathy.^[14] In radiography, good communication and interpersonal skills, and empathy help to influence patients' perspective and satisfaction.^[15]

In healthcare the benefits of effective communication to a patient include increased treatment compliance, enhanced

satisfaction, provision of emotional support, reduced anxiety, symptom relief and support for informed decision-making.^[16] Furthermore, imparting information to a patient and giving clear instructions, explanations and demonstrations, aids in reducing their uncertainty and putting their mind at ease.^[16] This also increases the chances that a patient will remember instructions given to them, therefore reducing unnecessary ionising radiation exposure and repeat images in radiography procedures.^[16] All communication involves verbal and nonverbal messages to convey information from one party to another.^[10] What is important is that radiographers should be aware of their nonverbal communication in terms of their tone of voice, gestures, facial expressions, and postures as these all convey meaning which a patient may interpret in a positive or a negative way. For example, if a radiographer issues instructions in a loud voice this may be interpreted by a patient as being rude. Radiographers should be aware of a patient's nonverbal cues as these convey how a patient may be feeling: comfortable, in pain, anxious or worried.^[10]

Effective verbal communication is an absolute necessity at every stage in a radiographic examination to improve patients' experiences. A set of activities, based on the acronym AIDET, provides a communication framework for HCPs.^[17] AIDET may be used to improve communication between radiographers and patients in a radiology setting.^[11] AIDET means acknowledge (greet the patient by his/her name and acknowledge their concerns), introduce (introduce yourself to the patient and tell them your name and your role in their care), duration (indicate the expected waiting time for the procedure), explanation (tell the patient what they can expect and describe the procedure to them), and thank you (thank the patient for their communication and cooperation).^[11,17] AIDET aims to enhance communication with patients, thus decreasing anxiety, improving compliance and clinical outcomes. Its use has helped to enhance patient care and satisfaction.^[18] Communication between a patient and a radiographer during a radiographic examination should involve explanation of the procedure with the aim to get them to cooperate, allay their fears, and reduce their anxiety.^[19]

Radiography involves face-to-face communication using verbal and nonverbal techniques. The use of body language and facial expression may help in establishing rapport and trust between the healthcare professionals and patients. Communication must be effective for each patient to understand and follow instructions. Facial expression, gestures, tone of voice and eye contact may enhance the building of relationships between a radiographer and patient as well as the success of the procedures that are being done.^[20]

Each patient has specific traits that influence how they communicate with and cooperate with others; some patients need more time than others. Patient's' needs should be identified and treated based on their individual needs. A peaceful environment without distraction is needed to encourage dialogue and maintain confidentiality so that a

patient may express themselves freely. Communication requires comfortable space and enough time.^[2]

A radiology department may be intimidating for patients. Communication and empathy are vital to patient care and must be modified based on the needs of each patient. Empathy may be described as emotional and intellectual understanding and awareness of someone's thoughts, feelings and behaviours. Empathy helps to create a relationship between a radiographer and a patient which will help to enhance communication, reduce patient anxiety, and create a better experience for a patient.^[15] Each patient's need's may be different based on the modality being used and the reason for accessing care. In radiotherapy for example, patients are sometimes emotional due to the nature of their illnesses. Factors that tend to influence the ability to communicate with emotional patients include the imaging professional's years of experience, their sociability and organisational support such as time and availability of private space.^[21]

COMMUNICATION BARRIERS BETWEEN PATIENTS AND RADIOGRAPHERS

There are several factors that present barriers to communication in a healthcare setting. Some of these include: language barriers, cultural differences, mental and emotional issues, difficulties with speech and hearing, gender and age differences, and patients' conditions. Colloquial language is a major barrier to communication.^[22] When there is a difference in spoken language, effective communication cannot be established. Nonverbal communication in different cultures may have different interpretations. Patients are also less acceptant of radiographers with different languages and cultures, as they may not be able to relate with them. Language is said to be the most effective means of communication. It provides understanding of the content that an individual is willing to express or communicate with others. It is more beneficial when a radiographer and patient share a common language as this allows objectives to be fulfilled and the process of communication will be effective. Radiographers should have knowledge regarding patients' culture, language, customs, and beliefs, as this can help them communicate with patients without having any pre-judgments or prejudices.^[22]

