Chapter 2
Need for the Study

A variety of chemicals, poisonous household products and medicines are readily available in India, thereby contributing to accidental or intentional incidences of poisoning. Mysore is one of the major cities in Karnataka state with several hospitals. As per our initial retrospective study, 382 poisoning cases have been reported in 2008 at a single hospital (JSS hospital), including 28 deaths due to poisoning. The overall rate of poisoning incidences and associated deaths in this region is one of the major health problems.

Unfortunately, there was no specialized poison information centre existing in this region before to provide poison information service. Although the Department of Clinical Pharmacy, JSSH, has been providing drug and poison information services since 1997, the service was mainly provided to healthcare professionals of the hospital. Established specialized PIC, greatly assist in the effective management of poisoning cases. The quality of management of poisoning cases is greatly influenced by the poison information services. Therefore, a specialized poison information centre was highly essential to provide the life saving information. Importantly, by means of appropriate educational and awareness programs, PIC can help prevent accidental poisoning and manage the crisis more effectively. There are only five WHO recognized poison information centres (PICs) in India. Although there are few other PICs available in India, these centres may not be able to meet the large demand for poison information and have difficulty to communicate effectively due to language barrier. Therefore, more regional PICs are required to fulfill the local need in a more effective manner.
The patterns of poisoning vary widely according to time, region, age group, sex, and socio-economic status. In addition, it is possible that the legal consequences of criminal charges for a suicidal act, societal stigma, and collection of suicide data by the police rather than an independent coroner may contribute to under-reporting of suicidal poisoning in India. By means of prospective assessment of poisoning incidences, epidemiology of poisoning can be determined and obtains insight on psychological disorders of patients. Also, such prospective assessments may help to provide patient counseling, facilitate more intense treatment and prevent recurrence.

Poisoning incidences are on the rise owing to the poor knowledge of general public on safe storage and use of pesticides and poisonous household products. In addition, poor knowledge on management of poisoning (first-aid) also affects the outcome of poisoning. Therefore, it is highly essential to create awareness on accidental poisoning, handling of crisis, and preventive measures. By means of educational and awareness programs, PIC can fulfill this requirement.

The key factors that affect the poisoning outcome are: a) the speed with which the person comes to clinical attention; b) the degree to which the poison’s toxicity and patient’s severity was understood immediately; and c) the readiness of hospital to provide intense monitoring and treatment. The primary healthcare system requires analytical assistance in assessing the severity of poisoning. Severe morbidity and high mortality rate associated with poisoning is often related to a delay in diagnosis or an improper management. Hence, poisoning with toxic substances is a medical emergency and
requires prompt treatment. A majority of physicians depend purely on clinical signs and symptoms as a guide for diagnosis. However, the onset of symptoms may take some time to develop, by then the toxicity might become irreversible or even fatal. In addition, subjective evaluation of clinical status by individual clinicians may differ in measurement of severity of illness. Unfortunately, laboratory methods are not always available in the hospitals. Using the various descriptive and prognostic evaluation scales (scoring systems), one can quickly predict the severity and mortality rates of poisoning. Therefore, it was important to assess the potential of scoring systems to predict the severity of poisoned patients. These scoring systems are simple, less time-consuming, and effective in an emergency situation to predict the severity and mortality of poisoning, thereby allowing more intensive monitoring and treatment (manage the patients on the basis of clinical characteristics).

The overall poisoning related aspects that were not understood or studied in this region include: a) epidemiologic, demographic and socio-economic characteristics of poisoning; b) dominance and types of poisoning agents; c) usefulness of severity scoring systems; d) role of poison information service; e) impact of educational and awareness programs on knowledge, attitude and practice of general public with regard to poisoning agents; and f) healthcare outcome-related and healthcare cost-related benefits of poison information services (PISs). Establishment of a new regional poison information centre, followed by appropriate measures and studies were highly essential in order to address the local and above-mentioned concerns.