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Critical Review

Pharmacist-patient communication amid COVID-19 pandemic: A review of available options and potential impact

Chia Siang Kow^{a,b*}, Syed Shahzad Hasan^c

^aSchool of Postgraduate Studies, International Medical University, Kuala Lumpur, Malaysia, ^bSchool of Pharmacy, Monash University Malaysia, Bandar Sunway, Selangor, Malaysia, ^cSchool of Applied Sciences, University of Huddersfield, Huddersfield, United Kingdom

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*Corresponding author.
E-mail:
chiasiang_93@hotmail.com

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ABSTRACT

Communication plays a vital role to ensure the safe and effective use of medicines. Nevertheless, movement restriction measures and social distancing policies amid the novel coronavirus disease 2019 (COVID-19) pandemic may have introduced a significant communication barrier between pharmacists and patients. As such, there is an urgent need for alternative approaches to continue pharmacist-patient communication for pharmaceutical care activities. This narrative review summarised the use of five alternative approaches to replace traditional face-to-face counselling by pharmacists: telephone counselling, videoconference, multimedia-mediated counselling, provision of reading materials, and drug reminder packaging. These five approaches may be used interchangeably on their own or as a model of care where different aspects of each approach may be combined to deliver coherent pharmaceutical care.

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INTRODUCTION

Since the first discovery of its outbreak in late 2019 at Wuhan, China, there have been more than 160 million individuals worldwide infected with novel coronavirus disease 2019 (COVID-19), with the global death toll reaching over 3.3 million as of 13th May 2021 (Dong et al., 2020). In order to rapidly and effectively contain the transmission of severe acute respiratory syndrome coronavirus 2, which is the causative pathogen for COVID-19, governments around the world have imposed lockdowns or curfews, with stringent restrictions on people's movement to slow the spread of COVID-19 (Ghosal et al., 2020). In addition, social distancing measures were being introduced to avoid gathering in the crowd which could facilitate the spreading of COVID-19 (Wilder Smith & Freedman, 2020). Nevertheless, albeit these stringent measures to limit social contact, pharmacies, either at the ambulatory settings or community

settings, would need to continue their operation to cater for the needs of the public in terms of administering COVID-19 vaccinations, resolving minor illnesses, medication dispensing, and other pharmaceutical care activities.

Communication plays a vital role to ensure the safe and effective use of medicines. Within patient safety literature, medication errors arising from poor communication between healthcare professionals and patients are not uncommon (Vermeir et al., 2015). Nevertheless, movement restriction measures and social distancing policies would introduce a significant communication barrier between pharmacists and patients, and thus may have significant patient safety implications. Patients receiving long-term medications for non-communicable diseases, such as hypertension, diabetes mellitus, cardiovascular diseases, and chronic respiratory diseases are at risk of medication non-adherence, even before the COVID-19 crises

(Abegaz et al., 2020; McQuaid, 2018; Polonsky & Henry, 2016). These patients need constant reinforcement by pharmacists during their routine visits for medication supply to ensure medication adherence or to address adverse events that may arise from their medication regimens. The same goes for patients who use medical devices on a long-term basis such as inhaler or insulin pen, who would require constant assessment and review of their technique of use and repeated therapeutic patient education. Moreover, there may be some patients opting for home delivery of their medications amid COVID-19-related lockdowns in which there would be no opportunity for intervention or communication by pharmacists.

Healthcare is one of the slowest industries to adapt to innovations worldwide (Herzlinger, 2006). Whether it be electronic prescribing, or smartphone-based applications, or barcoding for correct dispensing, healthcare in general, and the pharmacy field in particular, cannot be considered early adopters of the innovations. This coupled with the fact that the sudden impact of COVID-19 on human lives has caught even most of the optimists around us, indicating that pharmacists need to adapt quickly to innovations to ensure medication safety even during the trying times. As such, there is an urgent need for alternative approaches to sustain pharmacist-patient communication for pharmaceutical care activities including patient counselling, medication therapy management, lifestyle modification, inhaler technique assessment, and health promotional activities, amid COVID-19 crises. We aimed to summarise proven alternative approaches to direct face-to-face patient communication where pharmacists can adopt amid the COVID-19 pandemic and assess the pros and cons to which these approaches can be adopted in routine pharmacy practice at the ambulatory settings or community settings (Table 1).

