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## Knowledge of Community Based Practitioners Regarding Vaccine Preventable Diseases

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Diphtheria, pertussis, tetanus, poliomyelitis, measles and tuberculosis continue to kill or cripple millions in the developing countries(1). These are preventable infections because safe, effective and easily administrable vaccines are available. Starfield(2) has reported that nearly half of

the children are seen by a generalist physician regularly, whereas fewer than 1/3 are cared for by a pediatrician and 10% receive care related to place rather than a particular physician. In our country also it may be true that many children receive care related to place rather than a particular physician probably due to a long standing relationship of trust, shortage of time as well as resources, illiteracy and ignorance. The knowledge of these community based primary practitioners has an important impact on prevention and control of the six vaccine preventable diseases. In order to evaluate the knowledge of these practitioners, about vaccine preventable diseases, we planned this study.

### Material and Methods

Forty six community based primary practitioners doing general practice from various localities of Ludhiana were selected randomly. Clinic to clinic visits were carried out by the authors. During these visits the practitioners were interviewed in detail regarding symptoms, preventive measures and treatment of the six killer diseases and schedule, contraindication and storage of various vaccines. The proof of their qualifications and experience could often not be documented.

### Results

All the practitioners interviewed were males. Their qualifications included Registered Medical Practitioners in 23.9%, Bachelor of Ayurved Medical Science

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in 19.5%, Graduate of Ayurved Medical Science in 13%, Diploma in Homeopathic Medical Science in 13%, Bachelor of Medicine and Bachelor of Surgery in 8.6%, Diploma in Ayurved Medical Science in 6.5%, Registered Homeopathic Medical Practitioner in 4.3%, Pharmacist in 4.3%, Ayurved Medical Science in 2.2%, Matric in 2.2% and Class IV hospital employee in 2.2%. They all were doing general practice using allopathic medicines in part or totally. Their experience as a practitioner was upto 5 years in 28.2%, 6-10 years in 36.9%, 11-20 years in 21.7% and more than 20 years in 13.2% cases.

Almost 96% of them were aware of symptoms of measles, 94% of poliomyelitis, 89% of pertussis, 80% of tuberculosis, 50% of tetanus and 35% of diphtheria. Knowledge regarding treatment of these diseases was very unsatisfactory. The percentage of practitioners who were not aware of any treatment in tetanus, diphtheria, poliomyelitis, pertussis, tuberculosis and measles was 69.5, 68, 34, 21.6, 19.5 and 6.8, respectively. Various forms of treatments suggested included oral/injectable B-Complex and massage in acute polio, antibiotics in measles, tetanus and diphtheria, cough sedatives in pertussis and antitubercular drugs in tuberculosis. Some of the observations of great concern were reports of injectable treatment in polio (21.6%), steroids (4.3%), no cloth washing (4.3%), no intake of fried foods (4.3%), and no frying of food at home (2.1%) in measles, knowledge of antitetanus serum only in 10.8% and of antidiphtheric serum only in 8.6%.

Only 13% practitioners were having correct knowledge of cold chain, use of refrigerator, vaccine carrier and proper temperature for vaccine storage. Knowledge regarding number of doses required and

intervals for each vaccine was also not satisfactory (*Table I*). None of them were aware of need for oral polio vaccine and DPT vaccination before 3 months of age. Among various contraindications for vaccination, mild cough, fever and cold were reported by 54% of the practitioners. Other contraindications for vaccination which were reported are listed in *Table II*.

**TABLE I—Knowledge about Dosages and Intervals of Vaccines**

Vaccine	Number with correct knowledge	% age
BCG	18	39.1
Primary doses of OPV	23	50.0
Primary doses of DPT	19	41.3
Measles	16	34.7
First booster dose	18	39.1
Second booster dose	9	19.5
TT (antenatal)	4	8.6

**TABLE II—Contraindications to Immunization**

Contraindications	Number	% age
Mild cough, fever, cold	25	54.2
Infections	20	43.2
Diarrhea	13	28.2
No contraindication	10	21.6
High grade fever	6	13.0
Convulsions	5	10.8
Any serious illness	4	8.6
Skin diseases	3	6.5
No response	15	34.0

## Discussion

It is evident from this study that a large number of community based practitioners were not aware of prevention and treatment of vaccine preventable diseases, as well as proper storage and contraindications of vaccines. This reflects the need for proper training and involvement of these physicians in the control of these diseases. Some workers have reported successful involvement of registered medical practitioners in immunization campaigns. In the past, no study has been conducted to gauge the knowledge and awareness of practitioners. Murthy and Kumar have reported lack of knowledge about vaccine preventable diseases among mothers in a high vaccine coverage area(3). Lack of awareness of immunization among mothers is also reported by Shendurnikar *et al.*(4). As more of the community based practitioners involved in general practice were registered medical practitioners, Ayurvedic and homeopathic doctors, adequate stress on vaccine preventable diseases should be laid down during these courses and some kind of evaluation should be conducted before allowing them to practise.

Our observation of lack of knowledge about vaccine storage among majority (87%) of the respondents is of great concern because a successful prevention programme requires adequate quantities of effective vaccine for administration to the target population. Mere manufacture of adequate quantities of vaccine is not enough(5). To ensure the efficacy of vaccines it must be stressed that all personnel including practitioners involved must possess adequate knowledge about cold chain maintenance. Break in the cold chain has been reported as a prime factor among reasons for vaccine failures(6,7). Coverage

of the target population needs proper education of general practitioners and obstetricians who can play a key role in motivation and education, of community, for proper utilization of immunization services. A manual on vaccine preventable diseases has been released by the Indian Academy of Pediatrics(8). The manual provides details regarding schedule, storage as well as contraindications and side effects of various vaccines. In addition to this all practitioners after being adequately trained should be provided free vaccines for free immunization.

Some of the views of practitioners like use of injections in acute polio, steroids in measles, no washing of clothes in measles and no knowledge of vaccine storage are detrimental to the health care system and need immediate attention. A recent study has also emphasized that the clinicians must be educated to avoid unwarranted intramuscular injections(9). A close examination of existing health care system to remedy current inadequacies is necessary to make it more effective. The immunization programmes based on the use by the existing health services of thousands of well organised, non-professional, unpaid community volunteers have been tried with a great success in Cuba, Brazil and Dominican Republic(10,12). Can we think of such programmes in our country? In fact the problem is complex and multifactorial. To expect too much and too quickly is unrealistic. The work must continue, step by step, with greater dedication and direction.

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## Down's Syndrome with Hodgkin's Disease

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The frequency of acute leukemia, especially of the lymphoblastic type is higher in Down's syndrome as compared to the general population(1). Lymphoproliferative malignancies and other solid tumors have also been reported but an increased incidence has not been demonstrated(2,3).

The present report describes the occurrence of Hodgkin's disease in a child with Down's syndrome. The association of Hodgkin's disease and Down's syndrome is not extensively documented in literature. In our review of literature we could collect two case reports of Hodgkin's disease occurring in Down's syndrome(2,3). There is also a report of a family where four members had trisomy 21 and a normal child developed Hodgkin's disease(4). The present report further emphasizes the association and discusses the treatment results.

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