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**Can Telepsychiatry Overcome Communication Barriers in the Clinical Consultation?**

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# Introduction to Telemedicine

*“Transport of mails, transport of the human voice, transport of flickering pictures—in this century, as in others, our highest accomplishments still have the single aim of bringing men together.”*

Antoine de Saint-Exupery, Terres Des Hommes

Telemedicine uses information, communication and technology (ICT) to heal at a distance. It is defined by the World Health Organisation (2010) as, “The delivery of health care services, where distance is a critical factor, by all health care professionals using ICT for the exchange of valid information.” In conventional consultations, the clinician will use the senses of sight, sound, smell and touch in order to diagnose and form a management plan. In telemedicine, the input and feedback is made up of sight and/or sound, and even basic electronic “noses.” The image and sound is captured from the patient, then processed and transmitted via a secure line. It is reprocessed for the healthcare professional to view at a remote site (McLaren, 2003). This can either be a live exchange, where those involved are simultaneously present such as in videoconferencing, or a store-and-forward exchange, where pre-recorded data is exchanged between individuals at different times such as e-mailing a digital CT scan to a surgeon. The first major breakthrough in telemedicine came in 1897 through the use of the telephone, when it was used to diagnose a child with croup (Darkins and Cary, 2000).

Mental health relies heavily on good interpersonal communication, and it is one of the most obvious applications of telemedicine. The term telepsychiatry was first used by Dwyer in 1973 where he referred to it as psychiatric consultation by interactive television between a doctor and a patient, and it was one of the first applications of telemedicine (Dwyer, 1973). The largest emerging development in the field has been the use of web-based video conferencing, which is the main focus of this essay. Dwyer also stated that medical care cannot be improved by simply adding more professionals; he feels that the way that healthcare is implemented needs to be restructured in order to enhance patient care. In the 21st century, patients are already using technology in most aspects of their life and this can offer an enormous leap forward in carrying out the necessary psychiatric care in the clinical consultation.

# Origins and History

Telepsychiatry was first utilised in 1955 at the Nebraska Psychiatric Institute, where Wittson and Dunton (1956) used a closed-circuit television system to transmit live therapy sessions for students. The team also conducted group therapy sessions, which was used to observe the responses of the students and assess the nature of the interaction and relationships that were established. These were seen to be neutral. In the early 1970s, many pilot projects were carried out, (Murphy and Bird, 1974) which were limited due to poor quality images and high costs (Darkins and Cary, 2000). The 1980s saw the Norwegian government start a National Telemedicine Programme to provide care to patients in rural communities, since specialist care was not always available to them locally. This resulted in the formation of a telemedicine centre in northern Norway, giving rise to many telemedicine projects running over an expansive network (Gammon *et al.*, 1996). Development of similar networks took place in Southern and Western Australia over the early 1990s, giving rise to the rapidly growing literature in the field. Further studies throughout this decade showed strong patient and doctor satisfaction, as well as supporting the safety and effectiveness of telepsychiatry (Hilty et al., 2013). Cheaper costs and conveyance of technology enabled initiating programmes for prisons, federal health systems and universities (Baer et al., 1997). Currently in the UK, a company called Healios which was founded in 2013 is helping patients to connect with therapists through video consultation for assessments, treatments and well-being check-ins. After enrolling people can attend sessions when suitable for them and also request family members to join in. It is being used by 20 NHS trusts, enabling online treatment free of charge.

# Why Telepsychiatry?

In depth studies have highlighted the advantages of telepsychiatry across all ages in both rural and urban settings, with randomised control trials showing equal and higher efficacy when compared to traditional face to face consultations. One of the main advantages of telemedicine is that it provides new capabilities for remote or dangerous patients, such as prisoners, or patients in rural areas with limited access to care, to communicate more efficiently with physicians. This can be done by staying at home or going to nearby telemedicine sites. Travelling can be a huge burden for many patients, since it means many having to take time off work. Travel is also expensive, and several people will have to arrange for childcare; if the patient is a child then it will require removing the child from school and education for that period of time. Rural areas can have little public transportation, and patients with unreliable vehicles or no car will need to rely on someone else. Seasonal agriculture workers such as farmers also cannot leave during certain times of the year due to calving and harvest season. For some patients, it can also be challenging to drive into an urban setting, since it can make them feel unfamiliar and intimidated, therefore avoiding the whole process entirely. Without telemedicine, rural residents often have to rely on local providers; therefore, it is of high interest in developing countries.

Telemedicine often helps bring together an unfamiliar mixture of patients and doctors, with rural patients being able to consult with specialist at urban centres without having to leave their community. This may allow for better doctor-patient matching, such as providing recent immigrants with the chance to discuss with someone who speaks their language rather than relying on an interpreter. However, some psychiatrists have observed that travelling to an urban area might be advantageous for a patient, since the trip is an “event”, and travelling to a different area may offer the much-needed change in stimulation and social interaction. For many, there is also a stigma associated with mental illness within their families and communities and may prefer leaving their home for treatment if they can (Wagnild, Leenknecht and Zauher, 2006). Therefore a cost benefit analysis of telemedicine should be done for each patient with regards to their personal preferences.

Underfunded and almost squeezing to a breaking point at times, the National Health System (NHS) in the UK is also battling to deliver mental healthcare on time to those who are in dire need. Demands for mental healthcare has increased, as more people are being diagnosed with mental health problems and are also more willing to talk about it. The last 5 years has seen a 26% increase in the number of referrals to child and adolescent mental health services (CAMHS). Once children are considered to meet the threshold to require specialist treatment, the waiting time may be quite long before treatment starts. In 2017-2018, the average median waiting time till treatment began was 60 days, ranging from 6 days in the Norfolk and Suffolk provider to 188 days in the Alder Hey provider (Education Policy Institute, 2018). Not only would online consultation through companies like Healios cost half as much as a face-to-face consultation, it would also reduce the waiting times for people to be seen. The savings come largely from not requiring a physical clinic as well as reduced infrastructure costs.