Language differences hinder effective communication and create a strained interaction between a HCP and patient if they do not share a common language. As a result, a patient may not understand instruction given to them regarding their care.^[23] Pre-recorded audio instructions may be used in instances where a patient and a radiographer do not speak the same language. Although this is a one-way mode of communication, it is helpful in producing chest radiographs on COVID-19 patients.^[4] In some institutions, interpreter services are provided to improve communication, healthcare access and patient satisfaction. This sometimes proves to be costly. Online translation tools such as MediBabble and Google Translate are an option to help address

issues with communication.^[20] Additionally, there are ethical challenges associated with interpretation in healthcare. Some of these issues pertain to principles of confidentiality, accuracy, fairness, cultural awareness and professionalism. Interpreters should accurately convey the words and tones of HCPs. An interpreter should also keep meeting discussions private. The cultural norms of a HCP, patient and an interpreter must be considered; interpreters must abide by the best practices associated with their field of work.^[24]

Patients are different and present to healthcare facilities in different ways. Therefore, what is acceptable to one patient may not be the same for others due to cultural norms. The issue of culture is quite complex, and it is not easy to understand the health belief and practices of every culture. The use of eye contact, touching, issues relating to social class, race, and gender differ across cultures. It is important that HCPs consider their own experiences and cultural differences in communication and how these can challenge the way they provide patient care.^[2]

People can experience difficulties in speech and hearing after conditions such as stroke, trauma or injury to the brain. These conditions may affect areas of the brain that enables a patient to understand and speak. These will present barriers to effective communication. Use a pleasant and normal tone when speaking to patients who have difficulty hearing. In addition, if a HCP stands where a patient can see their face this will allow for lip reading and may help a patient to understand what is being said to them.^[2] Fear and anxiety can also affect a patient's ability to listen to a healthcare provider. A patient's illness, fear and anger can affect their thoughts and feelings. Efforts to reduce these may help to improve communication.^[2]

Patients with substance abuse disorder sometimes access radiology services and may present with conditions such as personality disorder. This makes communication and patient care challenging. Caring for these patients, therefore, may result in compassion fatigue for a radiographer resulting in irritability and reduced empathy towards such patients. These issues may be addressed through self-awareness, education and training and caring techniques to provide appropriate care for patients.^[25]

It is important that HCPs establish trust between themselves and patients, by respecting their patients and treating them as human beings.^[25] They should keep in mind that patients have their own opinions, perspectives, and feelings and that they should be involved in decisions related to their health.^[25] Being a good communicator entails keenly listening to patients, limiting interruptions while they speak, and being empathetic while they speak about their condition.^[25] The use of open-ended questions may be used to gain information of a patient's illnesses, as well to determine the best approaches for attending to patients.^[25]

Age is another major barrier to communication. Geriatric patients may require special communication due to the deterioration of age. As people grow older, they begin to

experience lifestyle changes that affect them physically and cognitively.^[10] Older patients may experience well-defined communication disabilities such as dysarthria, aphasia, hearing loss, and decreased short term memory.^[26] Communication disorders form a diverse group of conditions that vary in terms of type, severity, and accompanied by other symptoms that limit mobility, endurance, and understanding.^[26] For elderly patients, communication, safety, and comfort are important to enhance patient care. It is also necessary to spend extra time with elderly patients and this would entail patience and empathy to help improve the quality of care offered and the possibility of improving the examination and treatment outcome.^[27] Patients deserve quality care, and this can be shown by treating them as individuals: assess their needs without stereotyping or bias due to age. Radiographers are expected to modify techniques based on age and specific challenges relating to aging.^[27] To ensure that patients comprehend information or instructions given to them, radiographers may ask patients to repeat what was said to them.^[10]

