Original Research

A training program incorporating a diabetes tool to facilitate delivery of quality diabetes care by community pharmacists in Malaysia and Australia

Shamala AYADURAI, Bruce SUNDERLAND, Lisa B. TEE, H. Laetitia HATTINGH.

Abstract

Objectives: To assess a clinical training program on management of Type 2 Diabetes Mellitus (T2DM) incorporating a diabetes tool, the Simpler™ tool. Subsequently pharmacists' experience utilising the tool to deliver structured, consistent, evidence-based T2DM care was explored.

Methods: Full-time non-credentialed diabetes pharmacists providing diabetes medication management services in community settings were purposively recruited. Participants had either face-to-face or online training on diabetes management using the tool which took about two hours and 20 minutes to complete. Their diabetes management knowledge was assessed pre- and post-training using quantitative methodology. They were then required to apply the tool in daily practice for one month. Feedback on both the training sessions and tool utilisation were obtained through semi-structured interviews and analysed using a qualitative approach.

Results: Twelve pharmacists participated: Six from Australia and six from Malaysia. Before attending the training session, their median test score was 6.5/27, IQR 1.4 (1st marker) and 5.3/27, IQR 2.0 (2nd marker). After training, the scores doubled to 14.3/27, IQR 4.5 (1st marker) and 11.3/27, IQR 3.1 (2nd marker), showing significant improvements (p=0.002). Interview data identified perceived effectiveness factor through use of the tool. Participants found the content relevant, structured, concise and easy to understand; enabled comprehensive medication reviews; focused on achieving glycaemic improvement; facilitated documentation processes and pharmacists' role in T2DM management; and as a specific aid for diabetes management. Barriers included lack of accessibility to patients' laboratory data in Australia.

Conclusions: The targeted training improved pharmacists' knowledge on diabetes management and supported the Simpler™ tool use in practice as a structured and beneficial method to deliver evidence-based T2DM care.

Keywords

Education, Pharmacy, Continuing; Diabetes Mellitus, Type 2; Blood Glucose; Documentation; Pharmacists; Pharmaceutical Services; Evaluation Studies as Topic; Malaysia; Australia

INTRODUCTION

Health professionals are required to be knowledgeable about the need for appropriate glycaemic control and measures to prevent long-term diabetes complications. Diabetes caused 1.6 million deaths worldwide in 2016 which was an increase from 1 million in 2000.¹

Type 2 diabetes mellitus (T2DM) guidelines cover seven evidence-based factors to be addressed in the management of patients to reduce diabetes related problems.² Those are glycaemia, cholesterol and blood pressure control, medication, lifestyle, cardiovascular disease risk management and patient education. Despite the evidence, the incidence of complications remains high, both in Malaysia and Australia.³ One reason may be a lack of a structured approach focused on addressing these seven factors in diabetes intervention studies. While some studies showed an intervention improved patients' glycated haemoglobin (HbA1c) values, others showed no significant changes.⁷,¹² Pharmacists’ contribution to optimise medication therapy have been widely documented.¹³ Yet, pharmacists express the need for further training to upskill their competence in managing chronic conditions.¹² To address these issues, a pharmacist diabetes intervention tool, the Simpler™ tool, was developed to facilitate the delivery of structured, evidence-based quality care. To date, there is a lack of diabetes intervention studies which address the seven factors covered in the guidelines. This provided an opportunity to develop a tool that facilitated the provision of structured targeted diabetes care of consistent quality. The tool consists of seven diabetes factors and 32 corresponding evidence-based indicators according to diabetes practice guidelines. The indicators were originally sourced from diabetes practice guidelines from Australia, Malaysia the United Kingdom (UK) and the United States of America (USA).²,⁵ The Simpler™ tool serves as a structured aide memoir for pharmacists. The tool aims to prompt pharmacists to address all seven diabetes factors and its indicators. While Australia’s and Malaysia’s healthcare systems may differ, the diabetes practice guidelines and existing pharmacist led diabetes medication management service (MMS) are similar. The Simpler™ training was developed to standardise the application of the tool in provision of MMS services such as Diabetes MedsCheck in Australia and Diabetes Medication Therapy Adherence

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Clinic in Malaysia. The development of the Simpler™ tool was facilitated by a Delphi process and was validated between September and December 2014 and described in a previous study.23 The aim of this study was to evaluate a training program for non-diabetes credentialed pharmacists on management of T2DM using the Simpler™ tool and subsequently explore their experiences of utilizing the tool when providing MMS.

