Improving communication between foot health practitioner and patients with the use of digital communication interventions

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1. Introduction

In today's European society, the management of persons with chronic diseases is considered a major public health challenge[1]. It is not surprising since the prevalence of persons with chronic diseases is increasing[2,3] and that these persons have limitations in their activities of everyday life due to functional impairment [4]. The foot has been recognised several times as a source of major concerns among persons with chronic diseases leading to an increased risk of falling, of ulcer or of experiencing chronic pain[5]. At the time of writing this work, it can be highlighted that the Covid pandemic has resulted in an accelerated shift towards online digital solutions due to changes in expectation of service provision by the restrictions imposed[6]. Digital health solutions may play an important role as a method in managing persons chronic illness [7]. The importance of utilizing digital health solutions to meet the need for health systems is now well recognised[8,9]. In particular, the European Commission aims to improve prevention and management of chronic conditions, and allow patients to provide feedback to healthcare providers by enhancing the digitisation of the health and care sectors [1]. However, digital health solutions should not be considered as a mean to replace other health services, but rather a mean to complement and enhance them [1,10]. Thus, in this perspective, digital health solutions should be designed in a way that embraces the biopsychosocial healthcare model, since they interact in complex ways with biological, psychological, and social aspects of health and disease[11,12].

While some healthcare providers use digital health solutions to complement and enhance their services [1,10] their approaches to adopt these digital solutions may differ[12]. This justifies the need to educate current and future health care practitioners to appropriately integrate digital health solutions in their practice[12]. To properly integrate digital health solutions in practice, literature suggest that provider should adopt a person-centred perspective [4]. This can be done by empowering patients, having an effective communication with them and promote their participation in the treatment[4]. By adopting such an approach, this can improve treatment (cost-)effectiveness, health outcomes and well-being, change in self-management behaviours and limitations in daily activities and physical functioning[4,13].

Based on a critical evaluation of the literature, our group of experts identified some foot health challenges and summarise how they can be realistically addressed with the use of digital health solutions. By doing so, this work aims to inform the adoption of digital health solutions to strengthen Foot Health Practice.

This part concerns basic communication skills. If you want to get more information on this, please find below some written documents that we recommend:

- From page 5 to 27 : "Implementation of eHealth patient–provider communication tools into routine practice Facilitators and barriers from the perspectives of patients, middle managers and health care providers" [4]
- "Effective Communication for Health Professionals - E-Book"(https://books.google.be/books?id=-xytDwAAQBAJ&pg=PA1&hl=nl&source=gbs_toc_r&cad=3#v=onepage&q&f=false)

2 . “Face-to-face” Communication as a prerequisite to use Digital Communication Solutions

It is currently considered that healthcare communication deserves much greater attention than it currently receives, as it is one of most cost-effective interventions to improve the quality and safety of health services[14]. Communication is the act of conveying a message to another person, and it is an essential skill for establishing person centred care [15]. Evidence suggests good communication skills and behaviours from healthcare providers is associated with positive patient outcomes[16–18].

The digitalization process within health care leads to a shift from the physical face-to-face communication toward the use of digital health solutions [19]. Current literature highlights the need to improve physical face-to-face communication in combination with the use of digital health solutions [19]. Effectively, physical face-to-face communication is positively associated with the use of digital health solutions suggesting that they are complementary to each other[19]. Thus, it is considered that development of face-to-face communication skills is a pre-requisite to the use of digital health solutions [4,19].

However, at the time of COVID-19 outbreak and its underlying social distancing measures, the need for alternative ways to provide patient care has increased and the digital face-to-face consultations have been identified as a potential alternative to physical face-to-face consultations[20,21]. In podiatry, the use of a telephone-based follow-up consultation service may offer a potentially time and cost-efficient alternative to physical face-to-face consultations appointments for people with rheumatic and musculoskeletal disorders and this especially when capacity for physical face-to-face consultation is limited[21]. While such digital face-to-face consultation can be done by telephone, it is considered that video consultations can provide additional visual cues and therapeutic presence[22].

