

Interventions to prevent emergency department visit related to complementary and alternative medicines use

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Background

Our letter recommends targeted intervention regarding the findings of a systematic review published by the *Journal of Complementary Medicines Research* (formerly, *Journal of Intercultural Ethnopharmacology*) on the use and toxicity of complementary and alternative medicines (CAMs) among patients seeking medical care at an emergency department (ED) [1]. The study summarizes previous studies on CAM use among patients attending ED; definitions of CAM, the prevalence of CAM use among patients at ED, the source of information of CAM use, frequently used CAM, ED visits related to CAM use, and disclosure of CAM use to ED physicians. This letter further recommends some interventions that could be targeted at the identified knowledge gaps, including the role of clinical pharmacists, ED physicians, nurses, and the health-care policy makers in a bid to reduce burden contributed by CAM use at ED.

The widespread popularity of CAM use in the public may be related to the perception that CAM is “safer” and cheaper than conventional medication, its availability, healthcare-seeking behavior, and philosophical beliefs [2]. CAM is widely used among all age categories in the community for the purpose of medical interventions and well-being [1]. Some of these CAMs, however, have the potentials

to cause toxicities, interact with orthodox medications and underlying disease condition leading to hospitalization and unplanned visits to ED. ED (also known as accident and emergency unit), is a clinical setting of a hospital that specializes in the care of patients with acute conditions, which may be life threatening in some cases. ED receives many categories of patients with unplanned visits. Previous studies have shown that up to 25.0% of patients attending an ED were using some forms of CAM at the time of their visit [3]. Moreover, some of the CAMs consumed by the patients have the potential to interact with medications prescribed to the patients at the ED leading to CAM–drug interaction [4]. In addition, some of the CAM users stopped taking their prescribed medication in preference to CAM use [5], while in some cases the ED visit is related to CAM toxicity [1] (Figure 1).

A CAM-related ED visit is, therefore, any visit to an ED with chief presenting complaints associated with CAM use. In some studies conducted in Malaysia and China, one out of eight CAM users at ED presented with chief complaints related to CAM toxicity, with herbal medicines mainly implicated [6,7]. In New Zealand, 4.8% of ED patients using herbal party pills visited the ED due to complaints related to the herbal party use [8]. Most of the reported complaints associated with CAM-related

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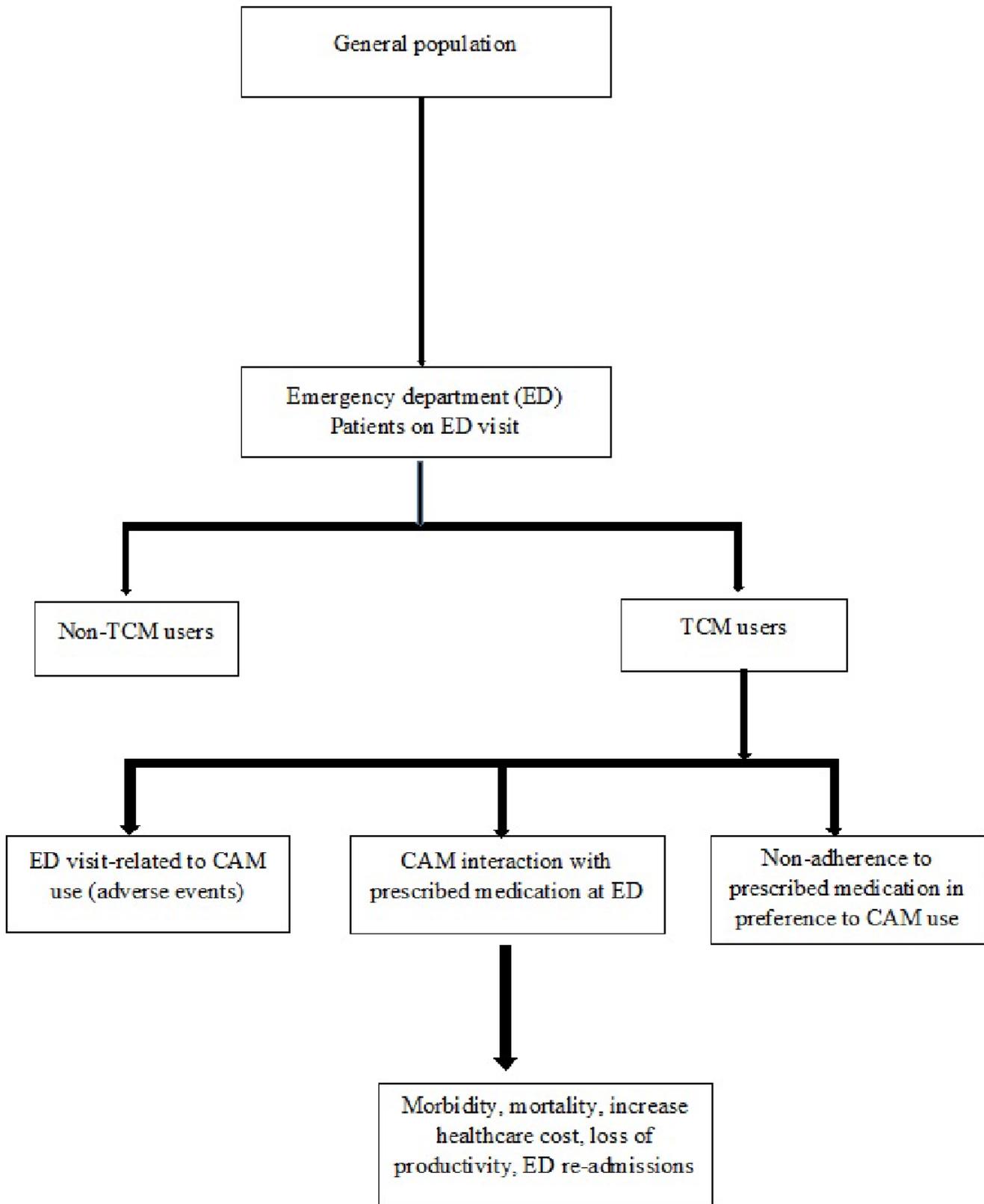


