Impact of Pharmacists Interventions on the Management of Patients with Type 2 Diabetes Mellitus; a Systematic Review

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Abstract

Background

Pharmacists gaining increasing role in Type II Diabetes mellitus (T2DM) management services through collaborative practice with healthcare professionals.

Aim

To assess the Pharmacists' interventions' in management of T2DM and to address the effects of these interventions on different health outcomes

Method

Studies were identified by electronically searching the PUBMED/MEDLINE, NHS evidence, Science Direct, Pharmacy Abstracts, Web of Science, ClinicalTrials.gov, Trip Database, International Pharmacy Abstracts and Cochrane Library of Clinical Trials.

Randomized controlled trials, including participants whom received direct care from the pharmacists, reporting one or more of the following main outcomes: a) Clinical outcomes, b) Patients' related outcomes, c) Healthcare Service Utilization

Results

33 studies were included 4,952 T2DM patients, were conducted in different healthcare settings.

Comparing to control groups, pharmacists groups showed significant reduction in mean change of HbA1c in twenty-four studies (-0.4% to – 2.5%) vs. (+0.43% to -1.6%), Systolic blood pressure in Fifteen studies (-20.09 mm/hg to +0.8 mm/hg) vs. (-4.4 mm/hg to +5.75 mm/hg), while Diastolic Blood pressure in twelve studies (-8.9mm/hg to +0.5mm/hg) vs. (-3.95mm/hg to +18mm/hg), Low-density lipoprotein in twelve studies (-23.20mg/dl to +1.16mg/dl) vs. (-21.65 to +5.02), high-density lipoprotein in seven studies (-5.8mg/dl to +10.44mg/dl) vs. (-2.8mg/dl to +3.48mg/dl), Total Cholesterol eleven studies (-30.54mg/dl to +8.5mg/dl) vs. (-20.10mg/dl to +3.86mg/dl) and Triglyceride in eight studies (-44.28mg/dl to +19.48mg/dl) vs. (-19.48mg/dl to +30.11mg/dl) respectively .

Also it showed reduction in cardiovascular disease risk, improvement in medication adherence through decrease in self-reported non-adherence and improving in refill rate and overall health related quality of life. Improvement in patients' knowledge and highly satisfaction rate (50-100%), high capability of identifying and resolving various drug therapy problems and considered as cost-effective.

Conclusion

These findings support the importance of pharmacists' interventions as they have pivotal impact on improving different health outcomes in T2DM patients'.

Biography

Labib AL-Musawe is a PhD candidate at university of Lisbon, seeking PhD Degree in Pharmacoepidemiology. Labib have more than six years' experience in pharmaceutical field, through his career, he worked as Risk management officer for Celgene hematological products through implementing safety program, Senior in charge Pharmacist for chain pharmacy called Pharmacy one and Clinical pharmacist at Private Hospital. Labib also holds a Master's degree in Clinical pharmacy from university of Jordan and Bachelor degree in pharmacy from Philadelphia University. Labib has good knowledge of ICH-FDA guidelines, medical literature and medical writing, case management and documentation, reporting and analysis skill, as well as speaking three languages

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