Alternate approaches to pharmacist-patient communication

Telephone Counselling

Telephone counselling may prove to be a feasible alternative to face-to-face counselling amid the COVID-19 pandemic. Other than reducing the risk of disease transmission where crowds in the pharmacy could be reduced, it could also be associated with

other advantages, including improved comfortability of patients where they are being approached in their environment where issues on privacy will not arise. This may be especially relevant to the discussion of sensitive topics such as sexually transmitted infections (STIs), adverse effects that may be embarrassing to discuss, or medicines that are related to erectile dysfunction, to quote few examples.

Scala et al. (2018) performed an explorative randomised open-label trial in a hospital to investigate the effects of telephone counselling by pharmacists on patients' beliefs about antihypertensive agents and blood pressure control. Patients in the intervention arm (n=84) received telephone counselling service from a pharmacist every 2 months for 1 year. Whereas patients in the control arm (n=80) received the usual care with no phone calls from a pharmacist. After 12 months, patients in the intervention arm reported a significant reduction in the mean systolic (149.9 mmHg to 135.5 mmHg; $p<0.001$) and diastolic blood pressure (91.7 mmHg to 86.0 mmHg; $p<0.001$) compared to baseline while their counterparts in the control group demonstrated a non-significant reduction in the mean systolic (149.6 mmHg to 147.9 mmHg; $p=0.836$) and diastolic blood pressure (91.5 mmHg to 90.6 mmHg; $p=0.874$). In addition, patients in the intervention group had developed a more positive attitude toward their prescribed antihypertensive agents, and with a significant decrease in the level of concern about undesirable effects, as assessed using the Beliefs about Medicines Questionnaire, while no meaningful changes were detected among patients in the control group.

Kooij et al. (2016) conducted a community pharmacy-based, multicenter, cluster-randomised controlled trial to assess the effect of telephone counselling intervention by pharmacists on patients' medication adherence. Pharmacies were randomised into two arms: pharmacies in arm A provided the intervention for antidepressants and bisphosphonates and usual care for renin-angiotensin system (RAS) inhibitors and statins; pharmacies in arm B provided the intervention for RAS-inhibitors and statins and usual care for antidepressants and bisphosphonates. Patients randomised to the intervention arms were selected weekly to be contacted by a pharmacist via telephone between 7 and 21 days after initiation of

medication with the objective to improve adherence. Patients randomised to the usual care received both verbal and non-verbal information upon initiation of medication and were being asked at the first refill visit about experiences with their medication where additional counselling was provided if deemed necessary. After adjustment of confounders, it was observed that there was a significantly higher modified medication possession ratio (MPR_m) (mean difference=5.79%; 95% confidence interval 2.57%-8.68%) and a significantly higher proportion of adherent patients (MPR_m ≥80%) with an odds ratio of 1.48 (95% confidence interval 1.20-1.78) over one year's period among patients in the intervention arm compared to patients in the usual care arm. Analysis based on medication classes showed that patients initiated with RAS inhibitors benefited significantly from the intervention.

Based on the two studies shown above, improved adherence to medications can be made possible with telephone counselling intervention. Benefits in terms of improved medication adherence could lead to may be related to the positive attitudes toward prescribed medications that developed from telephone counselling. In turn, improved medication adherence could lead to improved clinical outcomes including satisfactory blood pressure control. Therefore, telephone counselling may be appealing for busy pharmacists to maintain patients' medication adherence during these trying times, especially those who may need to handle a surge in the number of patients visiting pharmacies for COVID-19 vaccination. In addition, this option also offers better time management and flexibility for patients and pharmacists to arrange the calls as per their schedules.