In addition to reducing costs and waiting times, pilot studies have demonstrated telepsychiatry can be used in a large range of clinical tasks. These include: remote psychiatric consultation with outpatients; psychiatric assessment in prison; facilitating transfers and maintaining relationships in between multi-disciplinary teams; delivery of psychoanalysis and cognitive-behavioural therapy and discharge planning with primary care teams (Mclaren, 2003). Many frameworks have been suggested for evaluating the effectiveness of communication in telepsychiatry in the last decade. These propose several research techniques ranging from secondary data analysis and qualitative assessments, to randomised control trials and quasi-experimental designs. As well as assessing cost effectiveness, these studies also assess the impact of telemedicine on the doctor patient relationship. (Bashshur, Shannon and Sapci 2005; Esser and Gossens 2009).

Two keys questions can be asked: does telepsychiatry facilitate or inhibit patients communicating their ideas, concerns and expectations? Does it also facilitate or inhibit the doctor’s communication in delivering treatment and providing expressions of empathy? Answering these questions requires systematic research observing the impact of telepsychiatry on the nature and content of the communication. The exact effect that the medium has on communication is a much-debated topic, and our understanding has progressed slightly in the last 40 years (Hilty et al., 2013, Mclaren 2003). However, research literature on telepsychiatry and video consultations in healthcare is still sparse, with very few controlled before and after studies (Greenhalgh et al., 2016). Despite development there is a broad feeling that telemedicine has a long way to go before it grasps its full potential. Most telepsychiatry projects have been reported from developed nations such as United States, Canada, Australia, and certain European countries such as United Kingdom. In developing nations, telepsychiatry is still at a very preliminary phase (Malhotra, Shah and Chakrabarti, 2013).

# Communication in Telepsychiatry

The quality of the meeting between a patient and doctor is at the centre of care in psychiatry. The actual relationship has been suggested as the most fundamental feature for engaging patients in their treatment and facilitating positive results (Frank, 1990; McCabe and Priebe, 2004) and yet, the notion of a therapeutic and effective relationship is incredibly complex. Just like the intricate concept of love, there are many factors involved that will ensure a good rapport that gets stronger with time, and appropriate communication is the most useful way to do this. Communication is a behaviour which can be observed and has been measured objectively through empirical studies. The last 3 decades of research has suggested that good communication has a positive impact on the patients’ physical health (Kaplan, Greenfield and Ware, 1989; Roter, 1997), mental health (Fallowfield et al., 1990), adherence to medication and treatment, satisfaction of treatment and the amount of litigation (Hall and Dornan, 1988). So, what exactly is good communication in psychiatry, and how does telemedicine fit into this?

Although there is no exact theory of what establishes good communication, there are several principals that can help a clinician to establish it. Priebe et al. (2011) set out 5 guiding principles to enhance communication in psychiatry, which can be demonstrated through telemedicine. These 5 guiding principles are: appropriate involvement of patient in decision making; personal respect and positive regard; genuineness with a personal touch; the use of an integrated treatment model and a focus on the patient’s concerns. All of these will be discussed in relation to telepsychiatry.

## Appropriate involvement of patient in decision making

*“‘Informed consent’ sounds so easy in principle – the surgeon explains the balance of risks and benefits, and the calm and rational patient decides what he or she wants – just like going to the supermarket and choosing from the vast array of toothbrushes on offer. The reality is very different.”*

Henry Marsh, Do No Harm: Stories of Life, Death, and Brain Surgery

Telepsychiatry can influence the extent of the patient and doctor participation during the consultation, either facilitating the traditional paternalistic approach (Parsons 1951; Waitzkin 1991) or enabling movement towards patient centred patterns with shared decision making (Haug and Lavin 1983; Moskop 1981). A more paternalistic style would be referred to as “doctor-centred” behaviour, using close-ended questions and giving directions that are aimed at gathering the required information to make a diagnosis and considering management plans as efficiently as possible (Roter and Hall, 1992). On the other hand, patient centred interactions acknowledge patients as collaborators who bring their own resources to the consultation. This ensures holistic care, by including knowledge of the patient’s physical health as well as their psychosocial situation (such as relationships, personality, living arrangements and culture). This is carried out by asking more open-ended questions, requesting patient opinions, and making statements of concern/approval. Patient centred interactions are important in psychiatry, as patients who are encouraged to be more involved in their own healthcare tend to report higher satisfaction rates, better recollection and understanding, more positive clinical outcomes and better compliance (Hall, Roter and Katz 1988). This is further supported by individual studies done on patients with schizophrenia (Hamann et al., 2007) and depression (Swanson et al., 2007), where there were lower rehospitalisation rates and a positive trend on compliance. So, what are the effects of telemedicine in doctor-patient participation?

The distancing effect of telepsychiatry may aid to create a less threatening environment; not being in the same room as the doctor can make the patient feel less intimidated to interact with someone of “higher status” and authority. This will aid the consultation towards a patient-centred approach since the patient may hand over more information. It has been shown that psychiatric patients can tend to feel less inhibited by conversing their problems over video, (McLaren, et al. 1995) whilst those with more sensitive physical issues, such as sexually transmitted disease, are also more likely to seek treatment. Patients are not geared towards being inhibited or afraid of technology since nowadays people are trained to see screens; they look at their phones first thing in the morning, their computer screens at work and watch television at home. However, patients who are not used to technology may have trouble with this. The unique aspects of telemedicine can also empower patients to participate and expand their control over the consultation. Tachakra and Rajani (2002) utilised verbal content analysis to compare 30 in person consultations with 20 teleconsultations between an on-site patient and an off-site doctor in the UK. Results with telemedicine showed that there was a higher exchange of words, more turn taking, and increased backchannel responses than with face-to-face consultation. The video conference empowered patients to ask more questions, whilst the doctors ensured care was taken to achieve good communication; the authors believe that this was in part due to the lack of multi-sensory feedback, as patients are unable to perform certain parts of the physical exam. However, other studies show it is novelty of the idea encouraging patient participation, where being “on TV” or being able to be a part of “cutting edge” research can be exciting and a positive reinforcement (Baignant et al, 1997; Gammon et al, 1998). While excitement with novel technologies can fade with time, increased use enables familiarity with the concept, creating greater long-term comfort and acceptance for people.