To empower patients and to make them more active in their care , foot health practitioners should have person-centred communication skills[19,23–25]. Although there's no single definition of person-centred communication, a consensus about what constitutes ‘‘best practice’’ has been published in 2013 by King, A. & al. [16]. These recommendations are centred on the following 6 aspects – for more details the reader may refer to the original publication [16]:

- Fostering the relationship;
- Gathering information;
- Providing information;
- Making decisions;
- Responding to emotions;
- Enabling disease and treatment-related behaviour.

As part of this training course, you will have to:

- Synthesize the following video after consulting the power point “Best Practice’’ for Patient-Centered Communication: A Narrative Review” [16] : https://www.youtube.com/watch?v=aeSlJPLFk8Q
- Practise your person-centred communication skills. As with any learning procedure, communication skills require practice, feedback and repeated attempts to improve[17]. Practise your person-centred communication skills, identify the skills which can be improved and try to improve them in a second role-playing. (Best Practice” for Patient-Centered Communication: A Narrative Review [16])

Digital Communication Solutions to strengthen Foot Health Practice

With the population's increased use of technologies, patients are increasingly requiring the use of digital health solutions[4]. However, while these digital health solutions has a great potential to improve healthcare cost-effectiveness[4,26], their implementation into practice has proven to be difficult[4]. Thus the literature suggested that some effort should be made to implement these solutions into practice[27]. To promote this, some studies identified factors which affect the implementation process[4,28]. These factors can be defined as facilitators if they are expected to have a positive effect on the implementation or they can be defined as barriers if they are expected to have a negative effect on the implementation [4,26]. These facilitators and barriers can vary depending on the human characteristics, socioeconomic and cultural environments of the patient and healthcare provider[4,29–31].

At the healthcare provider level, typical facilitators to implement digital health solution are the motivation, the willingness to change, the workload improvements and the perceived benefit[4,26]. At the opposite, typical barriers are related to the lack of integration into existing routines, the lack of guidance about how to use the tool and the concerns about technology, confidentiality, security, safety and liability[4]. In addition, providers attitude can be a barrier if they consider the intervention as burdensome, do not appreciate it, have negative attitudes towards computer use or do not understand why they should make use of the new technology [4].

At the patient level, typical facilitators to the implementation include patients' perception of the service as convenient, efficient and user-friendly[4]. On the other side, typical barriers to the implementation are unawareness of the existence of the service and lack of interest in managing their own illness, concerns about privacy and confidentiality[4]. In addition, lack of information/motivation, negative attitude, language/cultural issues and preference for using other forms of communication are also reported barriers [4].

Twenty-six students in their first year of studying podiatry at Salford responded an audit survey related to their digital communication skills capabilities (Figure1). For each statement students were asked to state how their skill level matches to the capability:

- Proficient: Experienced and confident in ability
- Capable: Able to successfully complete tasks but still require help and support from time to time
- Developing: Still learning the skill