METHODS
This study involved the development and assessment of a training program that incorporated the use of the Simpler™ tool. Pharmacists’ knowledge was assessed pre- and post-training through a questionnaire. The same pharmacists subsequently applied the tool in practice for one month and their experiences were obtained through semi-structured interviews. Their perception of the training program and the utilisation in practice was assessed using a qualitative approach. This pilot study was conducted as part of a larger project and preceded a randomised controlled study.19 This study received ethics approvals from the Curtin University Human Research Ethics Committee (RDHS-06-14), Western Australia and the Medical Research & Ethics Committee (MREC), Ministry of Health Malaysia.

Participant recruitment
Pharmacists targeted were community pharmacists involved in the provision of diabetes care to patients, in full-time employment but non-diabetes credentialed pharmacists. The literature on sample size determinants for a qualitative study suggested a sample size between five and 25.24,25 Taking this factor into consideration and pharmacists’ potential time constraints, 13 potential participants were approached through personal contacts of the researchers and a snowball recruitment process.19,20 They were invited by email and were provided with an information sheet about the research and had the opportunity to ask questions before providing consent.

Quantitative assessment of the training program
Participants were required to complete a training session. The overall goal of the training was to enhance participants’ understanding of the pharmacist’s role in providing diabetes care and incorporated demonstrating how the Simpler™ tool facilitated the provision of structured diabetes care. Emphasis was placed on how the tool assisted in identifying the reasons for therapeutic failure and resolve the issues by providing evidence-based suggestions through application of a systematic approach. The training program was developed by the primary author (SA) and the overall syllabus details are presented in Table 1.

Pre- and post-evaluation questions (in the format of questionnaires) and training modules were peer-reviewed by three pharmacist academics with specialist diabetes knowledge. The face, content and usefulness were subsequently validated, and pilot tested by two Australian and two Malaysian pharmacists experienced in the management of diabetes patients who provided further feedback. Adjustments to the modules were subsequently made. Some pharmacists had a face-to-face workshop while others received online training. Since the first author was in Australia at the time of the study, face-to-face training sessions for the Australian participants were offered in the first instance, followed by e-learning sessions for the Malaysian participants. The same presentation slides were used for both the face-to-face and the online training sessions. In addition, the voice-over of the presentation slides followed a standardised script. The recorded training modules were uploaded to a cloud file storage service which allowed large file viewing. Sharing and access to the file was provided to participants via email. Pharmacists had the opportunity to ask questions during face-to-face workshops and those doing the online training through various channels including social media.