Videoconferencing

Videoconferencing had been increasingly utilised in healthcare settings, particularly to support communication with patients in remote and rural areas (Taylor et al., 2015). Videoconferencing enables patients to access pharmacy services without the need of leaving their home, something that is highly relevant to the current circumstances. Successful examples of videoconferencing used in pharmacy services within the literature include antiretroviral

(ARV) counselling & education and counselling of inhaled medicines.

Saberi et al. (2013) conducted a feasibility study to determine the acceptability of ARV counselling programs delivered via videoconferencing to young adults of African American origin. In the study, clinical pharmacists used a desktop videoconferencing software application called Movi, which allowed participation in telepresence video calls with other Movi users. Each session lasted on an average of 45 minutes and included counselling by a pharmacist on various topics such as the lifecycle of the human immunodeficiency virus (HIV) and the role of ARV in HIV lifecycle, important monitoring laboratory parameters, the mechanisms of action of ARV to keep HIV in control, potential drug-drug interactions and adverse effects, and techniques to improve adherence. After the session, the majority of participants complimented the privacy offered by videoconference as it prevented coincidental meeting with the members of their community or acquaintances in a society where HIV is associated with social dogmen. Besides, the participants found the added convenience and comfortability with a videoconferencing with no waiting times and cost associated with travelling to an appointment venue. Over 64% of participants felt that the videoconference intervention improved their HIV-related knowledge, motivated them to adhere to their clinic appointments, and equipped them with the skills to minimise non-adherence towards ARV.

Incorrect inhaler technique is one of the common factors responsible for poor control of chronic respiratory disorders (Usmani et al., 2018). Thomas et al. (2017) designed a before-after study to determine the feasibility and acceptability of a videoconferencing education program for inhaler training. Participants were required to attend three, monthly videoconferencing visits conducted by a pharmacist. Each visit started with the pharmacist assessing the baseline inhaler technique of the participant followed by a demonstration of the correct inhaler technique by the pharmacists and a subsequent demonstration by the participant. Forty-one participants with at least one Internet-based home videoconferencing visit completed the study.

Table 1. Pros and cons of five alternative approaches to replace traditional face-to-face counselling by pharmacists

Approaches	Pros	Cons
Telephone counselling (Gajarawala et al., 2021; Kichloo et al., 2020)	<ul style="list-style-type: none"> • Better sense of privacy for patients • Better access to pharmaceutical care services for patients otherwise inaccessible due to geographic distance or physical limitations • Convenience due to flexibility in the arrangement of telephone calls • Reduced operating costs of pharmacies • An enhanced clinical role for pharmacists • Improved patient adherence 	<ul style="list-style-type: none"> • Important non-verbal cues of patients cannot be observed as they would during face-to-face communication • Lacking a physical presence, some patients may experience a reduction of intimacy, trust and commitment toward the pharmacist
Videoconference (Gajarawala et al., 2021; Kichloo et al., 2020)	<ul style="list-style-type: none"> • Better sense of privacy for patients • Better access to pharmaceutical care services for patients otherwise would not be accessible due to geographic distance or physical limitations • Convenience due to flexibility in the arrangement of videoconference • Ability to observe non-verbal cues of patients • Reduced operating costs of pharmacies • An enhanced clinical role for pharmacists • Improved patient adherence 	<ul style="list-style-type: none"> • Lacking a physical presence, some patients may experience a reduction of intimacy, trust, and commitment towards the pharmacist • Not suitable for patients with visual impairment • Technological difficulties e.g., laptop/smartphone not available, elderly patients may not know how to operate videoconferencing software, patients in remote areas may have less than perfect network connections
Multimedia-mediated counselling (Abu Abed et al., 2014; Ciciriello et al., 2013)	<ul style="list-style-type: none"> • Standardised counselling content without missing important points • Reduction of pharmacist workload or time spending on counselling • Viewing of online/offline multimedia content at own convenience • Could overcome the language barrier • Repetition of counselling contents is possible • Could better capture attention from patients with interesting multimedia • Improved patient adherence 	<ul style="list-style-type: none"> • Need prior validation on contents preferably from experts or patients • May need to prepare multimedia contents or subtitles in different languages • Lacking a physical presence, some patients may experience a reduction of intimacy, trust, and commitment toward the pharmacist • Not suitable for patients with visual impairment • Possibility of unattended queries from patients if no follow-up by pharmacists after viewing of multimedia contents
Provision of reading materials (Grime et al., 2007; Sustersic et al., 2017)	<ul style="list-style-type: none"> • Reduction of pharmacist workload or time spending on counselling • Offer more detailed explanation on a particular topic of counselling • Reinforcement of important counselling points • Reading of materials at own convenience • Could overcome the language barrier • Revisit of counselling points when needed e.g., inhaler technique, injection technique • Suitable for patients who requested home delivery of medicines • Improved patient adherence 	<ul style="list-style-type: none"> • Need prior validation on content and readability preferably from experts and patients • May need to prepare materials in different languages • Content can be too technical for patients • Reading materials could be easily lost by patients • Not suitable for patients with visual impairment • Not suitable for patients with low literacy unless carers or friends could read for them • Possibility of unattended queries from patients if no follow-up by pharmacists after the provision of reading materials
Cont'd....		