Figure 1. A flowchart for a better understanding of CAM use among patients at ED setting

ED visits were adverse reactions (topical and systemic allergy), toxicity due to an overdose of herbal mixtures, miscarriage, lethargy, thrombocytopenia, acute anticholinergic symptoms, extreme alertness,

agitation, palpitation, dizziness, and pruritus [6,8,9]. Importantly, this burden can be prevented through interventional measures. Fundamental steps in the prevention are the identification of the

gaps that require the intervention. Some of these gaps have already been identified in the published systematic review [1].

Identified Gaps Related to CAM-Related ED Visits

Paucity of studies on CAM among ED patients

The utilization of CAM among the general population in developing countries is up to 70% [10], and the use of CAM persists in those countries due to inadequate access and affordability to conventional medicines [11]. Despite this high prevalence, only a few studies were conducted to determine the use and toxicities related to CAM use at an ED setting of healthcare facilities in those countries.

Barriers related to healthcare provider-patients communication

Despite their wide usage and the potentials of CAM to cause toxicities, up to 80.0% of the ED patients do not disclose to the ED physician the CAM that they are currently using at the time of the visit [12]. In a similar manner, the ED physician also does not always ask the patients as to whether they are using any form of CAM or not. There is a paucity of information regarding barriers to open communication and shared decision between healthcare professionals and patients particularly regarding CAM use.

Barriers to reporting CAM use to a healthcare provider

There is dearth of interventions to reduce barriers to reporting CAM use to healthcare professionals at ED. One of the major barriers that prevents most patients from reporting their CAM use to healthcare professionals at ED is the fear of negative reactions from the healthcare provider and the perception that it is not important to disclose [1]. There is a rareness of published strategies to improve reporting of CAM use to healthcare providers at ED.

Inadequate information on the role of healthcare providers regarding CAM use among ED patients

Information is also limited regarding the role of a clinical pharmacist in an ED setting to avert possible CAM interactions with prescribed orthodox medication, or to enquire about the type of CAM the patients are using at home. There is also lack of published studies on the role of ED physicians and other clinicians on CAM surveillance in ED as well

as the knowledge, attitude, and perception of CAM use.

Lack of validated screening tool for ADEs related to CAM use

Currently, there is a lack of a validated tool for the screening of CAM-related Adverse drug events (ADEs) among patients at ED. A validated screening (electronic or paper-based) that can quickly detect adverse events related to CAM is absolutely an indispensable tool.

Recommendations for Targeted Interventions

More studies on CAM use among ED patients

More clinical studies are needed, particularly, in developing countries to identify the contributions of CAM use in ED settings including CAM-related adverse events occurring in the ED setting. The studies should focus more on the ED visits related to CAM toxicity. More studies are also needed to investigate the knowledge, attitude, and perception among healthcare practitioners regarding CAM use among patients on ED visit.

Healthcare professionals at ED

There should be an intervention to sensitize the healthcare professionals regarding CAM knowledge, including adverse events related to CAM use. The strategies may include the inclusion of CAM in the curriculum of continuing education programs. Patient education should be improved at all levels of patient care in the ED. Healthcare providers at ED should at all-time ask the patients about CAM use. This is to: (i) ascertain whether the visits could be related to CAM, (ii) to avoid prescribing a conventional medication that may interact with the CAM, (iii) advice the patient on the proper use of CAM, and (iv) risk of non-adherence to conventional medication in preference to the CAM use. This strategy may improve healthcare provider-patient communication.

The inclusion of CAM in patients' information sheet

Including CAM in the patient's information sheet for investigating medication history during routine consultation with patients at ED will assist in enquiring about CAM use and improvement in detecting CAM-related ADE [11]. This will further guide the healthcare providers in finding out the etiology of the presenting complaints as well as to

avoid prescribing conventional medications that may interact with the CAM.

Provision of clinical pharmacists in the ED

The services of a clinical pharmacist are needed in ED settings for adequate surveillance of CAM use and related toxicities in the ED. A separate pharmacy department/unit is necessary for an ED for optimum provision of pharmaceutical care. A clinical pharmacist in an ED will assist in detecting and preventing CAM-related adverse events, improve patient counseling on CAM use, and adherence to conventional medication.

Provision of a screening tool to detect CAM-related adverse events

A validated screening tool for detecting CAM-related adverse events among patients at ED should be developed for adequate and easier identification of adverse events associated with CAM use. The tool will increase the detection rate of CAM-related toxicities thereby reducing morbidity and health-care cost. In addition, this will also contribute to a reduction in ED overcrowding and enhance optimum time utilization in the future.

The inclusion of CAM in public health programs

Awareness regarding adverse events related to CAM use should be incorporated into other public health promotional programs. This will further increase the public awareness to potential adverse events related to CAM use, including interaction with conventional medicines and dangers of stopping prescribed medications in preference to CAM.

Conclusion

CAM use is common among ED patients, and an ED visit may be related to CAM toxicity. Information regarding the burden of CAM in ED is limited despite the growing use among the ED patients. Targeted interventions to determine the contribution of CAM in clinical practice at ED should be targeted at performing more studies to identify the contribution of CAM use in ED, healthcare providers and patients at ED, and the ED settings.

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