Some studies have also indicated that telemedicine may not have such a patient centred approach, with doctors controlling the dialogue more and patients adopting a passive role. Agha, Roter, and Schapira (2009) showed that through 11 teleconsultations, where a lot more biomedical information was exchanged than psychosocial information. Furthermore, Street, Wheeler and McCaughan (2000) observed 26 teleconsultations resulting in the doctors taking more control and talking the most, whilst patients were the least active, receiving less information. There are several reasons why this could be the case, one of them being greater requests for repetitions made by the patient (Liu et al, 2007; Agha et al, 2009), resulting in less time for valuable information to be acquired. This could be fixed through ensuring that the sound and video quality are of a high standard and fixing any IT issues at hand. Another reason could be due to doctors making less empathetic and praise utterances during the consultation, as well as asking too may closed questions. It is important to note that despite this, patients still ranked both mediums highly, with telemedicine being ranked higher at times (Mclaren 2003). Doctors on the other hand have had lower satisfaction rates. Other doctors have found these sessions enjoyable since it gives them a break from their normal activities. These individuals are more likely to be innovative and pursue variety in their work and may deliver telepsychiatry services with amplified energy and enthusiasm (Urness, 2003). A lot of these trials take place without giving the doctors the necessary training or skills beforehand to deal with the fairly novel way of communicating with patients (Lit at al, 2007). Therefore a training programme to help doctors communicate better and express empathy through telemedicine would be of great interest; these could also improve the low satisfaction rates.

Shared decision making in the clinical consultation may not be the best choice for every scenario. Patients can express a desire for treatment options and their illness prognosis but may not necessarily want to take the lead in the decision of the treatment (Charles et al., 1997). The level to which a psychiatric patient would like to be involved can vary depending on the context; in an emergency situation research in some psychiatry samples have found that patients have a high level of trust in their clinicians and anticipate them to take the lead role in deciding the best mode of management (Laugharne and Priebe, 2006). During an emergency, adopting a doctor patient approach would be in the best interests of the patient due to obvious time restraints. This all highlights the need for doctors to be able to adapt to the clinical situation, as well as taking into consideration the patient’s own engaging techniques and tapping into any possible synergy. Some doctors also feel it is also key to “not proffer a specials board of options” that are of no benefit to the patient in order to prevent delays in effective treatment (Kay, 2017).

It is not incumbent upon doctors alone to construct a place for patients during the clinical consultation; it can be argued that it is not their sole responsibility for placing patients at the centre of the session. Being a patient can involve learning, evaluating and acclimatising to the idea of taking charge of their healthcare, which takes time. Similarly, it may take time for a both patient and doctors to adapt to the idea of telepsychiatry. A limitation of a lot of these studies is that they do not repeat consultations with the same doctors and patients again. This would be of high value to see whether or not both parties are adapting to the system over time and if increased use helps with familiarity.

Telemedicine systems have advanced on the traditional array of verbal and non-verbal communication modalities, through enabling patient control over aspects of the videoconference (Kavanagh and Yellowlees 1995). Patients knowing that they can take charge of their own healthcare is a vital step to ensure good treatment management. One idea to implement could possibly be sharing some of the patient’s notes with them online during the video consultation, helping the patient to see their treatment plan being typed. Another way this could be achieved is through HEALTH passports (helping everyone achieving long term health), which are online patient held records devised to enhance health literacy and encourage patients towards good lifestyle changes. The Royal College of Psychiatrists (2013) stated that local versions of these passports can also be developed in association with their team. Heather Close, a rehabilitation centre in Lewisham provides 24-hour care for patients with long term mental illness and is an example of a place where online health passports are provided for each patient. A colourful diagram of a body is labelled with a physical condition that the patient may have, and then pictures and words are used to describe what the best management plan is. Individual responsibility for one’s own health is encouraged with an effort towards improving the healthcare of their family and community as well. These health passports could potentially be viewed through the video consultation, with the doctor explaining to the patient what each part means.

## Personal respect and positive regard

*“I have no right, by anything I do or say, to demean a human being in his own eyes. What matters is not what I think of him; it is what he thinks of himself. To undermine a man’s self-respect is a sin.”*

Antoine de Saint-Exupery, Le Petit Prince

As well as shared decision making, another aspect to explore is whether patients feel they are receiving the same amount of respect and positive regard during a video consultation. Patients need to be respected and valued as a person, with their views taken seriously regardless of any potential differences in opinion between them and the doctor. This is of particular importance in psychiatry since it is vital in enhancing patient’s self-esteem and reducing any negative thoughts or feelings of worthlessness, whilst giving them the freedom to explore their ideas, concerns and expectations without the fear of judgement (Freeth, 2007). It can be difficult to measure positive respect in a telepsychiatry setting, yet results show it may infuse doctor’s information and advice with more respect and authority for the patient (Sisk and Sanders 1998) since they believe that a particular location and time has been set aside for them for the videoconference (Gammon, et al. 1998).

## Genuineness with a personal touch

*“A great doctor must have a huge heart and a distended aorta through which pumps a vast lake of compassion and human kindness”*

Adam Kay, This is Going to Hurt: Secret Diaries of a Junior Doctor

Jaspers et al. (1998) highlighted the importance of doctors being truly genuine, warm and open by communicating with their patients as real human beings. In psychiatry, a “personal touch” is valued by patients to make them feel they can trust their doctors and have a meaningful relationship. Doctors who offer a human connection which emanates warmth may engage in a much better alliance with patients (Castonguay, Constantino and Holtforth 2006). Is it possible to show this level of warmth and genuine care through a video consultation? A study showed Skype has proven to be effective in supporting mental health issues, through a personalised care plan amongst 12-18 year olds with spina bifida (Levy, Henderson and McAlpine, 2014). A 15 minute video consultation once a week enabled participants to feel more confident talking about personal issues than a face-to-face consultation. Privacy was also appreciated, with one participant stating that she feels “more confident, speaking to a nurse on my own about personal things, without my mum being there.” Their complex physical requirement also reinforced how much easier it was for them to attend virtual sessions rather than travel to a hospital.