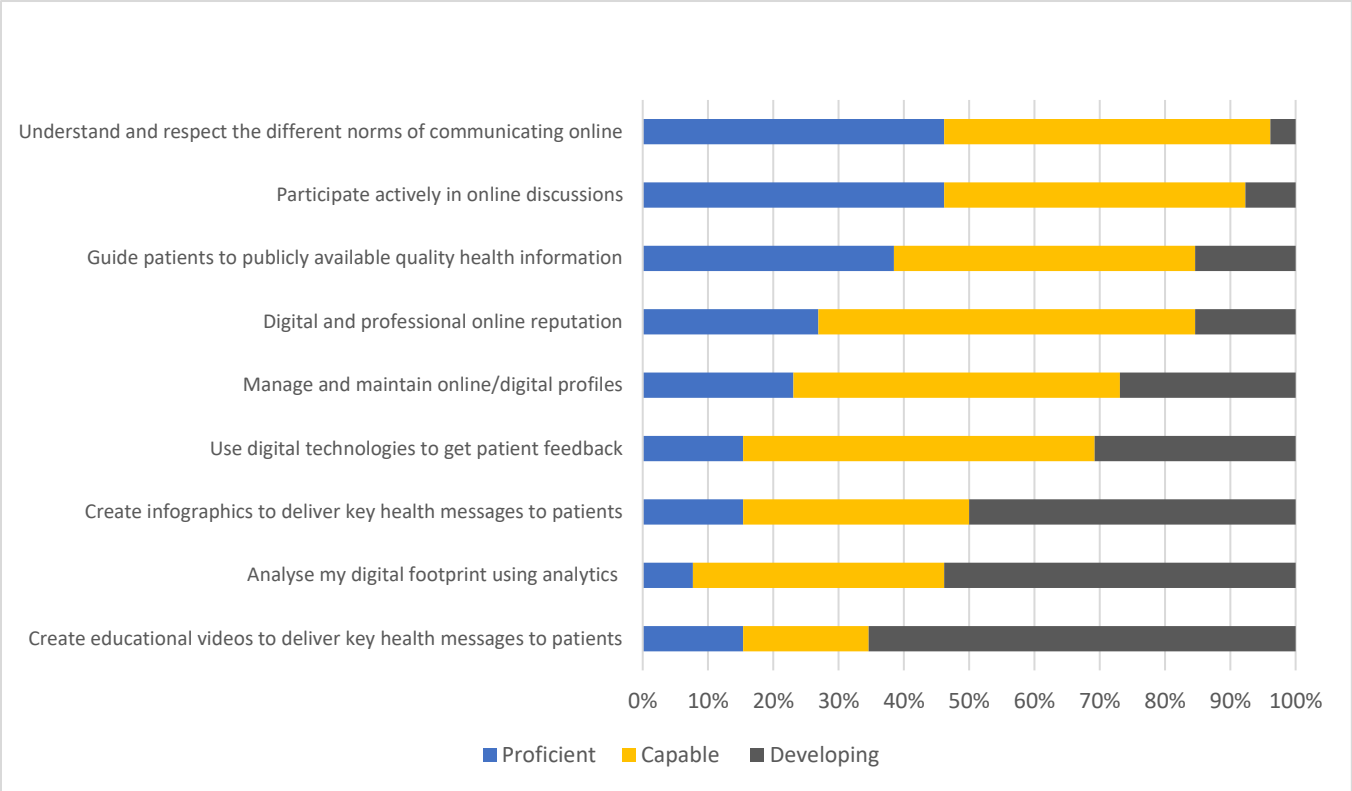

Figure 1: Distribution of 1st year student digital communication skills capabilities

The objective of this section is to promote the implementation of digital health solutions in foot health practice. In this perspective we (1) identified two common challenges in foot health practice and (2) illustrate how digital health solutions can realistically address these challenges. This part should be considered as a starting point which will need to be updated over time to incorporate new evidence and technologies.

Health challenge 1: Health literacy

The health literacy can be considered as a person's ability to obtain, process and comprehend basic health information which is considered as a requirement to make good health decisions [32–34]. It is now well-known that low- health literacy is associated with poor health and low-adherence to treatment[33,34]. It is commonly reported in the literature that persons with chronic disease are affected by low computer and health literacy, which negatively affects their ability to benefit from access to online health information[35].

There is evidence suggesting that interventions which aims to promote health literacy may be more effective particularly for individuals with very low health literacy[32]. In addition, it has been shown that interventions designed specifically to meet the needs of low health-literate audiences are effective both for the intended low health-literate users as well as those with higher health literacy[32]. Practitioners should also consider the socio-demographics of an intended audience when tailoring information through trustworthy online health communication channels and information sources.[36] Findings suggest there are significant socio-demographic disparities in perceived trust in online health communication channels (mediums by which messages are disseminated) and information sources (the person, organization, or entity that is responsible for designing and delivering health messages)[36]. Thus, foot health practitioners should be able to provide educational and instructional materials that are easy to read, culturally relevant, and translated into appropriate languages[37].

The objective of this section is to offer foot health practitioners different ways to provide evidence-based information to patients in a digital format. To do so, the first exercise of this section is about considering using health information material that are already publicly available. The second exercise is about the creation of health information content when no quality health information material is publicly available.

Exercise 1: Guiding patients to health information publicly available

It has been reported in 2013-2014 that 8 out of 10 internet users are looking online for health information [38] and that "70% of Americans used online resources for making healthcare decisions"[39]. This fits with the need to deliver health literacy interventions using IT that is accessible and cost-effective[34]. With electronic dependency increasing, research and policy have determined the best solution to improve health literacy is the internet[40]. The Internet is hybrid in nature, as it is comprised of various channels and sources that operate in varying contexts [36]. Defining the Internet without accounting for the heterogeneity of online channels and sources oversimplifies the Internet as a tool to provide health education to diverse populations[36].

