A systematic review of pharmacist input in the screening, management and prevention of metabolic syndrome

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Background:
Metabolic syndrome (MetS) is a cluster of factors that increase the risk of cardiovascular disease and include diabetes, abdominal obesity, elevated triglycerides, low high-density lipoprotein cholesterol and high blood-pressure. A patient is considered to have MetS if 3 out of 5 factors are present 1.

Purpose:
To critically appraise, synthesise, and present the available evidence on: the types and impact of pharmacist input in MetS, to characterize the populations who would benefit most and to describe facilitators and barriers.

Methods:
- **Databases:** Medline, Cumulative Index of Nursing and Allied Health Literature (CINAHL), International Pharmaceutical Abstracts (IPA), Cochrane Database of Systematic Reviews
- **Included studies:** Peer-reviewed papers published in English from 2008; all study designs were included
- **Papers assessed:** By two reviewers for methodological quality
- **Critically appraised:** Data extracted using standardized tools

Results:

**Search flowchart as an adapted PRISMA diagram**

**Figure 1 – Search flowchart as an adapted PRISMA diagram**

**Children and adolescent**
- High risk e.g. overweight
- Positive family history of type 2 diabetes mellitus (DM) in a first-degree relative
- With presence of acanthosis nigricans

**Populations that would benefit the most**
- Adults
  - With psychiatric illness and on antipsychotics
  - With or without MetS as part of a community pharmacy screening programme

**Figure 2 – The population who would benefit the most from the pharmacist input in MetS**

**Earliest detections of the MetS by pharmacist-led screening efforts**

**The impact of the pharmacist-led input in MetS**
- Prevention of complications of MetS such as diabetes and cardiovascular events and reversal from a MetS status to a non-MetS status
- Increase in patient knowledge and awareness of MetS

**Figure 3 – Some facilitators and barriers of pharmacist-led implementation**

**Conclusions**
Pharmacists can effectively participate in the screening, prevention and management of MetS in different populations and settings to enhance patient’s care.

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