However this is not always the case. In another study, one of the psychiatrists stated: “When you are with a patient face-to-face for an hour, most are settled by the end of the hour, they would feel more relaxed – I would be able to help them feel more relaxed. But on occasion it has been difficult to ensure a personal relationship through video conference” (May et al 2000). Another concern for physicians was that they could not utilize their already acquired skills to reassure patients and gain their trust. Whilst doctors have concerns about not having a proper professional-patient relationship over video. Freeth (2007) has criticised them for over-emphasising the skills required in a doctor-patient relationship. Therefore what could be done to use videoconferencing as a tool to facilitate doctor satisfaction?

As mentioned previously, it would be helpful to create a training scheme for psychiatrists to gain tips and techniques of what can be said to ensure that the warmth and authenticity can be established and is not lost through the video feed. For example, patients with mental illness may value clinicians who opened up a bit about themselves and revealed personal information, further adding to the trust in the relationship (Laugharne et al., 2011). This is further confirmed through studies where patient satisfaction is notably higher through physician disclosure than non-disclosure (Hansson and Berglund, 1992). Whilst self-disclosure has been a controversial topic, perhaps these types of communication techniques may be accepted in telemedicine to aid and enhance the personal touch. Beach et al., (2004) suggested differentiating between the different types of self-disclosure. Types include rapport building disclosures, using amusing anecdotes or empathetic statements (“I know, I would be very scared too”), intimate disclosures mentioning private relations (“I also struggled to cope when my mother died”) or casual disclosures with evident association to the patient’s illness (“I wish I could sleep standing up”). Whilst many claim that self-disclosure methods may disrupt treatment and compromise the concept of strict doctor-patient boundaries, patients still hold it in high regard. Ensuring that the self-disclosure is appropriate to the context, without compromising the boundaries too much, could be a positive start in ensuring video conferencing is further facilitating the doctor-patient relationship.

Further possibilities to add a personal touch could be to use a software the enhances the personalisation of the patient on the screen. For example, showing the patient’s name on the screen as well as any personal HEALTH passports or notes could aid with this. It is also important to note that whilst telepsychiatry may not be as personal as being in the same room, it is more personal than consultations taking place completely over the phone. Cukor et al (1998) emphasises that the added worth of a video channel constructs a social presence, enabling patients to share a virtual space and feel relaxed discussing their complex mental health issues. They may also feel lower anxiety and stress levels when visual prompts are present (Ball et al. 1995).

## The use of an integrated treatment model

*“We are only as strong as we are united, as weak as we are divided”*

J.K. Rowling, Harry Potter and the Goblet of Fire

Effective communication and teamwork between multiple clinicians is also crucial in psychiatry, because they all play a role in the patients’ care, and behavioural/emotional/cognitive limitations may hinder the patient’s proficiency to transfer information between settings. Telemedicine can be used to enable a patient’s multidisciplinary team (MDT) to be involved in the same discussion without having the logistical or geographical challenges of meeting face-to-face. For example, introducing MDT video consultations in cancer care enabled communication between specialists at the University Hospital of North Norway and colleagues at the oncology care unit at Nordland Hospital, 300 miles apart. 32 video consultations were carried out over a 12-month period, which resulted in exhibiting how telemedicine can be used to integrate a remote palliative care unit into the department at the university (Norum and Jordhøy, 2006). In another study, the shortage of thoracic surgeons in the UK required initiating MDT meetings through telemedicine; this resulted in saving at least 3 working weeks of thoracic surgical time over 1 year (Campbell, Ball and Mornex, 2015). Whilst communication between healthcare professionals is of paramount importance, the differences in professional training methods, philosophy and status may increase the social distance amongst them. Some specialists may tend to focus mainly on biomedical issues, whereas generalists including nurses and other primary care practitioners tend to adopt a more holistic approach including a concern of psychosocial environment (MacFarlane, et al. 2006). These disparities can be further problematic with telemedicine since practising style and communication patterns can differ between rural and urban clinicians (Wells and Lemak, 1996). Foreseeing complications communicating with specialists may make some rural doctors apprehensive about using telemedicine. Resulting interpersonal problems can be prevailed if physicians already know and have respect for each other (MacFarlane, et al. 2006). Implementing the appropriate training programme for clinicians would also help.

## Focus on the patient’s concerns

*“Anxiety might be contagious, but confidence is also contagious”*

Henry Marsh, Do No Harm: Stories of Life, Death and Brain Surgery

Communication should focus on the concerns of the patient and be guided by the complaints and wishes of the patient. A lot of patient concerns consist of comorbid physical problems, which is vital since 68% of adults with mental disorders in the UK also have physical conditions (Druss and Walker, 2011). A major limitation of telepsychiatry is the inability to touch a patient and perform physical exams. It can be argued that psychiatry is a speciality in which touch is required the least compared to specialities such as surgery or emergency medicine, however it is still an important aspect. Despite not being able to perform physical exams, technological advancements mean that video quality is pristine, giving good visual aids. A monitor with a webcam of good camera quality, a microphone and the Internet are all that is required, and it is also of low cost. Furthermore, measures can be taken to ensure that certain physical conditions can be detected; camera control at the far end of the room enables easy close-up, wide angle and a focussed view to detect micrographia, tremors, cogwheel rigidity, rashes and other abnormalities (American Psychiatric Association, 2018). If further physical examination of a patient is required, then telepsychiatry can be used to facilitate consultations and refer patients to the appropriate clinician to see in person.

Technical support is a concern to psychiatrists; for instance, if the video link is disconnected or if there is no picture, there is no one to help reconnect (Wagnild, Leenknecht and Zauher, 2006). This can be overcome by having an IT support team on hand. Having the patient’s telephone number available is also vital, just in case there are technical errors. As technological advancements become greater, these systems will only get better with time.