<table>
<thead>
<tr>
<th>Module no.</th>
<th>Module title</th>
<th>Module content</th>
<th>Module goals</th>
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<tbody>
<tr>
<td>1.</td>
<td>Introduction</td>
<td>1. Describe the pharmacist’s role in management of T2DM</td>
<td>To provide an overview and understanding of pharmacists’ role in diabetes management.</td>
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<td></td>
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<td>2. Explain the research objectives and significance</td>
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<td>3. Outline the research plan and present findings from the Simpler™ tool development and validation phase</td>
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<td>2.</td>
<td>Simpler™ tool validation</td>
<td>1. Outline and describe the seven indicators incorporated into the Simpler™ tool</td>
<td>To help pharmacists understand the Simpler™ tool development and evaluation process to increase confidence in its usage</td>
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<td>2. Explain the benefits of the Simpler™ tool using evidence-based information</td>
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<td>3.</td>
<td>Case study discussion</td>
<td>1. Outline the information gathering process</td>
<td>To analyse the causes of therapeutic failure in case study examples. To demonstrate and apply the Simpler™ tool to solve the issues.</td>
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<td></td>
<td></td>
<td>2. Practise effective interventions using the Simpler™ tool</td>
<td>To justify each suggestion with evidence-based information using the Simpler™ tool</td>
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<tr>
<td>4.</td>
<td>Writing intervention notes</td>
<td>Writing case notes/Guild Care using the Simpler™ tool</td>
<td>To compose patient notes using a systematic approach for writing</td>
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*Guild Care refers to the software used by some Australian community pharmacists to record and report patient information [http://www.guildlink.com.au/guildcare/about-us/]. T2DM= Type 2 diabetes mellitus
Upon completion, participants attending the face-to-face training completed the post-training questionnaire while participants who followed the online training informed the researcher (SA) and were subsequently sent the post-training questionnaire by email. Both groups had access to notes and the Simpler™ tool when completing the post-training questionnaire.

The pre-training questionnaire consisted of two sections: Section A included five closed-ended questions directed at participants’ training background and current practices, and Section B consisted of two open-ended questions on a patient’s case scenario aimed to test participants’ knowledge of diabetes guidelines and their skills in suggesting medication management interventions. The post-training questionnaire contained the same questions in Section B of the pre-training questionnaire. The pre- and post-training questionnaire is shown in Online Appendix. The questionnaire was face and content validated by the same pharmacists who pilot tested the training modules. Participants’ answers were marked by two markers using a written marking scheme validated by an independent pharmacist. Each answer had point/s awarded and the scores were marked out of 27.

Qualitative assessment of the training program and tool utilisation in practice

Upon completion of the training, the same participants were given one month to apply the tool in their practice settings. They were provided with a template to record the number of times the tool was used on patients and the types of interventions conducted by utilising the tool. A unique identification number was allocated indicating where the participant originated: participants were assigned the letter P and numbered 1 to 6. The letter A was assigned to participants from Australia (example P1A) and those from Malaysia the letter M (example P1M). This allowed to differentiate participants’ perception of the tool from both countries as the two healthcare systems differed.

Semi-structured interviews were conducted by SA (July to August 2015). Face-to-face interviews were conducted with two pharmacists at their workplaces and two at a university. Telephone interviews were conducted with the remaining eight pharmacists. The interview process followed Kvale’s seven stages for conducting interviews and the requirements of consolidated criteria for reporting qualitative research guidelines (COREQ). The interview guide consisted of three sections, sections A, B and C, presented in Table 2. The interviewer followed the interview guide while allowing opportunity for probing questions and clarifications. The interview guide was pilot tested with two independent pharmacists.

