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The Newly Concepts In Children Treatment With Chronic Diseases In Primary Health Centers

Faisal Mohmad Matle Alosaimim[1]*, Abdulaziz Hamd Marzog Alotaibi[2]*, Ahmad Baijan Matr Almutairi[3]*, Shimah Shae Bin Omirh[4]* , Mohmad Saud Mohmad Alotaibi[5]*, Mohmad Farhan Madeg Alotaibi[6]*, Faisal Faihan Mohmad Alotaibi[7]*, Shoib Gazan Nashi Alotaibi[8]*, Adel Awajan Madeg Alotaibi[9]*,Sultan Dekhilalah Mater Almutairi[10]*

[1]*Nursing Specialist Afif Hospital, Saudi Arabia

[2]*Nursing Technician Afif Hospital, Saudi Arabia

[3]*Nursing Technician Afif Hospital, Saudi Arabia

[4]* Nursing Specialist Afif Hospital, Saudi Arabia

[5]*Nursing Assistant Alnbwan PHC, Saudi Arabia

[6]*Nursing Technician Afif Hospital, Saudi Arabia

[7]*Nursing Technician Afif Hospital, Saudi Arabia

[8]*Nursing Specialist Afif Hospital, Saudi Arabia

[9]*Nursing Technician Adwadmi Hospital, Saudi Arabia

[10]*Nursing Technician Thurb PHC Hospital, Saudi Arabia

Abstract: Most of the significant chronic illnesses that affect children and adolescents are characterized by an acute phase surrounding the diagnosis of the illness followed by prolonged stress associated with extended treatment, recovery, and survivorship. Each phase of a chronic illness can present children and their families with significant challenges and stressors. However, there is evidence that chronic conditions may exert greater psychological and physical stress than acute illnesses that resolve quickly [4]. Further, many pediatric illnesses are exacerbated by stress encountered in other aspects of children's lives, here arises the role of family physicians (FPs) to help the child and their parents understand the ways that children cope with stress to better explicate processes of adaptation to illness and to develop effective interventions to enhance coping and adjustment(Compas et al., 2012)[5].Children with disabilities or chronic illnesses are at increased risk for psychological morbidity[6]. In particular, psychological maladjustment is 10–15% higher in children with chronic conditions, as compared to healthy controls[7]. Finally, the Ontario Child Health Study reported that children with chronic conditions and major disability were three times more likely to have a psychiatric disorder than their healthy counterparts, controlling for age and sex-specific risks for psychiatric problems[8].Potential interactions between the burdens on the family that result from a child's chronic illness and family members' psychological morbidity are hypothesized to explain the associations with child's psychological morbidity.

Keywords: Newly concepts, Children Treatment, chronic Diseases, Primary Healthcare

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INTRODUCTION

define chronic health conditions in a child as "any physical, emotional, or mental condition that prevented him or her from attending school regularly, doing regular school work, or doing usual childhood activities

or that required frequent attention or treatment from a doctor or other health professional, regular use of any medication, or use of special equipment" (Van Cleave et al. 2010).Chronic illnesses are characterized by at least three important features—they are prolonged in their duration, they do not resolve spontaneously, and they are rarely cured completely (Stanton et al. 2007). Major advances in the diagnosis and treatment of chronic illness in children have changed the landscape of clinical pediatrics. Diseases that were once fatal are now successfully treated and children survive at much higher rates than 20 to 30 years ago(Halfon and Newacheck, 2010). These improved outcomes are based on early detection and diagnosis and powerful methods for the treatment and management of many previously lifethreatening diseases(Mokkink et al., 2008). On otherhand,Parental caregivers often experience anxiety and fear about managing care for their chronically-ill child;[9] however it is largely unknown how this distress relates to their physiology and health. To date, no studies have simultaneously examined biological and self perceived measures of caregiver stress among caregivers of children with chronic conditions, and how well these measures correlate with subsequent health outcomes for these children. However, one study of parents of pediatric cancer patients examined chronic psychological stress and immune function reporting that caregiving stress impaired the parents' immune response to anti-inflammatory signals[10]. Childhood chronic illness can have a considerable impact on family functioning[11]. In turn, the manner in which the family adjusts to and copes with a child's illness can substantially influence the psychosocial adjustment of the child and the family as a whole. For example, mothers of children with spina bifida with more supportive families and marriages reported lower levels of psychological symptoms[12].Thus, positive family functioning may moderate the relationship between caregiving and poor mental health and increased levels of stress. Family functioning also moderates the association of children's externalizing behavioral problems to caregivers' symptoms of hostility among caregivers of children and adolescents with sickle cell syndromes[13]. Indeed, family factors may be more predictive of psychopathology among children than the type and severity of a childhood

chronic condition[14]. In particular, poor family functioning, low income, parental distress, and an increased burden of illness on the family are all associated with the child's psychological maladjustment. Moreover, positive family-based characteristics such as parental self-esteem, family social support, the child's coping mechanisms, and health care beliefs all contribute to adaptation among children with chronic conditions. Caring for a chronically-ill child often requires much time and effort of parents[15]. A child's condition can have an impact on the parents' ability to work and the availability of financial resources in the family[16]. For example, nearly 20% of US families with children with a health condition reported that the illness had affected the parents' ability to work[17] as many employed parents lack sick benefits[18]. Indeed, mothers of children with health limitations are at particularly high risk of losing their jobs[19]. Finally, the decreased employment among parents has the added impact on the economic resources available to the child through reduced access to employer-sponsored insurance[20].