In order to uncover patient concerns, regular meetings between a doctor and a patient are of utmost importance. However, this routine set up has no evidence-based method to structure the communication, giving little research into how effective the long-term outcome is. A quick communication checklist completed by the patient before the appointment, where they specify their common needs they want to elaborate on, can lead to enhanced doctor patient interaction (Van Os et al., 2004). This was indicated through a computer mediated procedure structuring the doctor-patient interchange called DIALOG, which was set up in order to ensure that an array of life categories and treatment concerns were constantly addressed (Priebe et al., 2007). The patients were asked to rate their satisfaction levels in a variety of life categories such as mental health, relationships, job situation and leisure activities during the consultation, with patients answering the questions on a hand-held laptop. The use of computers was incredibly important in facilitating communication and reducing any unmet needs the patient had, since both parties could view the patient’s changes in satisfaction of different life domains over time. Patients’ answers to structured questions regarding management plans and expectations were consistently visually displayed on a computer screen, which improved discussion of treatment and the recognition of realistic targets for therapy. From a telemedicine point of view, both visual and auditory methods can enrich the doctor patient interaction by improving the patient’s concentration, information absorption and even decreasing certain psychiatric symptoms such as delusions (Ahmed and Boisvert, 2006).

# Communication Training in Telepsychiatry

Currently, training in telepsychiatry is not a mandatory requirement during specialist training in the UK, United States, Canada or Australia. However it is a requirement in Australia or New Zealand where telepsychiatry is the only option for patients located in rural areas (Saeed et al, 2016). The American Psychiatric Association offers an online telepsychiatry toolkit with an array of teaching videos from leading psychiatrists to guide doctors and therapists, enabling them to enhance their communication methods via video consultation. The resource is constantly evolving, and the toolkit encompasses a wide range of topics such as communication skills, legal and reimbursement issues, technical considerations and the integrated care model. Tips and tricks for enhancing communication skills are discussed; one exercise includes trying to adapt online presence to come across like a TV presenter. TV presenters tend to use facial expressions and movements much more than people do face to face, and they accentuate language with extra emphasis on tone to make their points. According to the American Psychiatric Association, this type of behaviour has to be learnt as it cannot come naturally, and they recommend a formal media training course to enhance these skills (American Psychiatric Association, 2018). The importance of training to enhance doctor patient interaction over video conference is paramount and it is vital to start making training more available to psychiatrists over the world, especially in rural areas where it is of dire need.

# Limitations of Data Collection

Most of the data from all of these studies have been assessed through verbal content analysis, which is a method by which psychiatrists and psychologists use to evaluate the transitory psychological state of the participants. One main advantage of the technique is that it can be applied by researchers of differing theoretical viewpoints. The perspective that a researcher holds can be built into the content analysis; this is vital since the zeitgeist of psychology is frequently changing. It is also inexpensive and needs nominal training. However, the content analysis scale ignores all information that is not in word format; non-verbal communication such as facial emotions and nodding is not included which are vital parts of communication. Furthermore, interpreting results requires already established content analysis scales in order to compare results from research of many types. Yet it is the best technique on hand; questionnaires and interviews need to include questions relating precisely to the situation, whereas content analysis does not require such specificity and can be applicable from one situation to the next (Viney, 1983). It is also important to note that further studies need to be carried out to show the long term effects of telemedicine on the doctor-patient relationship.

# Relation of Telepsychiatry with Specific Mental Health Disorders

Communication in psychiatry is the means to diagnose disorders and provide therapeutic care. It can be especially complex as many mental disorders affect the way patients communicate, leading to potential barriers in telepsychiatry. For example, the hallmark symptoms of in psychosis, as described by Schneider’s first rank symptoms, will lead to question the practicality of using videoconferencing. Will psychotic patients be willing to speak to doctors via telepsychiatry, and will it exacerbate delusions or paranoia? Interestingly, findings in most studies show that telepsychiatry is well tolerated and accepted, equivalent to face-to-face consultations. There is little evidence that any psychotic symptoms are exacerbated (Sharp, Kobak and Osman, 2011), and the distance is seen as a positive factor for patients. Some patients with psychosis prefer receiving telepsychiatry care rather that in person, with satisfaction increasing over time. Children in particular tend to be more forthcoming with it as well (Pakyurek, Yellowlees and Hilty, 2010). Magaletta et al (2000) observed the satisfaction of telepsychiatry services with prison inmates. 81% of the 175 participants rated their treatment positively and 83% would come back to be seen by a doctor through videoconference. The satisfaction ratings also indicated that the level of comfort increased over time. Patients with thought disorder had higher levels of satisfaction than face-to-face consultations compared to patients with affective disorders. This could be due to thought-disordered patients being over-stimulated in social relationships, therefore the distance tends to calm down their anxiety levels. The organised and constrained approach of the telepsychiatry environment may also lessen any stressors they have; patients do not need to deal with scheduling, planning and paying for a trip to the doctor. Whilst all studies offer strong evidence for psychosis patients, further empirical research is required. Furthermore, patients with paranoid thoughts may not be able to disclose personal information until they are completely at ease that the videoconferencing server is secure. All precautions must be taken to ensure the privacy of the appointment, since doctor-patient confidentiality cannot be compromised.

Further technologies can be used to aid telepsychiatry in psychosis patients and deliver psychological treatment. An experimental randomised control trial led by King’s College London has created a novel “Avatar” therapy, which is a computerised version of the patient’s auditory hallucinations. Therapy involves a three-way conversation between the therapist, patient and avatar, where patients practised talking to their avatar and standing up to it. Over time, the notion is that the control of power would shift to the patient. Patients with avatar therapy found their hallucinations to be much less powerful and distressing than the control group. If researchers show that this therapy could be delivered efficiently by different professionals in different locations, and through video consultations too, this could modify how psychosis patients are treated across the planet (Craig et al., 2017).

Other psychological treatments such as internet delivered cognitive behavioural therapy (ICBT) have also shown to be effective for patients with post-traumatic stress disorder (Frueh et al, 2007) as well as obsessive-compulsive disorder (Himle et al., 2006). Meta-analysis results indicate that for CBT particularly, a face to face consultation may not be crucial to give positive long-term results, and that even if an alliance was to form between patient and therapist during ICBT it is not of huge importance to the overall outcome (Calbring et al, 2017). However, understanding how ICBT works still needs to be further researched as there is very little information on this. Another limitation of ICBT is the difficulty in showing the homework worksheet and concept diagrams to the therapist – holding sheets up to the camera is a solution but less than ideal. In future studies, homework and concept diagrams can be aided via the use of computer technology, enabling real time graphics on the screen. This would also help some patients express their thoughts better than their own drawings/handwriting on paper.