Participants could raise points during the interview that

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<thead>
<tr>
<th>Table 2. Interview Questions Used to Guide the Interview Process</th>
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<tr>
<td>Section A: Details and experience of pharmacist</td>
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<tr>
<td>1. What is your age?</td>
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<tr>
<td>2. Were you trained to practise Diabetes MedsCheck/medication therapy adherence clinic (MTAC) diabetes?</td>
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<td>3. If yes, how did you undertake this training?</td>
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<td>4. Do you have any post-graduate qualifications? If yes, what qualifications?</td>
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<td>5. On average, how many hours do you work per week in the community setting?</td>
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<td>6. How many years have you been practising as a pharmacist in the community?</td>
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<td>7. In which year did you first obtain your registration to practise as a pharmacist?</td>
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<tr>
<td>8. How would you consider your current role in the pharmacy? Prompt: Dispensary pharmacist, patient care-focused, managerial role, MTAC diabetes/Diabetes MedsCheck pharmacist, clinical pharmacist….</td>
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<tr>
<th>Section B: Previous and current experience in providing diabetes medication management service (MTAC diabetes, Diabetes MedsCheck)</th>
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<tr>
<td>1. On average, how many patients do you provide the service to in a day/week/month?</td>
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<tr>
<td>2. How do you normally review patients? Prompt: use MTAC diabetes/Diabetes MedsCheck checklist, own checklist, tools from the web, etc</td>
</tr>
<tr>
<td>3. How often do you refer to the Australian/Malaysian guidelines on diabetes?</td>
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<th>Section C: Experience in using Simpler™ tool</th>
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<tr>
<td>2. On how many patients did you use the Simpler™ tool?</td>
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<tr>
<td>3. Talk about the interventions you made using the Simpler™ tool.</td>
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<tr>
<td>4. Are the medication reviews with patients with diabetes different now compared to when you were not using the Simpler™ tool? If yes in what way?</td>
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<tr>
<td>5. How was the Simpler™ training session? Prompt: suggestions for improvement</td>
</tr>
<tr>
<td>6. Would you recommend the Simpler™ tool to other community pharmacists?</td>
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<tr>
<td>7. Are there any recommendations you like to make to enhance the usability of the tool?</td>
</tr>
<tr>
<td>8. Thank you again for your time. Before we finish, do you have any comments you’d like to make, about the research topic or training or about the interview?</td>
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</table>
were not included in the interview guide if these were relevant to the overall aim of the study. The interviews ended when all questions were exhausted and no new information was obtained [interviews reached a saturation point].

Interviews were audio recorded and transcribed verbatim by SA. Audio recordings were saved with a unique identification code to protect participants’ anonymity. A project supervisor (HLH) conducted quality checks of transcripts against audio recordings.

Data analysis

Differences between the pre- and post-training questionnaire responses were analysed using the Wilcoxon Signed Rank Test for non-parametric testing as the sample did not meet the requirements for normal distribution. SPSS statistical package version 22 was used for the quantitative analysis.

Descriptive analyses were used for closed-ended interview questions (Sections A and B of the interview guide) whilst thematic analysis was used for the open-ended questions (Section C) to gain insight into pharmacists’ opinions, views and perceptions of the Simpler™ tool. In addition, the open-ended questions were used as a guide to identify emerging patterns. An inductive process was followed throughout the analysis and recurring topics from the interview data were investigated using the qualitative framework method as suggested by Boyatzis. Participants’ raw data were highlighted in order to determine sentences or keywords which were then assigned a label called ‘codes’. The codes were then sorted into topics. Different views under the same topic were grouped as a subtopic. Transcripts were then scrutinised again for new or emerging topics. The coding process was performed by SA and project team members verified the analytical process before finalising the analysis. NVivo qualitative analysis software version 10 was used to categorise and organise the qualitative data.

RESULTS

Participant characteristics

Of the 13 pharmacists approached, 12 consented to undertake the study. There was equal representation of participants from Malaysia (n=6) and Australia (n=6). Most participants (75%, 9/12) had less than three years’ experience of conducting diabetes management. Table 3 presents participants’ demographic data and practice experiences.

Interestingly, the majority of participants (66.7%; 8/12) had never or only sometimes referred to the Australian or Malaysian diabetes practice guidelines when providing diabetes MMs. Regarding the question “What motivated you to participate in this research?” most participants ranked interest in the subject (83.3%;10/12) and improve patients’ outcomes (91.7%; 11/12) as the main incentive.

Quantitative assessment of training program

1) Pre- and post-training questionnaire

There was a significant improvement in post-training questionnaire scores (P=0.002) by both markers. Before attending the training session, the participants’ median test score was 6.5/27, interquartile range (IQR) 1.4 (1st marker) and 5.3/27, IQR 2.0 (2nd marker). After attending the training session, the scores doubled to 14.3/27, IQR 4.5 (1st marker) and 11.3/27, IQR 3.1 (2nd marker), showing significant improvements (p=0.002). Pharmacists initially struggled to frame better questions to make meaningful interventions. However, post-training results showed a marked improvement in addressing the seven diabetes factors to facilitate the intervention process.