Fear and lack of understanding are heightened in children.^[10] Radiographers should adjust their tone of voice and language, as small children may not understand all the information given to them. Some strategies that are useful when communication with children include maintaining a friendly smile, and giving a firm gentle reassuring touch as this could assist in reducing stress in children.^[10] Communicating with paediatric patients also poses challenges for radiographers. Toddlers (one to two years) can say a few words and are usually attached to their parents. It is important that a radiographer refer to them by name. It is important to be calm, patient and cheerful while interacting with them. The procedure should be explained in simple words to a toddler before entering the x-ray room. The explanations of the procedure should be clear, simple and include demonstrations when possible. Talking to a toddler and playing with them helps minimise fear, resistance and negative behaviours such as temper tantrums.^[10] Toddlers may be distracted by balloons, foam blocks and picture books and these may be used to help them to cooperate when being x-rayed by a radiographer.^[28] Children and parents should be informed about the x-ray procedures. Parents should be given more detailed information than their children. Before an x-ray examination, both children and parents should be allowed to voice their concerns. This should help children to be more prepared for the procedure and enhance the likelihood of greater engagement and cooperation during the procedure.^[29] Children at the age of three to five years are usually trying to establish their independence. They are able to converse with radiographers and they should be encouraged to cooperate for the x-ray procedures. Demonstrating the positions for the x-ray examinations for a hand or a foot may be helpful. Children may ask questions about the procedures and the response of a radiographer should be simple and truthful.^[10] Toys that move, playhouse, paper and crayons may be used to distract them and get them to cooperate for the procedures.^[28]

Gender plays a significant role in shaping the relationship between a HCP and patient.^[30] Males and female health professionals provide different care, depending on the gender of the patient, as men and women have different needs, thoughts, and perceptions.^[30] They tend to deal with illness and pain differently as men and women are confined to gender norms and stereotypes.^[30] Men may want to appear strong for fear of displaying any sign of pain or discomfort which may be seen as a sign of weakness; they therefore downplay their condition and may withhold important health information.^[30] Women disclose more information about themselves in conversation as they are perceived as having a warmer and more engaged style of nonverbal communication.^[30] Female HCPs, compared to males, may also encourage and facilitate patients to talk to them more freely in a more intimate way.^[30] Patients may avoid seeking care at specific facilities because of the gender of healthcare workers (HCWs). In addition, they may not think it acceptable, or their families might not feel it acceptable, to see a HCW of another gender.^[30] Gender dynamics can also affect the way that patients communicate with HCWs.^[30] To avoid sanction, or because of beliefs about what it is appropriate to discuss, patients may not discuss certain symptoms which may then limit a HCW to make a correct diagnosis.^[30]

HEARING AND VISUALLY IMPAIRED PATIENTS

Patients may have different levels of impairment, and this should be taken into consideration when communicating with hearing impaired patients.^[10,31] It is important that one gets a patient's attention before starting conversations with them. A radiographer should exercise patience and understanding to achieve this and should also speak clearly using a moderate tone of voice. Asking open-ended questions and asking a patient to repeat the explanation may help enhance a communication process between a patient and a radiographer.^[10] Patients who wear hearing aid should be allowed to wear them while a radiographer is giving explanations for the procedure. Patients who wear spectacles should be allowed to wear them, when possible, as most hearing impaired persons rely on visual cues to assist them with communicating with others.^[10] There should be written material readily available in case it is necessary to use written instructions for hearing impaired patients. Important to not use jargon so that a patient can understand what is written.^[31] They may also request an interpreter and their needs should be considered and addressed.^[10] The mode of communication should meet the specific need of a patient.^[8] In the x-ray department, giving verbal instructions to hearing impaired patients is challenging for a radiographer and patient. Radiographers should be trained to deal with hearing impaired patients. There should also be equipment available for visual signals for breathe hold. Radiographers should also spend extra time with hearing impaired patients to explain a procedure before entering the x-ray room.^[32]