A pilot programme in 2016 delivered telepsychiatry in rural communities to patients that were deaf and hard of hearing. It also gave promising results, with patient satisfaction achieving high standards. Telepsychiatry can be used to guide management planning, create specialised rehabilitation courses and improve awareness (Crowe et al., 2016). Increasing exposure to the deaf community through telepsychiatry services with the help of interpreters can create mental health and linguistic cultural competence, as well as reduce stigma.

# Conclusion

To conclude, it is obvious that there are many ways telepsychiatry can be used to overcome communication barriers in the clinical consultation. With one of its main advantages being overcoming geographical barriers, telepsychiatry is quickly becoming a popular field of choice, giving patients and doctors the ease of not travelling a long way; this reduces both time and costs. Studies show that for most psychiatric disorders, patient satisfaction is the same or even higher than normal face-to-face consultations. Several communication barriers can be lifted with this technology; some of these include reducing social distance, enabling patients to relax in their own environment and using technology to facilitate psychological treatment such as CBT. However there are also limitations; due to this perhaps telepsychiatry will never be able to completely replace in-patient consultation, but it can definitely be used as an adjunct where required. Several researchers also have stated more scientific studies are needed to inspect the relationship between telepsychiatry and doctor-patient communication. These would include more in-depth qualitative investigations, as well as applying interaction analysis instruments to electronically mediated consultations as opposed to just verbal content analysis. Furthermore, it would be critical to also compare telemedicine consultations across other medical specialities, in both communication and technical aspects.

Once patterns of communication are completely understood, it can enable researchers to process what types of interaction lead to best outcomes in telemedicine; this in turn will assist in developing training courses and programmes for healthcare professionals. Telepsychiatry must expand its focus to study the communication processes in mental health as this will enable us to give more effective healthcare in the 21st century.

# References

Agha Z, Roter DL, Schapira RM. An evaluation of patient-physician communication style during telemedicine consultations. Journal of Medical Internet Research 2009;11:e36.

Ahmed, M. & Boisvert, C. (2006) Using computers as visual aids to enhance communication in therapy. Computers in Human Behavior, 22, 847^855.

American Psychiatric Association (2018). *Learning To Do Telemental Health*. [online] Psychiatry.org. Available at: https://www.psychiatry.org/psychiatrists/practice/telepsychiatry/learning-telemental-health [Accessed 12 Oct. 2018].

Baer, L., Elford, D. and Cukor, P. (1997). Telepsychiatry at Forty: What Have We Learned?. *Harvard Review of Psychiatry*, 5(1), pp.7-17.

Baigent MF, Lloyd CJ, Kavanagh SJ, Ben-Tovim DI, Yellowlees PM, Kalucy RS, Bond MJ. Telepsychiatry: „tele‟ yes, but what about the „psychiatry‟? Journal of Telemedicine and Telecare 1997;3:3-5.

Ball CJ, McLaren M, Summerfield, Lipsedge MS, Watson JP. A comparison of communication modes in adult psychiatry. Journal of Telemedicine and Telecare 1995;1:22-6.

Bashshur, R., Shannon, G. and Sapci, H. (2005). Telemedicine Evaluation. *Telemedicine and e-Health*, 11(3), pp.296-316.

Beach, M., Roter, D., Larson, S., Levinson, W., Ford, D. and Frankel, R. (2004). What do physicians tell patients about themselves?. *Journal of General Internal Medicine*, 19(9), pp.911-916.

Campbell, B., Ball, D. and Mornex, F. (2015). Multidisciplinary Lung Cancer Meetings: Improving the practice of radiation oncology and facing future challenges. *Respirology*, 20(2), pp.192-198.

Carlbring, P., Andersson, G., Cuijpers, P., Riper, H. and Hedman-Lagerlöf, E. (2017). Internet-based vs. face-to-face cognitive behavior therapy for psychiatric and somatic disorders: an updated systematic review and meta-analysis. *Cognitive Behaviour Therapy*, 47(1), pp.1-18.

Castonguay, L., Constantino, M. and Holtforth, M. (2006). The working alliance: Where are we and where should we go?. *Psychotherapy: Theory, Research, Practice, Training*, 43(3), pp.271-279.

Charles, C., Gafni, A. and Whelan, T. (1997). Shared decision-making in the medical encounter: What does it mean? (or it takes at least two to tango). *Social Science & Medicine*, 44(5), pp.681-692.

Craig, T., Rus-Calafell, M., Ward, T., Leff, J., Huckvale, M., Howarth, E., Emsley, R. and Garety, P. (2017). AVATAR therapy for auditory verbal hallucinations in people with psychosis: a single-blind, randomised controlled trial. *The Lancet Psychiatry*

Crowe, T., Jani, S., Jani, S., Jani, N. and Jani, R. (2016). A pilot program in rural telepsychiatry for deaf and hard of hearing populations. *Heliyon*, 2(3), p.e00077.

Cukor P, Baer L, Willis BS, Leahy L, O‟Laughlen J, Murphy M, Withers M, Martin E. Use of videophones and low-cost standard telephone lines to provide a social presence in telepsychiatry. Telemedicine Journal 1998;4:313-31.

Darkins, A. and Cary, M. (2000). *Telemedicine and Telehealth: Principles, Policies, Performances and Pitfalls*. Springer Publishing Company, pp.5-8.

Druss, B. and Walker, E. (2011). *4*. [online] Available at: https://www.integration.samhsa.gov/workforce/mental\_disorders\_and\_medical\_comorbidity.pdf [Accessed 13 Dec. 2017].

Druss, B. and Walker, E. (2011). Mental disorders and medical comorbidity. *THE SYNTHESIS PROJECT*, (21), p.4.

Dwyer, T. (1973). Telepsychiatry: Psychiatric Consultation by Interactive Television. *American Journal of Psychiatry*, 130(8), pp.865-869.