Qualitative assessment of the training program and tool utilisation in practice

All 12 pharmacists participated in the semi-structured interviews. The average duration of the interviews was 32 minutes with the face-to-face interviews ranging between 19 to 32 minutes (mean 26 minutes) and the telephone interviews between 16 to 54 minutes (mean 36 minutes). Most participants (91.7%; 11/12) used the Simpler™ tool to facilitate their intervention process. Those included: to add a statin to achieve cholesterol targets; initiate metformin in patients with uncontrolled diabetes; dose adjustments and improving medication adherence. One participant did not use the tool as this participant only focused on lifestyle factors during patient consultations. The participant therefore expected more detailed counselling points on lifestyle management. Participants reported making interventions using one or more tool indicators. The types and number of interventions made are provided in Table 4 with supporting quotations.

Interview analysis revealed that patterns were grouped into three main topics. Those were:

- Perception of training program (interview guide question 5 of Section C),
- Perceived effectiveness of the Simpler™ tool (from various questions), and
- Barriers to the Simpler™ tool utilisation (interview guide questions 1,3,4,6 of Section C).

1) Perception of the training program

Table 3. Participant demographic and practice information (N=12)

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<tr>
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<th>Mean (SD)</th>
<th>Median (IQR)</th>
<th>Min</th>
<th>Max</th>
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<tbody>
<tr>
<td>Age (years)</td>
<td>30.7(6.6)</td>
<td>30.3(6.8)</td>
<td>27(8)</td>
<td>27 (7.8)</td>
</tr>
<tr>
<td>Working hours/week</td>
<td>42.5(3.0)</td>
<td>43.5(5.5)</td>
<td>38.5(5.8)</td>
<td>38.5(5.8)</td>
</tr>
<tr>
<td>Years practising as pharmacist</td>
<td>7.3(9.7)</td>
<td>5.7(7.1)</td>
<td>2(6)</td>
<td>2.6 [5]</td>
</tr>
<tr>
<td>Average patients provided service to during research period</td>
<td>3(2)</td>
<td>7(5.4)</td>
<td>10(5.5)</td>
<td>6(8)</td>
</tr>
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</table>

A=Australia, M=Malaysia, Min=Minimum, Max=Maximum, IQR=Interquartile Range, SD=standard deviation
Most participants (83.3%; 10/12) commented that the training module content was adequate and relevant. In addition, they found the length of training appropriate. The majority believed the Simpler™ training session increased their knowledge and confidence in evidence-based diabetes management and for some it served as a refresher. Participants provided positive comments on the training sessions overall. The supporting participants’ quotations on the training session are presented in Table 5.

Improvements to the Simpler™ training modules included to: 1) add an intervention recording template to document interventions in patients’ medical records (PMR), 2) develop a flow chart to illustrate the information gathering process before the Simpler™ tool application, 3) include more slides on identifying medication related problems, 4) add information on glucagon use, and 5) add materials on lifestyle management.

2) Perceived effectiveness of the Simpler™ tool in practice

All 12 participants found the Simpler™ tool to be beneficial when conducting medication reviews with patients. Participants used words such as ‘organised’, ‘sequential’, ‘straight to the point’, ‘my accounting made relevant’, ‘compact’, ‘complete’ and ‘easiest tool’ to describe the benefits. Participants from both Malaysia and Australia expressed their reliance on the Simpler™ tool when conducting MMS as they considered it to be a point of reference. All participants expressed the tool as an ‘aide memoir’ in recollection of the factors associated with diabetes management.

Eight specific issues were identified on the perceived effectiveness of the tool, summarised with corresponding quotations in Table 5. The Simpler™ tool allowed participants to conduct more comprehensive reviews during consultations. Of specific interest was that one participant found that the tool made diabetes medication reviews more purposeful as improving patients’ glycaemia levels became the focus. However, three of the participants found the limited access to patient’s medical data a barrier and was therefore unable to make a meaningful intervention while one
believed accredited pharmacists providing home medicine reviews service were better suited to make interventions.