Currently, the health Information's available on the internet are often of poor quality, misleading, and/or have commercial content designed to sell products or services[41]. This is not surprising given the fact that at the present time no law exists to prevent the publication of inaccurate health information from non-healthcare providers[33]. This is also the case for information related to foot health [42,43] and can be considered as critical since inaccurate health information may have serious implications for consumer attitudes and medical decision making[41].

Given that acquiring information on the Internet has the potential to misguide patients with inaccurate information, evidence suggest that the healthcare practitioners should give the patients the opportunity to discuss the health information they found online [44]. Allowing this discussion is key to

ensure that patients' opinion is valued and to strengthen the relationship with the patient[44]. The healthcare practitioner should also make sure that the information the patients wish to use in decision making is based on the evidence[44].

As online health information content can range from scientific publications to personal blogs, information quality can vary, and patients may not possess the necessary skills to evaluate the quality of health information. This exercise aims to help foot health practitioners in guiding patients to quality health information which are already publicly available. As part of this training course, you will have to:

- Make an infographic for patients on how to evaluate health information with the Discern Tool. The Discern Tool is an instrument which can be used by patients and health practitioners for evaluating the quality of written health information[45]. You can use the following publications to guide your reflexion[45,46].
- Evaluate the quality of a health video (different videos depending on the languages) with the same methodology as the one used in this publication[47].

Exercise 2: Creating digital material related to health information.

When no quality health information material is publicly available it could be foreseen to create it by ourselves. Creating some content offers the opportunity to make eHealth interventions more personally relevant and can improve the patient engagement [34] .

Educational videos are often used and have positive results on health literacy [34]. Those videos have the potential to be more engaging than traditional patient information brochures due to the ability to use more audiovisual information[32]. While videos are going to become the primary source of information for patients, Youtube has been determined as a poor source for accurate information [48]. Therefore, high quality educational videos are needed to further guide patients [48].

As part of this training course, you will have to translate scientific articles into educational videos with the use of the free version of Powtoon (https://www.powtoon.com/homepage/?utm_source=google&utm_medium=cpc&utm_campaign=07_2020_brand_eu_tier1&pa_id=erSJ4UHQwCA&ad_id=448436328856&ad_group_id=75206366547&keyword=%2Bpowtoons&gclid=EAIaIQobChMIvZaRzpPi7gIVi5ntCh1DEQg-EAAYASAAEgJ1SvD_BwE):

- Why is a biopsychosocial approach required in healthcare? (Based on our paper 2 → Valuator framework)
- How to prevent diabetic foot injury ? https://www.e-footcare.org/e-footcare/practical-gestures/

→Powtoon tutorials: https://www.powtoon.com/tutorials/

Health challenge 2: Value-Based Healthcare

In 2010, Porter proposed a conceptual approach to measure value in health care. In this approach, creating value for the patients is considered as the overall goal in healthcare[49]. With the idea that ‘‘Value should always be defined around the customer” this approach promote the measure of outcomes which are important to individuals[49]. The approach developed by Porter deserves a lot of merit and is conceptually sound, hence, it has significant challenges [50] and is probably too broad in light of the current work.

The objective of this section is to offer foot health practitioners a way to implement value-based healthcare into practice. To do so, the first exercise of this section is about setting a goal which meets the patient needs, values or preferences. The second exercise is about the collection of feedback to evaluate if the the patient’s needs, values or preferences have been met.

Exercise 1 : Setting person-centred goal

Goal setting is considered as an essential part of the rehabilitation process [51]. While it is generally agreed that a good goal is specific, measurable, achievable, realistic/ relevant and timed (SMART), there is relatively little research on the best way of setting goals [51]. Over the last few years, it has been suggested in the literature to set goal which are patient-centred. Indeed, using a patient-centered approach can improve the ability of foot health practitcionner to :

- Meet a person’s needs, values or preferences ;
- Optimize the person’s experiences with care,
- Involve the patients and their perspectives into care[52].