Education Policy Institute (2018). *Access to children and young people’s mental health services – 2018*. [online] Available at: https://epi.org.uk/publications-and-research/access-to-camhs-2018/ [Accessed 5 Oct. 2018].

Esser PE, Goossens RHM. 2009. A framework for the design of user-centred teleconsulting systems. Journal of Telemedicine and Telecare 2009;15:32-9.

Fallowfield, L., Hall, A., Maguire, G. and Baum, M. (1990). Psychological outcomes of different treatment policies in women with early breast cancer outside a clinical trial. *BMJ*, 301(6752), pp.575-580.

Frank, A. (1990). The Role of the Therapeutic Alliance in the Treatment of Schizophrenia. *Archives of General Psychiatry*, 47(3), p.228.

Freeth, R. (2007). *Humanising psychiatry and mental health care*. Oxford: Radcliffe.

Frueh, B., Monnier, J., Grubaugh, A., Elhai, J., Yim, E. and Knapp, R. (2007). Therapist Adherence and Competence With Manualized Cognitive-Behavioral Therapy for PTSD Delivered via Videoconferencing Technology. *Behavior Modification*, 31(6), pp.856-866.

Gammon D, Sorlie T, Bergvik S, Hoifodt TS. Psychotherapy supervision conducted by videoconferencing: A qualitative study of users‟ experiences. Journal of Telemedicine and Telecare 1998;4:33-5.

Gammon, D., Bergvik, S., Bergmo, T. and Pedersen, S. (1996). Videoconferencing in psychiatry : a survey of use in northern Norway. *Journal of Telemedicine and Telecare*, 2(4), pp.192-198.

Geller, J. (2003). Self-disclosure in psychoanalytic–existential therapy. *Journal of Clinical Psychology*, 59(5), pp.541-554.

Greenhalgh, T., Vijayaraghavan, S., Wherton, J., Shaw, S., Byrne, E., Campbell-Richards, D., Bhattacharya, S., Hanson, P., Ramoutar, S., Gutteridge, C., Hodkinson, I., Collard, A. and Morris, J. (2016). Virtual online consultations: advantages and limitations (VOCAL) study. *BMJ Open*, 6(1), p.e009388.

Hall, J. and Dornan, M. (1988). What patients like about their medical care and how often they are asked: A meta-analysis of the satisfaction literature. *Social Science & Medicine*, 27(9), pp.935-939.

Hamann, J., Cohen, R., Leucht, S., Busch, R. and Kissling, W. (2007). Shared Decision Making and Long-Term Outcome in Schizophrenia Treatment. *The Journal of Clinical Psychiatry*, 68(07), pp.992-997.

Hansson, L. and Berglund, M. (1992). Stability of therapeutic alliance and its relationship to outcome in short-term inpatient psychiatric care. *Scandinavian Journal of Social Medicine*, 20(1), pp.45-50.

Haug M, Lavin B. Consumerism in medicine: Challenging physician authority. BeverlyHills, California: Sage Publications, 1983.

Healios.org.uk. (2018). *Healios*. [online] Available at: https://www.healios.org.uk [Accessed 13 Oct. 2018].

Hilty, D., Ferrer, D., Parish, M., Johnston, B., Callahan, E. and Yellowlees, P. (2013). The Effectiveness of Telemental Health: A 2013 Review. *Telemedicine and e-Health*, 19(6), pp.444-454.

Himle, J., Fischer, D., Muroff, J., Lockers, L., Abelson, J. and Hanna, G. (2006). Videoconferencing-based cognitive-behavioral therapy for obsessive-compulsive disorder. *Behaviour Research and Therapy*, 44(12), pp.1821-1829.

Improving physical health for people with mental illness: what can be done?. (2013). [ebook] London: Faculty of General Adult Psychiatry, pp.12-14. Available at: http://www.rcpsych.ac.uk/pdf/FR%20GAP%2001-%20final2013.pdf [Accessed 12 Dec. 2017].

Jaspers, K., Hoenig, J. and Hamilton, M. (1998). *General psychopathology*. Baltimore, MD: Johns Hopkins University Press.

Kaplan, S., Greenfield, S. and Ware, J. (1989). Assessing the Effects of Physician-Patient Interactions on the Outcomes of Chronic Disease. *Medical Care*, 27(Supplement), pp.S110-S127.

Kavanagh SJ, Yellowlees PM. Telemedicine-Clinical applications in mental health. Australian Family Physician 1995;24:1242-7.

Kay, A. (2017). *This Is Going To Hurt - Secret Diaries of a Junior Doctor*. 1st ed. Picador, p.164.

Laugharne, R. and Priebe, S. (2006). Trust, choice and power in mental health. *Social Psychiatry and Psychiatric Epidemiology*, 41(11), pp.843-852.

Laugharne, R., Priebe, S., McCabe, R., Garland, N. and Clifford, D. (2011). Trust, choice and power in mental health care: Experiences of patients with psychosis. *International Journal of Social Psychiatry*, 58(5), pp.496-504.

Levy, S., Henderson, L. and McAlpine, C. (2014). Growing up with confidence: using telehealth to support continence self-care deficits amongst young people with complex needs. *Journal of Innovation in Health Informatics*, 21(3), pp.113-117.

Liu X, Sawada Y, Takizawa T, Sato H, Sato M, Sakamoto H, Utsugi T, Sato K, Sumino H, Okamura S, Sakamaki T. Doctor-patient communication: a comparison between telemedicine consultation and face-to-face consultation. Internal Medicine 2007;46:227-32.

MacFarlane A, Harrison R, Murray E, Wallace, P. A qualitative study of communication during joint teleconsultations at the primary-secondary care interface. Journal of Telemedicine and Telecare 2006;12:24-6.

Magaletta, P., Fagan, T. and Peyrot, M. (2000). Telehealth in the Federal Bureau of Prisons: Inmates' perceptions. *Professional Psychology: Research and Practice*, 31(5), pp.497-502.

Malhotra, S., Shah, R. and Chakrabarti, S. (2013). Telepsychiatry: Promise, potential, and challenges. *Indian Journal of Psychiatry*, 55(1), p.3.

