Table 1: Effect of tailored intervention of community pharmacists on surrogate markers of hypertension and type 2 diabetes mellitus

		Mean ± SD		
Variable	**Parameter**	**Week 1**	**Week 4**	**Week 8**
Total	SBP (mmHg)	146.72 ± 22.52	135.89 ± 18.56*	129.56 ± 17.54**
	DBP (mmHg)	84.17 ± 15.77	80.39 ± 11.03*	80.39 ± 10.57**
	FBG (mg/dL)	84.67 ± 16.03	97.83 ± 16.15	115.83 ± 22.48
	W-Hip ratio	0.91 ± 0.09	-	0.89 ± 0.07**
	BMI (kg/m^2)	25.58 ± 5.67	-	26.84 ± 5.59**
Gender				
Male (n=7)	SBP (mmHg)	148.29 ± 18.17	137.43 ± 15.73	133.14 ± 15.68
	DBP (mmHg)	87.29 ± 16.17	80.00 ± 11.73	78.71 ± 9.18
	W-Hip ratio	0.94 ± 0.07	-	0.90 ± 0.06**
	BMI (kg/m^2)	27.03 ± 7.04	-	26.96 ± 6.59
Female (n=11)	SBP (mmHg)	145.73 ± 25.72	134.91 ± 20.85*	127.27 ± 19.00**
	DBP (mmHg)	82.18 ± 11.14	80.64 ± 11.14	81.45 ± 11.67
	FBG (mg/dL)	82.20 ± 16.60	92.40 ± 10.24	110.00 ± 20.26
	W-Hip ratio	0.89 ± 0.08	-	0.87 ± 0.07
	BMI (kg/m^2)	26.29 ± 5.00	-	26.77 ± 5.19
Diagnosis				
HTN (n=12)	SBP (mmHg)	145.83 ± 26.73	137.25 ± 21.50*	130.42 ± 17.23**
	DBP (mmHg)	84.92 ± 15.66	80.25 ± 12.02	80.08 ± 11.59
	W-Hip ratio	0.92 ± 0.08	-	0.89 ± 0.07**
	BMI (kg/m^2)	26.69 ± 6.55	-	26.88 ± 6.43
HTN+T2DM (n=6)	SBP (mmHg)	148.50 ± 12.13	133.17 ± 11.87*	127.83 ± 18.70**
	DBP (mmHg)	82.67 ± 17.39	80.67 ± 9.17	81.00 ± 11.67
	FBG (mg/dL)	84.67 ± 16.03	97.83 ± 16.15	115.83 ± 22.48
	W-Hip ratio	0.90 ± 0.08	-	0.88 ± 0.07
	BMI (kg/m^2)	26.38 ± 3.93	-	26.77 ± 3.90

SBP: Systolic Blood Pressure, DBP: Diastolic Blood Pressure, FBG: Fasting Blood Glucose, W-Hip ratio: Waist–to-hip ratio, BMI: Body Mass Index, HTN: Hypertension, HTN+T2DM: Hypertension and Type 2 Diabetes Mellitus, n: number. ** P < 0.05 – Week 1 vs Week 4*, *** P < 0.05 – Week 1 vs Week 8*. FBG data not available for males.

Results: A total of 89 prescriptions were received. 56 (63%) were eligible for technician screening, of which a suitable technician validated 50%.

Across both sites a total time of 360 minutes were spent validating/screening prescriptions including solving prescription related issues. Combining the time taken by a pharmacist to return from a clinical area and screening time consequently saved a total of 227 minutes of pharmacists' time.

Conclusion: Distributing the workload amongst trained staff saves pharmacist's time, which can be utilised on clinical and complex tasks. This does not eliminate the requirement of a pharmacist to validate prescriptions however; it reduces the frequency and streamlines the service. Further data collection is required to analyse the direct impact on patients' and any changes in the number of reported errors. A limitation to the study is the lack of data prior to implementation as a comparator. Additionally, during data collection there were no suitable technicians available at one site due to the Covid-19 pandemic, resulting in only 50% of eligible prescriptions being screened by a technician. Ultimately, this does not change the outcome; enhancing technician's roles allows pharmacists' time to be used more efficiently.

References

1. Royal Pharmaceutical Society. Shaping Pharmacy for the future. Hospital Pharmacy: A briefing for members in England. 2017. Available at: *https://www.rpharms.com/Portals/0/Hospital%20pharmacy%20briefing%20-%20final.pdf* [Accessed: 11/10/20]
2. National Pharmacy Clinical Trials Advisory Group. Professional Guidance on Pharmacy Services for Clinical Trials v2.1. 2019. Available at: https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Hospital%20Pharmacy%20Hub/Practice_Guidance_on_Pharmacy_Services_for_Clinical_Trials_v2.1.pdf?ver=2020-09-18-095937-733 [Accessed: 09/10/20]

TAILORED INTERVENTION TO IMPLEMENT THE MANAGEMENT OF HYPERTENSIVE AND TYPE 2 DIABETES MELLITUS PATIENTS IN COMMUNITY PHARMACIES – A PILOT STUDY

A. Ogunbeku, S.J. Showande, R. Adisa and T.O. Fakeye, *Department of Clinical Pharmacy and Pharmacy Administration, Faculty of Pharmacy, University of Ibadan.*

Introduction: Uncontrolled blood pressure and poor glycaemic control may lead to increased morbidity and mortality (1). A systematic review of 40 studies reported beneficial effects of interventions conducted in community pharmacies in the management of diabetes and cardiovascular diseases (2).