Although the beneficial effects of patient-centered approach are widely recognized, its implementation in clinical practice remains an ongoing challenge. In fact, too often the only goals set for individuals have been clinical goals set by the therapist, which may have little meaning for a particular person. With respect to foot orthotic practice, frequently these goals are based on ‘therapist based clinical (biological) endpoints’ (e.g. pressure measurements, kinematic analyses, etc).

In this work, setting a person-centred goal is considered as the first step to allow the implementation of value-based healthcare. As part of this training course, you will have to do the following tasks :

1) Based on the following publication, please synthetyse[53]
    a. What does setting a goal means
    b. Why is it valuable to set a goal
    c. How can we set a goal
2) Please synthetise the following video :
    a. https://www.youtube.com/watch?v=NTYRtRNsAko

3) Based on the protocol described in this study, please set a goal for a specific patient[54]:
    a. A collaborative decision between the patient and the therapist is made to either engage in or terminate the therapy
    b. The patient and the therapist determine how they work together by clarifying expectations and identifying priority issues and possible goals
    c. Assessment or evaluation of personal, environmental and occupational factors that underlie the patient’s issues
    d. The patient and the therapist establish goals and agree on the objectives and plan of intervention
    e. Implement the plan with patient participation and power-sharing

Exercise 2 : Monitoring value

Eliciting feedback from patients affords an opportunity to highlight and address aspects of the care experience that need improvement, and to monitor performance with regard to meeting patient experience goals in the delivery of care[55]. As described in the VALUATOR model, the quality measures can be classified with a three-domain classification system : clinical, non-clinical and surrogate quality measures. With the objective of monitoring value via the use of digital communication solutions, this section will focus on the collection of clinically meaningful measures/endpoints. Clinically meaningful measures/endpoints represent objective or subjective outcomes measures about how a person feels, functions or survives.

Meaningful, person-centered measurement is essential to drive improvement in healthcare value for patients[56]. In principle, patients are unique experts in their lived experience of care, and respecting their insights has extraordinary potential to enhance quality[57]. In addition, it can be considered unethical to ask patients to comment on their experiences if these comments are going to be ignored[58]. Careful observation, measurement, recording, interpretation, and analysis of patients' subjective experiences are essential to appreciating what is working well in healthcare, what needs to change, and how to go about making improvements[58].

As part of this training course, you will have to:

1) Use the standardised quality measures available on our website(BPS questionnaires) to measure value. While it can been argued that those measurements can fail to provide the complete picture of an individual's problems, and through this ignore a person's individuality[59], we believe this approach is practical and educational. When those standardized measurement instruments are used, consideration should be given to whether the metrics and measures that are being used are sufficiently capturing patients' experiences[55].

2) Evaluate the degree to which the person-centred goal has been attained. A key component of a successful strategy for understanding and improving patients' experience is ensuring that what is measured reflects what matters most to patients[55]. In this perspective of measuring what matters to the patient, you will have to collect feedback to evaluate if the person centred goal previously set has been attained based on the methodology described in this publication[60]. Each person was asked about each goal and whether the goal was attained :

    i. "fully" (goal completely achieved with no need to take further steps)
    ii. « partially" (the goal was not achieved but remained actively pursued or some of the goal was achieved)
    iii. "not at all" (the goal was not at all met).
    iv. →"Successful" attainment was conservatively defined as goals that participants reported as being met fully;
    v. →partially or unmet goals were categorized as "failure." [60].

3) Use the Improving Practice Questionnaire (IPQ) to collect patient feedback and use those information to improve your practice[61].

4) Try to describe the philosophy implemented on the website below to improve patient care. (https://www.careopinion.org.uk/)

Conclusion

Based on a critical evaluation of the literature, our group of experts identified some foot health challenges and summarise how they can be realistically addressed with the use of digital health solutions. By doing so, this work aimed to inform the adoption of digital health solutions to strengthen communication between foot health practitioner and patients.

Clinicians who may wish to use novel eHealth technology and have questions about information security, privacy or confidentiality should consult their local “privacy officer”, office of information technology and/or the manufacturer or vendor of the technology; technology should be avoided if information is lacking about the risks and protection for the patient’s data. [13]

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