Marsh, H. (2014). *Do No Harm: Stories of Life, Death and Brain Surgery*. London: Weidenfeld & Nicolson.

McCabe, R. and Priebe, S. (2004). The Therapeutic Relationship in the Treatment of Severe Mental Illness: A Review of Methods and Findings. *International Journal of Social Psychiatry*, 50(2), pp.115-128.

McLaren P, Ball CJ, Summerfield AB, Watson JP, Lipsedge M. An evaluation of the use of interactive television in an acute psychiatric service. Journal of Telemedicine and Telecare 1995;1:79-85.

McLaren, P. (2003). Telemedicine and telecare: what can it offer mental health services?. *Advances in Psychiatric Treatment*, 9(1), pp.54-61.

Moskop JC. The nature and limits of the physician‟s authority. In Doctors, Patients, and Society: Power and Authority in Medical Care, Staum, MS. Larsen, DE., eds. Waterloo, Ontario, Canada: Wilfrid Laurier University Press. 1981; 29-44.

Murphy, R. and Bird, K. (1974). Telediagnosis: a new community health resource. Observations on the feasibility of telediagnosis based on 1000 patient transactions. *American Journal of Public Health*, 64(2), pp.113-119.

Norum, J. and Jordhøy, M. (2006). A university oncology department and a remote palliative care unit linked together by email and videoconferencing. *Journal of Telemedicine and Telecare*, 12(2), pp.92-96.

Pakyurek, M., Yellowlees, P. and Hilty, D. (2010). The Child and Adolescent Telepsychiatry Consultation: Can It Be a More Effective Clinical Process for Certain Patients Than Conventional Practice?. *Telemedicine and e-Health*, 16(3), pp.289-292.

Parsons T. Illness and the role of the physician: A sociological perspective. American Journal of Psychiatry 1951;21:452-60.

Pomey, M., Ghadiri, D., Karazivan, P., Fernandez, N. and Clavel, N. (2015). Patients as Partners: A Qualitative Study of Patients’ Engagement in Their Health Care. *PLOS ONE*, 10(4), p.e0122499.

Priebe, S., Dimic, S., Wildgrube, C., Jankovic, J., Cushing, A. and McCabe, R. (2011). Good communication in psychiatry – a conceptual review. *European Psychiatry*, 26(7), pp.403-407.

Priebe, S., McCabe, R., Bullenkamp, J., Hansson, L., Lauber, C., Martinez-Leal, R., Rössler, W., Salize, H., Svensson, B., Torres-Gonzales, F., Van Den Brink, R., Wiersma, D. and Wright, D. (2007). Structured patient–clinician communication and 1-year outcome in community mental healthcare. *British Journal of Psychiatry*, 191(05), pp.420-426.

Rcpsych.ac.uk. (2013). *Improving physical health for people with mental illness: what can be done?*. [online] Available at: http://www.rcpsych.ac.uk/pdf/FR%20GAP%2001-%20final2013.pdf [Accessed 03 Dec. 2017].

Roter D, Hall J, Katz N. Patient-physician communication: A descriptive summary of the literature. Patient Education Counseling 1988;12:99-119.

Roter DL, Hall JA. Doctors Talking with Patients/ Patients Talking with Doctors: Improving Communication in Medical Visits. Wesport, Connecticut: Auburn House, 1992.

Roter, D. (1997). Communication Patterns of Primary Care Physicians. *JAMA: The Journal of the American Medical Association*, 277(4), p.350.

Saeed, S., Johnson, T., Bagga, M. and Glass, O. (2016). Training Residents in the Use of Telepsychiatry: Review of the Literature and a Proposed Elective. *Psychiatric Quarterly*, 88(2), pp.271-283.

Sharp, I., Kobak, K. and Osman, D. (2011). The use of videoconferencing with patients with psychosis: a review of the literature. *Annals of General Psychiatry*, 10(1), p.14.

Sisk JE, Sanders JH. A proposed framework for economic evaluation of telemedicine. Telemedicine Journal 1998;4:31-7.

Street RL, Wheeler EJ, McCaughan WT. Specialist-primary care provider-patient communication in telemedicine consultations. Telemedicine Journal 2000;6:45-54.

Swanson, K., Bastani, R., Rubenstein, L., Meredith, L. and Ford, D. (2007). Effect of Mental Health Care and Shared Decision Making on Patient Satisfaction in a Community Sample of Patients with Depression. *Medical Care Research and Review*, 64(4), pp.416-430.

Tachakra S, Rajani R. Social presence in telemedicine. Journal of Telemedicine an Telecare 2002;8:226-30.

Urness, D. (2003). Telepsychiatry and Doctor–Patient Communication: A Tale of Two Interviews. *Canadian Psychiatric Association*. [online] Available at: http://ww1.cpa-apc.org/Publications/Archives/Bulletin/2003/october/urness.pdf [Accessed 1 Sep. 2018].

Van Os, J., Altamura, A. C., Bobes, J., et al (2004) Evaluation of theTwo-Way Communication Checklist as a clinical intervention: results of a multinational, randomised controlled trial. British Journal of Psychiatry, 184, 79^83.

Viney, L. (1983). The assessment of psychological states through content analysis of verbal communications. *Psychological Bulletin*, 94(3), pp.542-563.

Wagnild, G., Leenknecht, C. and Zauher, J. (2006). Psychiatrists' Satisfaction with Telepsychiatry. *Telemedicine and e-Health*, 12(5), pp.546-551.

Waitzkin H. The Politics of Medical Encounters: How Patients and Doctors Deal with Social Problems. New Haven: Yale University Press, 1991.

Wells R, Lemak CH. Beyond adoption to sustained use: Telemedicine for rural communities. Telemedicine Journal 1996;2:285-93.

Who.int. (2010). *TELEMEDICINE Opportunities and developments in Member States*. [online] Available at: http://www.who.int/goe/publications/goe\_telemedicine\_2010.pdf [Accessed 14 Dec. 2017].

Wittson, C. and Dutton, R. (1956). A NEW TOOL IN PSYCHIATRIC EDUCATION. *Psychiatric Services*, 7(9), pp.11-14.