Aim: To evaluate the impact of a tailored intervention on clinical outcomes in the management of hypertensive and/or type 2 diabetes mellitus (T2DM) patients in community pharmacies in a pilot implementation study.

Methods: The study (April to July 2019) utilized a mixed-method design. This included a cross-sectional survey among 133 consented community pharmacists and 390 T2DM and/or hypertensive patients at the pharmacies. Thirty-one item (pharmacists) and 29-item (patients) semi-structured questionnaires were used to gather information on their perception of pharmacists' roles in the management of T2DM and/or hypertension. Barriers to implement identified roles by the pharmacists were documented. Thereafter, a prospective before- and after-intervention study was conducted in four consented pharmacies to address the barriers. Two pharmacists per pharmacy and 34 consented T2DM and/or hypertensive adult patients who had been on medications for ≥3 months participated. Pharmacists were provided with 2-hr one-on-one training on the management of T2DM and hypertension based on standard guidelines pre-intervention and at 4 weeks. Components of the pharmacist's intervention included patient's education, medication counselling , lifestyle modifications and self-care use of point of care devices. Systolic and diastolic blood pressure (SBP and DBP), fasting blood glucose (FBG) and body mass index (BMI) of all patients were measured at baseline, 4- and 8-week post-intervention. Weekly patient follow-up visits to the pharmacies were mandatory. Telephone calls and referral were incorporated, when necessary. Failure to show up for two consecutive visits disqualified patients from completing the study. Descriptive statistics (to summarise data), and paired t-test to compare mean differences in the measured parameters at α=0.05.

Results: Hypertensive and/or T2DM patients (374) and 71 pharmacists participated in the survey. The patients expected pharmacists to provide medication counselling (81;27.1%), education (47;12.6%), follow-up (18;4.8%), health outcomes monitoring (17;4.5%), and collaboration with physicians (12;3.2%). Sixty-nine (97.2%) pharmacists agreed that patients' follow-up, patient counselling (71;100.0%), therapeutic plan design to achieve goals (67;94.4%) and collaboration with physicians (61;85.9%) were important. Barriers to providing adequate counsel to these patients were time constraints (23;32.4%), unconducive environment (7;9.9%) and patient's impatience (33;46.5%). For the intervention component, 16 of the 34 patients enrolled were lost to follow-up (one hospitalized, seven failed two consecutive visits, and eight lost to referral). Effects of the tailored intervention on the parameters are in Table 1.

Conclusion: The patients' and pharmacists' perceived roles of the pharmacist in the management of hypertension and T2DM were in tandem. The 8-week tailored pharmacists' intervention resulted in better control of blood pressure but increased FBG. This pilot study is limited by the small sample size of patients and pharmacists, as well as the lack of appropriate comparator. Future large-scale multi-site study with relevant comparator is required for a far-reaching conclusion on the impact of the tailored pharmacist intervention in the management of diabetes and hypertension.

References

1. Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; National High Blood Pressure Education Program Coordinating Committee. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: The JNC 7 report. JAMA. 2003;289:2560–72.
2. Evans CD, Watson E, Eurich DT, Taylor JG, Yakiwchuk EM, Shevchuk YM, et al. Diabetes and cardiovascular disease interventions by community pharmacists: a systematic review. Ann Pharmacother. 2011;45(5):615–28.

EVALUATION OF AN EDUCATIONAL OUTREACH CAMPAIGN (IMPACT) ON PAIN MANAGEMENT DELIVERED TO GENERAL PRACTICES IN WALSALL

S. Visram[1], J. Saini[2] and R. Mandvia[1], *1. School of Pharmacy and Bionengineering, Keele University, Keele, UK. 2. NHS Walsall Clinical Commissioning Group, Walsall, UK.*

Introduction: Opioid class drugs are a commonly prescribed form of analgesic widely used in the treatment of acute, cancer and chronic non-cancer pain. Up to 90% of individuals presenting to pain centres receive opioids, with doctors in the UK prescribing more and stronger opioids (1). Concern is increasing that patients with chronic pain are inappropriately being moved up the WHO 'analgesic ladder', originally developed for cancer pain, without considering alternatives to medications, (2). UK guidelines on chronic non-cancer pain management recommend weak opioids as a second-line treatment, when the first-line non-steroidal anti-inflammatory drugs / paracetamol) ineffective, and for short-term use only. A UK educational outreach programme by the name IMPACT (Improving Medicines and Polypharmacy Appropriateness Clinical Tool) was conducted on pain management. This research evaluated the IMPACT campaign, analysing the educational impact on the prescribing of morphine, tramadol and other high-cost opioids, in the Walsall CCG.

Methods: Standardised training material was delivered to 50 practices between December 2018 and June 2019 by IMPACT pharmacists. The training included a presentation on pain control, including dissemination of local and national guidelines, management of neuropathic, low back pain and sciatica as well as advice for prescribers on prescribing opioids in long-term pain, with the evidence-base. Prescribing trends in primary care were also covered in the training, and clinicians were provided with resources to use in their practice. Data analysis included reviewing prescribing data and evaluating the educational intervention using feedback from participants gathered via anonymous questionnaires administered at the end of the training. Prescribing data analysis was conducted by Keele University's Medicines Management team via the ePACT 2 system covering October 2018 to September 2019 (two months before and three months after the intervention) were presented onto graphs to form comparisons in prescribing trends of the Midland CCG compared to England.