

Community endocrinology

Sanjay Kalra, Arun Kumar¹, Sreedevi Aswathy², Vanishree Shriraam³

Department of Endocrinology, Bharti Hospital and B.R.I.D.E., Karnal, ¹Department of Community Medicine, SHKM Government Medical College, Nalhar, Mewat, Haryana, ²Department of Community Medicine, Amrita Institute of Medical Sciences, Kochi, Kerala, ³Department of Community Medicine, Sri Ramachandra Medical College and Research Institute, Porur, Chennai, Tamil Nadu, India

ENDOCRINE FUNCTION AND DISEASE

Endocrine phenomena, whether physiological or pathological, are ubiquitous in the community. Puberty, pregnancy, lactation, and menopause are phases of life which almost everyone has to pass through. Other endocrine conditions such as Vitamin D deficiency, and overweight, are so common as to be considered an acceptable part of life. Yet others, such as diabetes, obesity, and osteoporosis, afflict a large segment of the population. According to a bibliometric analytical study conducted on the types of articles published in an endocrinology and metabolic disorders related national journal, it was found that of all the articles published during a selected interval of 4 years in the section “endocrinology and gender,” 17% of them pertained directly or indirectly to community health aspects of endocrinology.^[1]

Most of these conditions can be managed, or modulated, by nonpharmacological management, including dietary, physical activity, and lifestyle modification. This can easily be achieved by counseling and health education, and can obviate the need for drug therapy. While many patients may still require pharmacological therapy, drugs included in the essential list of medicines, available at primary care level, suffice for the vast majority. At the same time, to complement these measures, interventions based upon food fortification, e.g., with iodine or with Vitamin D, need to be implemented in the whole community, for a meaningful impact.

The high prevalence of endocrine phenomena and disease; the (seeming) simplicity of individual-based and community-based interventions; and the potential advantages of prevention, as opposed to cure, of endocrine disease; all argue for inclusion of endocrine care in primary, or essential health care.

Corresponding Author: Dr. Sanjay Kalra, Department of Endocrinology, Bharti Hospital, and B.R.I.D.E., Karnal, Haryana, India.
E-mail: brideknl@gmail.com

COMMUNITY ENDOCRINOLOGY

Community medicine and endocrinology are the two major disciplines, upon which falls the onus of assessing such endocrinology related care needs, and devising ways to fill identified gaps.

In conjunction with other specialties such as pediatrics, obstetrics/gynecology, andrology, and geriatrics, these disciplines can help provide appropriate endocrine care at the community level. Inter-professional collaboration with nutrition, exercise physiology/physiotherapy, psychology and social work will facilitate the process. This concept, which can be termed community endocrinology, is similar to that proposed for, and followed by, community psychiatry and community geriatrics.

Hence, the term “community endocrinology” may be defined as the specialty which involves assessment of the endocrine and metabolic health needs of populations, planning and administering community-based, community-oriented promotive, preventive, and curative services to meet those needs, to maintain optimal endocrine and metabolic health, using available manpower and resources. It also involves teaching and research in the field.^[2]

Community endocrinology may include, within its domain, maintenance of optimal endocrine health at every life stage, prevention and timely management of endocrine, and metabolic disorders [Table 1]. This is achieved by attention to individual, as well as a community, awareness of healthy lifestyles and practices, and by advocacy in favor of an endocrine-and metabolic - friendly healthy environment. Behavior change communication is the crux of, and the key to, community endocrinology interventions for early disease prevention and health promotion. A focus on promoting life-stage and gender - appropriate endocrine hygiene and metabolic hygiene, similar to health promotion and primary prevention, will help improve health substantially. The concept of community diabetology needs special mention here. With diabetes becoming endemic to most societies,

there is a need for community-based, community-oriented, community-specific approach to prevent, detect, and manage diabetes in an enabling and diabetes-friendly environment, both psychosocial and physical. Importance of the potential beneficial effects of less resource-intensive interventions like yoga targeted toward achieving better health and checking the burden of diabetes mellitus have also been advocated.^[3]