<p>Drug reminder packaging (Conn et al., 2015; ETTY-Leal & Mary, 2017)</p>	<ul style="list-style-type: none"> • Reinforcement of important instructions with regards to medication taking or medical device use • Could overcome the language barrier • Requires little resources on the provider's side • Suitable for patients who requested home delivery of medicine • Potential reduction in medication errors • Improved patient adherence 	<ul style="list-style-type: none"> • Not suitable for patients with visual impairment • Not suitable for patients with low literacy
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The first visit resulted in a significant improvement in the inhaler technique which was persisted during the second and third visits, with the pre-training inhaler technique improved over the course of study. Statistically and clinically significant improvements were also observed in the quality of life score of participants after the 2-month training period. Almost all participants (91%) rated high satisfaction towards the videoconferencing education program and 94% of them would also recommend the program to others.

We believe that the above studies provide excellent support for the use of videoconferencing by pharmacists amid COVID-19-related restrictions in the counselling of a range of medicines and medical devices to ensure their safe use. Though some of the advantages with telephone counselling such as an improved sense of privacy may also be applicable in this context, videoconferencing may be more suitable for counselling topics that may need lengthy explanation (ARV) or physical demonstration (inhaler technique), where telephone counselling may not be feasible. Other pharmaceutical care activities possible include medication reconciliation, where patients can show to their pharmacists the medications they are taking through videoconferencing.

Multimedia Counselling

The use of multimedia contents such as images, animations, and videos to provide medication counselling is another alternative to traditional face-to-face counselling. Multimedia materials with or without additional guidance by a pharmacist may be provided on-site for patients to access on-the-spot, or made available in portable format via emails, website, interactive portal, smartphone applications, or video-hosting platforms such as YouTube, where patients can access as per their convenience. Though

reinforcement may be required after the multimedia demonstration, the time needed may be reduced compared to traditional face-to-face counselling.

Moore et al. (2015) conducted a prospective, randomised, open, parallel-group study at a medical centre to determine the efficiency and effectiveness of anticoagulation education through informational video recordings compared to traditional face-to-face counselling. Study participants initiated on warfarin were randomised to receive either informational video recordings (intervention) or face-to-face verbal counselling (control). Participants in the intervention group received anticoagulation education via a pre-recorded informational video recording displayed on a tablet device, without the pharmacy counsellor sharing the room while the participant was viewing the video. Participants in the control group received face-to-face counselling by pharmacy counsellors, using a standardised warfarin education script, which was comparable to the content displayed in the video recording. The authors reported a significant reduction in mean total counselling time in the video group compared to the face-to-face counselling group upon adjustment for covariables. Analysis based on patient subgroups (with or without prior warfarin use) showed that only those with prior warfarin use but restarted on warfarin had a significant reduction in mean total counselling time from the intervention. Nevertheless, there was no significant difference in mean Oral Anticoagulation Knowledge scores after the video (74.3%) and face-to-face counselling (71.3%) upon adjustment of covariables.