Participants provided the following suggestions to further refine the Simpler™ tool:
- Use visual prompts
- Larger font for headings
- Use either Malaysian or Australian targets
- Use terms like Asian or Caucasian for body mass index targets

Based on these suggestions, the tool was further refined as presented in Table 6.

**DISCUSSION**
The effectiveness of the Simpler™ tool was similar to a hypothesis by Weed who suggested two important features in order for a tool to be effective: (1) the tool should enable information retrieval and organisation and (2) the tool should empower the user to use the information obtained and own judgement to make an intervention.\(^7\) While the intention of the tool is to facilitate the intervention process, pharmacists are expected to have prior knowledge in guideline recommended treatment for diabetes.

The training content was reported to be relevant to practice and increased pharmacists’ knowledge of guideline-based diabetes management. Similar to other studies where pharmacists perceived increased confidence after training, the Simpler™ training increased participants’ confidence to deliver guideline adherent diabetes care in their practice settings. The average post-test marks (11.3 marks) in this study were lower than the full score (27 marks). The low scores may reflect participants’ limited ability to detect clinical problems in the case study provided. The most likely cause hinges on the fact that the majority (75%) of participants had less than three years of managing patients with T2DM diabetes. In addition, participants were expected to have existing knowledge on practice guidelines to facilitate the intervention process. In studies where pharmacists perceived increased confidence after training, the Simpler™ tool was also used, and the pre-and post-training questionnaire evaluated the knowledge and skills of participants before and after the training sessions. Several studies have used a similar approach to evaluate underlying topics related to the use and effectiveness of the Simpler™ tool in providing a structured process for monitoring T2DM patients in a community setting.

Quantitative methodology was also used, and the pre- and post-training questionnaire evaluated the knowledge and skills of participants before and after the training sessions. Several studies have used a similar approach to evaluate the effectiveness of a training program. Pharmacists from both countries found the Simpler™ tool comprehensive and useful in prompting them to deliver structured diabetes care and recommend clinical interventions. Similar benefits were reported in studies using a defined approach to aid decision making such as the intervention tool for prescribing antibiotics, asthma intervention tool for pharmacists, inappropriate medication use and prescribing indicators in the elderly Australian population and a dietary intervention tool. Participants’ evaluation of the effectiveness of the Simpler™ tool was similar to a hypothesis by Weed who suggested two important features in order for a tool to be effective: (1) the tool should enable information retrieval and organisation and (2) the tool should empower the user to use the information obtained and own judgement to make an intervention.\(^7\) While the intention of the tool is to facilitate the intervention process, pharmacists are expected to have prior knowledge in guideline recommended treatment for diabetes.

| S=Statin | • Statin initiation in patients with CVD
| • Achieve targets for LDL and TG
| • Statin initiation in patients >40 years old without CVD

I=Insulin/Glycaemic control | • Insulin initiation if glycaemic control not achieved despite being on two or more oral hypoglycaemic agents
| • Target of HbA1c ≤ 7% if no other complications
| • Management of hypoglycaemia
| • Self-monitoring of blood glucose
| • Aim a reduction of HbA1c by 1% if above target HbA1c
| • Initiate/continue metformin if not contra-indicated

M=Medication | • Assess medicine related problems
| • Review medication adherence

P=Blood Pressure | • Achieve BP target
| • ACEI/ARB initiation in patients with/without microalbuminuria/proteinuria
| • Reduce sodium intake (<2400mg sodium/day; 6g/1 teaspoon/day)
| • One or more antihypertensive medicine to be taken at bedtime