Areas where community medicine and endocrinology can work together include health education of the general public, health care workers, physicians, and medical students; surveys (research) to find out prevalence, morbidity, mortality, case-fatality, psychosocial aspects of important endocrine, and metabolic issues; assessment of area prevalence of various disorders; mass treatment, or prevention, and control measures e.g., iodization of salt, Vitamin D supplementation; focus on vulnerable groups with decision making on mass screening versus high risk screening; creation of economic and effective protocols for investigations as well as treatment, including policy making on basic testing (lab investigations) and selection of medicines to be used for endocrine problems at various health care levels after thorough risk-benefit, as well as, cost-effectiveness analyses.

MATCHING RESOURCES TO CHALLENGES

Many services related to community endocrinology are already provided under various national health programs.^[4] A separate vertical program for community endocrinology might not be required on an urgent basis to

Table 1: Domains of community endocrinology

Life-style endocrine transition
Puberty
Marriage
Preconception
Pregnancy/lactation
Andropause/menopause
Ageing
Lifestyle management
Obesity/overweight
PCOS
Diabetes
Subfertility
Food fortification
Iodine
Vitamin D
Environmental issues
Vitamin D exposure
Endocrine disruptor chemicals
Diabetes-friendly cities
Minority issues
Transgender rights/intersex management
Women's health

PCOS: Polycystic ovarian syndrome

provide such essential care. Rather, horizontal integration of relevant endocrine interventions, across existing national health programs, will be more apt. Figure 1 discusses the simple screening and therapeutic measures that can be potential interventions for incorporation into the ongoing programs depending on the available evidence.

This can be achieved by including community endocrinology related issues in induction training or ongoing education of medical officers serving in the public health system. A formal course on community endocrinology can also be initiated with the help of open universities as well. Similar to that of the experts in community medicine or public health, skills of people trained in the proposed specialty/super-specialty of community endocrinology can also be utilized in planning/implementation of relevant future national programs at a large scale.^[4] However, concerted focus on equity of endocrine and metabolic health, at the community level is necessary.^[5] The strategic efforts may include training of paramedical staff in healthy lifestyle behaviors including diet and physical activity, early detection of endocrine disorders, as well as basic management. It will also necessitate focused campaigns on community awareness, including the need to adopt healthy lifestyles, improve health care seeking behavior, and promote health friendly societal support.

CONCLUSION

The Bhima-esque task of planning the public health interventions for managing endocrine and metabolic disorders, through seemingly insurmountable, pales in comparison to much larger health challenges which have been successfully handled by experts in community medicine. Smallpox eradication, polio eradication, guinea worm

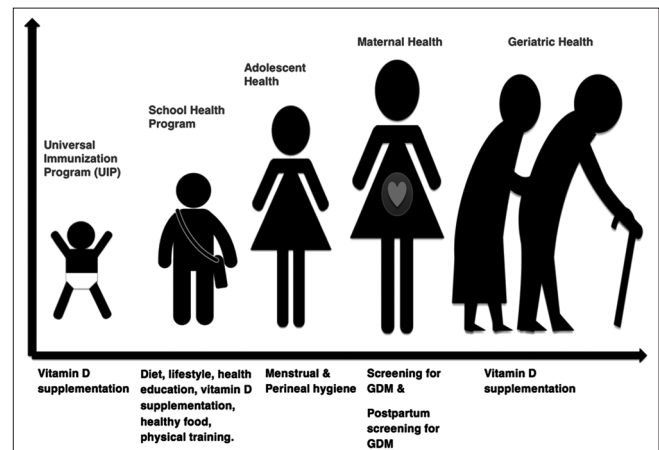


Figure 1: Scope for community endocrinology

eradication, and reduction in maternal and infant mortality, are some examples of challenges which have been overcome. These successes have been achieved by the provision of community-based services, with the help of trained and committed paramedical staff, taking into account local customs, traditions, and requirements. A similar approach will be required to tackle the endocrine and metabolic diseases that are gradually become endemic in our society. Working together, community medicine and endocrinology should be able to spearhead the movement of community endocrinology, to achieve optimal endocrine health for all.

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