Park et al. (2018) reported a phase IV, open-label, non-inferiority, multicenter, randomised controlled trial to evaluate the efficacy and safety of video education (one-way education) compared to face-to-face education (two-way education) on asthma control in

patients with well-controlled or partially controlled asthma who required inhaler treatment with Flutero^l® (fluticasone/salmeterol). Participants randomised to video education group (one-way education) watched a 10-minute video on a laptop computer when they visited the registered site on day 1, at week 4, and at week 12. The video, which comprised an explanation of the device's structure, device demonstration by an expert, and a summary on how to use the device, could be repeatedly viewed for a full understanding of the instructions. In addition, manuals on how to use the inhaler were provided to the subjects to reinforce the knowledge acquired during the video session. The face-to-face education (two-way education) method involved optimal education for correct inhaler technique adjusted to each subject's needs, and inhalation errors were minimised via patient demonstration of the inhaler technique and error correction. The authors reported in the full analysis set that forced expiratory volume in the first second was significantly improved in both the control group (from $85.3 \pm 1.7\%$ [mean \pm standard error of the mean] to $89.4 \pm 1.6\%$; $p < 0.01$) and the video education group (from $84.8 \pm 1.6\%$ to $88.1 \pm 14.2\%$; $p < 0.01$), with no significant difference between the two groups after adjustment of covariates. There were also no significant differences in asthma control test (ACT) score, inhaler technique improvements, number of critical errors, number of subjects with optimal inhaler technique, feeling of satisfaction with inhaler-10, or adherence rates between the two groups at week 4 or week 12, after adjustment for confounding variables. Using a similar protocol, King et al. (2015) in their prospective randomised controlled trial also demonstrated the feasibility of multimedia counselling in promoting correct metered-dose inhaler (MDI) technique, with or without the valved holding chamber, in which multimedia counselling showed comparable short-term effectiveness and time-efficiency in MDI technique education with those of conventional face-to-face counselling.

The above studies illustrated that the utilisation of multimedia counselling could reduce pharmacist's time required for medication counselling without short-term patient comprehension being compromised. In some circumstances, multimedia counselling could also replace fully face-to-face counselling by a pharmacist, even for inhaled

medications that typically require physical demonstration, as illustrated in the studies by Park et al. (2018) and King et al. (2015) where the short-term clinical outcomes did not differ. Nevertheless, it is best to reserve multimedia counselling for patients who have had previous counselling by a pharmacist and need reinforcement (study by Moore et al. (2015) showed that patients with prior warfarin use benefited significantly) or for patients who are highly motivated without previous history of non-adherence, since pharmacists' follow up to ensure understanding and adherence may be required to improve long term clinical outcomes. As demonstrated in the study by Park et al. (2018), multimedia counselling may be complemented by the provision of reading materials to enhance patients' understanding, which will be described below.

Provision of Reading Materials

The communication of medicines information or treatment plan is critical for patients' treatment adherence and the safe use of medicines. A need to observe social distance amid the COVID-19 pandemic may hinder effective communication of information related to patient's treatment or medication. Even before the COVID-19 pandemic, patients often misunderstand the content of pharmacists' recommendations during counselling or they tend to forget the given information (McCarthy et al., 2014). Therefore, the provision of reading materials may complement pharmacists' counselling.