L=Lifestyle | • Exercise: 30 mins walking (or equivalent) 5 or more days/week (total ≥150 min/week)
| • Weight loss: Caucasian (BMI <25 kg/m²), Asian (BMI ≤ 23 kg/m²)
| • Smoking cessation
| • Waist circumference: Caucasian (<94 cm in men, <80 cm in women), Asian (≤90 cm in men, ≤80 cm in women)
| • Alcoholic intake: ≤2 standard drinks (20 g) per day for men
| • Management of stress & diabetes related distress
| • Erectile dysfunction: recommend Phosphodiesterase-5 inhibitor as first line therapy for male patients
| • Foot care
| • Diet advice using plate model
| • Annual eye assessment
| • Address sleep hygiene

E=Education | • Knowledge & understanding of medicine
| • Medicine storage
| • Medication optimisation during fasting month for Muslims and other religious groups

R=Cardiovascular Risk | • Aspirin therapy as secondary prevention in those with diabetes with history of CVD
| • Use of Framingham risk calculator to calculate CVD risk and educate patients
| • Aspirin therapy (75mg-162mg/day) as primary prevention to decrease CVD risk (10 year risk >10%, Framingham)

\(^7\) Australia: Low density lipoprotein (LDL) <2.0 mmol/L, Triglyceride (TG) <2.0 mmol/L, Malaysia: LDL <2.6 mmol/L, TG <1.7 mmol/L

\(^5\) Australia: [6.0-8.0 mmol/L fasting], [8.0-10.0 mmol/L-2h postprandial]; Malaysia: [4.4-7.0 mmol/L fasting], [4.4-8.5 mmol/L-2h postprandial]

\(^4\) Australia: ≤140/90 mmHg, with albuminuria/proteinuria ≤130/80 mmHg; Malaysia: ≤135/75 mmHg

\(^3\) Recommendations according to 2016 ADA Standards of medical care in diabetes; Malaysia Clinical Practice Guidelines recommend aspirin therapy if 10 year risk >10% only for patients aged 65 years and above

ACEI=Angiotensin converting enzyme inhibitors; ARB= Angiotensin 11 receptor blockers; BP= Blood pressure; BMI= Body mass index; CVD=Cardiovascular disease; HbA1c=glycosylated haemoglobin and reflects average glycaemia the preceding 6-8 weeks LDL=Low density lipoprotein; TG=Triglyceride

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The content of the Simpler™ training module was informed by the results of a previous Australian pharmacists’ diabetes pilot program during which pharmacists described the training being more theoretical than practical and requested more concise information. Although this element guided the design of the Simpler™ training program some pharmacists identified a need to include more clinical information and lifestyle counselling points in the training content. To address this issue, additional materials were subsequently developed on pharmacotherapy management which summarised the thought process required to make pharmaceutical care interventions. Similarly, two additional web links were added directing pharmacists to a list of counselling points on lifestyle management.

Documenting pharmacists’ interventions into patients’ medical record has not traditionally been practised by community pharmacists but is more common among hospital pharmacists. Despite this, participants who completed the training expressed their willingness and were confident to record their clinical interventions. Information from patients’ medical data expedites pharmacists’ assessment of pharmacotherapy issues and enable them to make quality interventions.

The aim of this pilot study is to explore pharmacist’s perception of the Simpler™ tool and obtain suggestions for improvement. Thus, participants who are actively engaged in diabetes management service were purposively recruited using the snowball sampling. However, the risk of their views being biased towards a more positive response during the interview session is acknowledged, as was shown in other studies. In addition, the small sample size from one state in Malaysia and one in Australia may not reflect the views of all pharmacists.

CONCLUSIONS

This was the first study to explore pharmacists’ views on a structured diabetes intervention tool and training program to guide them in addressing each of the seven guideline required diabetes factors. The Simpler™ training program and tool proved to be a useful approach to upskill pharmacists and improve their confidence in delivering diabetes care. Pharmacists viewed the tool as relevant and beneficial in facilitating the provision of structured, evidence-based interventions in diabetes care.

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CONFLICT OF INTEREST

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