Patients with impaired vision rely heavily on hearing and touching to communicate. Some may become anxious in a

new environment (e.g., a radiology department). They may be reassured and encouraged if a radiographer holds their hands while directing them verbally. There are others who may confidently navigate the room if they are given descriptions of the room and the objects close to them such as asking them to sit in a chair that is placed behind them.^[10]

STRATEGIES TO IMPROVE COMMUNICATION AND PATIENT CARE

Communication underpins provision of health services thus it is important for ongoing improvements to address challenges that influence performance in a radiology department. To improve safety, quality and patient-centeredness, health professionals should identify and break down the barriers to effective communication by adopting strategies that strengthen their professional and interpersonal communication skills.^[33] Staff training in communication skills is beneficial to organisations: good communication skills are usually taught and require practice and scrutiny.^[33] Personnel in senior and supervisory positions should create an atmosphere of open communication by setting expectations, through appropriate behaviour and investing in communication and support systems in a department.^[33]

In addition to general training in communication skills, there should be training for all employees in the use AIDET to enhance communication with patients. There should be regular clinical audits to assess the effectiveness of AIDET in order to make improvements, if needed. The results of research should be used to make improvements to communication techniques. Audits should cover patient satisfaction in all aspects of service provision. For example, how age, culture, social class, and race interconnect with gender to impact communication and patient care.

In some hospitals there are structured communication formats that guide interactions with patients.^[6] These include: the Studer group's AIDET communication framework and the American Society of Radiologic Technologists' ACE campaign: announce your name, communicate your credentials, and explain what you are going to do.^[6] These frameworks were developed to encourage communication with patients. ACE patient cards may also be provided to inform patients about some of the roles of radiologic technologists (radiographers).^[6,34] The commit to sit initiative encourages patient safety and satisfaction by using effective communication techniques such as sitting eye-to-eye with patients at the time of initial contact, engaging in open dialogue and active listening.^[35] This initiative encourages radiology professionals to communicate with patients in a manner that shows empathy, compassion, respect and competence to lead to fostering a trusting relationships.^[6,35]

Radiographers should create openness, acceptance and empathy when communicating with patients. Patients should not be objectified. These actions should help radiographers to respond to a patient's emotion with appropriate language and behaviours and improve communication

with them.^[6] This requires being attuned to patients' needs in order to harmonise a relationship between them and radiographers: the latter thus have to make genuine efforts to understand patients' emotions and in so doing enhances communication. Attunement involves three principles: wondering, following, and holding. Wondering involves ascertaining patients' reason for accessing care and which leads to a connection with patients to improve patient care.^[6] Following refers to a radiographer's demonstration of commitment to patients and their family, building trust with patients by using verbal and nonverbal strategies, and active listening entails making efforts to understand each patient's perspectives and experiences. Radiographers practice holding by creating a safe environment for a patient based on their needs such as providing comfort, attending to physical and emotional needs, offering compassionate care and reassuring them while caring for them.^[6]

IMPLICATIONS FOR PRACTICE

Effective communication impacts patient care: it helps to improve patients' experiences when accessing radiology services in a department. Effective communication allows for establishing a good radiographer-patient relationship. As discussed above it is important to create a conducive environment of trust to facilitate exchange of information

in order to provide optimal service delivery. One should always be mindful of nonverbal cues to minimise misunderstanding of instructions by patients. Effective communication ensures that radiographers monitor and observe patients, before, during and after every procedure. In a radiology setting, there is likely to be fewer repeat examinations and therefore a reduction in patients' exposure to radiation when effective patient-centred communication is implemented.

CONCLUSION

Effective communication between radiographers and patients is very important for a successful execution of radiographic procedures. Ineffective communication during radiological procedures may result in the production of inferior quality radiographs, repeat examinations, and patient delays which negatively impact patient care. Communication errors in radiography may lead to repeat examinations which increase ionising radiation dose to a patient. Regular clinical audits should be done to identify areas for improvement in order to render effective radiographic services to patients.

CONFLICT OF INTEREST

None.

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