Botermann et al. (2016) conducted a cross-sectional study to evaluate the practical handling of a standardised medication plan by the patients, which was a printable document provided to patients that specified the complete medication, their instructions, and indications. Researchers interviewed 40 adult patients receiving 5 or more regular medicines from seven German community pharmacies with regards to the proposed standardised medication plan. The interview consisted of questions regarding identification of and understanding of the information provided on the medication plan. Overall, the participants rated the medication plan positively. Almost all participants (98%) found important information on the standardised medication plan. Patients were also questioned to determine the understanding of the information on

medication intake with regards to meals. In particular, they were questioned about medication intake “1 hour before a meal”, which almost all (98%) interpreted correctly, and “during a meal”, which all (100%) interpreted correctly. The less precise advice of “before a meal” was interpreted correctly by 73% of participants and only 15% correctly interpreted the term “after the meal”.

Padova et al. (2016) designed a multicentre pre-post study to determine if the provision of a written education sheet can reduce patient-initiated triage calls related to oral anticancer drugs among patients who received these drugs. Written patient education sheets on self-management of potential side effects were designed and provided by pharmacists to the patients prescribed with the following three oral chemotherapy agents: capecitabine, temozolomide, or pazopanib, which constituted altogether two-thirds of all triage calls pertaining to oral chemotherapy in the study sites before the intervention. The education sheets were provided with the prescription itself upon pickup or mailed with the prescription to patients in rural areas. It was reported that among patients who received the education sheet, the average number of weekly calls per patient reduced from 0.066 during the 16-week pre-intervention period (139 triage calls among 131 patients), to 0.035 during the 16-week post-intervention period (36 triage calls among 64 patients), which represents a significant reduction of 47% in the volume of patient-initiated triage calls ($P = 0.003$). Reduction in the call volume indicated improved self-care by patients receiving oral anticancer agents.

The above examples highlighted the need to validate the contents of reading materials to ensure simple languages being used (without medical jargons) with clear instructions (if any) to ease patients' understanding. Such a form of written communication may prove useful when pharmacists could not perform comprehensive counselling due to a need to limit the duration of social contact or for patients opt for home medication delivery where reading materials could be inserted inside the medication parcel for the patients. One potential advantage with reading materials that detail self-care approaches such as self-monitoring of blood glucose or self-management of side effects is that they promote self-care among the highly motivated

patients which could reduce the use of limited healthcare resources, especially amid the COVID-19 pandemic. Telephone follow up may be used to remind patients to read the provided materials or to check patients' understanding.

Drug Reminder Packaging

Drug reminder packaging or labellings, such as pillboxes, blister packs, multidrug punch cards, and instructional labelling, is widely used in everyday clinical practice (Boeni et al., 2014). Such adherence-oriented medication packaging may improve treatment compliance and reduce compliance barriers in the ambulatory and the community settings. Drug reminder packaging may be utilised for patients elected for home delivery of medications amid the COVID-19 pandemic where pharmacists could not reinforce medication compliance. Also, the technique of medical devices such as inhalers may deteriorate if pharmacists have no opportunity to assess patients' technique amid the COVID-19 pandemic in which instructional labels can be attached with medical devices if feasible.

Boeni et al. (2014) performed a systematic review that included 30 studies to determine the effect of drug reminder packaging on medication adherence. The authors observed a significant effect of drug reminder packaging on at least one of the measured adherence parameters in 17 studies included. In addition, there were also improvements in other clinical outcomes. One study included reported a significant reduction in low-density lipoprotein cholesterol (LDL-C) levels and blood pressure readings after eight months compared to the baseline for patients using drug reminder packaging (LDL-C: -4.8 mg/dl, $P = 0.001$; systolic blood pressure: -6.9 mmHg, $P = 0.005$; diastolic blood pressure: -2.5 mmHg, $P = 0.04$). In addition, another study among patients with type 2 diabetes reported a significant reduction in haemoglobin A1c (HbA1C) (-0.74% ; $P < 0.0001$). Other improvements included effective pain reduction in cancer patients ($P < 0.0001$), a significant reduction in the number of opportunistic infections and hospitalizations in HIV patients ($P < 0.05$), a significant reduction in the percentages of sub-therapeutic international normalised ratio (INR) values with oral anticoagulation (warfarin) ($P = 0.04$), and significant increment in the time within the

therapeutic INR range ($P = 0.03$). Humanistic outcomes noted that patients rated significantly higher the usability of drug reminder packaging than that of usual packaging.

Basheti et al. (2017) conducted a single-blind randomised controlled trial in patients with asthma using Accuhaler and Turbuhaler to examine the effect of inhaler technique labels (intervention) on retention of correct inhaler technique and asthma control relative to no inhaler technique labels (control), following inhaler training. All patients (either randomised to the intervention group or the control group) demonstrated perfect inhaler technique at baseline (inhaler technique score=9/9). During follow-up, inhaler technique score had decreased in both groups (intervention and control) from the post-education score of 9/9, but there was significantly less decline in the intervention group than the control group (mean difference: -1.29 [95% confidence interval $-1.94, -0.64$]). In addition, there were significantly more patients in the intervention group who still demonstrated the correct technique at 3 months compared with control patients for Accuhaler (62% vs 12%, $p < 0.001$) and Turbuhaler (74% vs. 11%, $p < 0.001$). At the 3-month assessment, no significant difference in ACT score was found between intervention and control groups for both Accuhaler ($p = 0.083$) and Turbuhaler ($p = 0.097$) users. However, mean reliever use was significantly lower at 3 months for patients in the intervention group (2.19 puffs/day) relative to control patients (3.42 puffs/day).

Compared to other aforementioned approaches, drug reminder packaging is a simple technical alternative that requires little resources on the provider's side. Studies above have demonstrated how simple input in terms of modifying drug packaging could bring meaningful clinical outcomes: improvement of readings in lipid panels, improvement of blood pressures, improvement in glycaemic control, improvement in anticoagulation control, improvement in asthma control, as well as pain reduction. Besides, it could also be customised according to patients' needs, for instance, the bigger font size for patients with visual problems or prepare in languages where the individual patients can comprehend.

LIMITATIONS

There are limitations to the current review. First, the review was performed as a narrative review rather than a systematic review of the literature. Therefore, some studies may have been missed. Additionally, our review discussed only five alternative approaches to replace traditional face-to-face pharmaceutical care, but there might be other suitable approaches to be utilised by the pharmacists.

CONCLUSIONS

This narrative review summarised the use of five alternative approaches to replace traditional face-to-face counselling by pharmacists. Telephone counselling, videoconference, multimedia-mediated counselling, provision of reading materials, and drug reminder packaging offer a workable solution to either supplement or replace traditional face-to-face counselling methods, even after the pandemic ends. The patient-pharmacist communication approaches discussed in the paper have implications for practice in the post-pandemic world. These five approaches may be used interchangeably on their own or as a model of care where different aspects of each approach may be combined to deliver coherent pharmaceutical care. It may not be feasible to introduce these communication approaches to every patients. However, specific patient group can be targeted in daily practice; for example, drug reminder packaging can be used for older people with or without impaired memory; multimedia counselling can be implemented for outpatients to reduce patients' waiting time; and videoconferencing or telephone counselling can be utilised to reduce the number of patients visiting pharmacies. Some of these approaches, especially multimedia counselling, may require significant funding to implement that could limit their use.

Pharmacists have a professional obligation to ensure no compromise in the quality of pharmaceutical care during this period of "the new normal" way of delivering healthcare amid the COVID-19 pandemic. Innovating pharmacy practice will not only maintain continuity of care for patients but also ensure the safety of pharmacy personnel when protective measures for pharmacy personnel are inadequate due to shortages in personal protective equipment (Hasan

et al., 2020). As one of the most trusted healthcare professionals, pharmacists should be leading the examples of innovations in patient counselling amid the COVID-19 pandemic (Lynas, 2012). Support from national professional pharmacy organisations and the International Pharmaceutical Federation would be crucial for the wider adoption of such innovations in pharmacy practice.

CONFLICT OF INTEREST

The authors declared no conflict of interest.

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