CORE PRINCIPLES of PATIENT AND FAMILY CENTERED CARE:

During the past decade, family advocates have promoted family-centered care, 'the philosophies, principles and practices that put the family at the heart or center of services,the family is the driving force[21].Sharing complete, honest, and unbiased information with patients and their families on an ongoing basis and in ways they find useful and affirming, so that they may effectively participate in care and decision-making to the level they choose. Health information for children and families should be available in the range of cultural and linguistic diversity in the community and take into account health literacy. In hospitals, conducting physician rounds in the patients' rooms with nursing staff and family present can enhance the exchange of information and encourage the involvement of the family in decision making[22].Collaborating with patients and families at all levels of health care: in the delivery of care to the individual child; in professional education, policy making, program development, implementation, and evaluation; and in health care facility design. As part of this collaboration, patients and families can serve as members of child or family advisory councils, committees, and task forces dealing, for example, with operational issues in health care facilities; as collaborators in improving patient safety; as participants in quality improvement initiatives; and as leaders or coleaders of peer-support programs[23].Patient- and family-centered care

emerged as an important concept in health care during the second half of the 20th century, at a time of increasing awareness of the importance of meeting the psychosocial and developmental needs of children and of the role of families in promoting the health and well-being of their children[24].

TYPES OF INTEGRATIONS:

Functional integration (extent to which key support functions and activities such as financial management, human resources, strategic planning, information management and quality improvement are coordinated across operating units), organizational integration (e.g. creation of networks, mergers, contracting or strategic alliances between healthcare institutions), professional integration (e.g. joint working, group practices, contracting or strategic alliances of healthcare professionals within and between institutions and organizations) and clinical integration (extent to which patient care services are coordinated across the various personnel, functions, activities and operating units of a system).

PRINCEPLES OF FAMILY MEDICINE AND ROLE OF FAMILY PHYCIAN IN CHRONIC ILNESS MANAGMENT:

with the patient, with an emphasis on providing comprehensive physical, psychological and social care for the patient and his family. The focus is on the patient, with the background knowledge of his family and not just on the disease entity, organ or system. Apart from curative care a Family Physician is in the best position to provide preventive care ,promotion of health and rehabilitative care within the community and familiar sunoundings. The ten essential principles of Family Medicine care are Caring, Clinical competence, Cost-effective care, Continuity of care, Comprehensive care, Common problems management expertise, Co-ordination of care, Community based care including prevention and research, Communication and counseling skills of high standard, Continuing medical education[25]

OBJECTIVES FOR CHRONIC DISEASE:

•Find and apply diagnostic criteria.

• Find and apply surveillance strategies.

• Elicit a focused history that includes information about adherence, self-management, and barriers to care.

• Perform a focused physical examination that includes identification of complications. • Assess improvement or progression of the chronic disease.

• Describe major treatment modalities.

• Propose an evidence-based management plan that includes pharmacologic and nonpharmacologic treatments and appropriate surveillance and tertiary prevention.

• Communicate appropriately with other health professionals (e.g., nutritionists, counselors). Physical

• Document a chronic care visit. therapists,

• Communicate respectfully with patients who do not fully adhere to their treatment plan.

• Educate a patient about an aspect of his/her disease respectfully, using language that the patient understands. When appropriate, ask the patient to explain any new understanding gained during the discussion.

SELECTED CHRONIC ILLNESS :

• Diabetes mellitus.

• Obesity.

• Hypertension .

• Chronic illness due to infections.

Childhood Diabetes mellitus :

Managing children and adolescents with diabetes is complex and time-consuming, and requires the combined efforts of several disciplines. The goals of diabetes management are best attained with the help of a diabetes treatment team and the child's family physician[26] .The main aim of managing children with diabetes is achieving optimal blood glucose control. The degree to which this is achievable, however, is different for children than for adults. The principles governing administration of insulin and the strategies adopted in teaching good diabetes management to children differ in important respects from those for adults. Some of these differences are: • A need to educate parents so they can supervise their children's diabetes treatment until the children mature; • The increased insulin sensitivity and greater risk of hypoglycemia in young children, necessitating use of smaller insulin doses and adoption of relatively liberal target ranges for blood glucose[27]; The unpredictable habits of preschool children, especially in terms of activity and calorie intake, that can result in varying insulin requirements from day to day; and the importance of recognizing older children's increasing maturity and encouraging them to man- age the condition themselves and, at the same time, discouraging parents from being overprotective[28].

Classification of pediatric diabetes mellitus[29]:

TYPE 1 (beta-cell destruction leading to absolute insulin deficiency), TYPE 2 (insulin resistance with variable secretory defect), Genetic defects of beta-cell function: for example, maturity-onset diabetes of the young (MODY), Diseases of the endocrine pancreas, Infections (Congenital rubella, Cytomegalovirus), Drugs (Glucocorticoids, Thyroid hormones, Diazoxide, Immunosuppressive agents), Endocrinopathies (Cushing syndrome, Pheochromocytoma), Other genetic syndromes (Down syndrome, Turner syndrome, Prader-Willi syndrome, Klinefelter syndrome)

MANGING CHILDREN: NEWLY DIAGNOSED

Diabetes mellitus can present at any age from infancy onward, but peaks in incidence occur in both the 5- to 9-year-old and 10 to 14year-old groups. Polydipsia and polyuria, accompanied by weight loss, are classic presenting features of the disease. These symptoms might be overlooked in infants or toddlers until they become lethargic and dehydrated and develop the electrolyte, acid-base, and osmolar abnormalities characteristic of diabetic ketoacidosis (DKA)[30]. Children who present with symptoms of diabetes for the first time are often seen initially by their family physicians for evaluation. At this stage, they should be referred to a pediatric diabetes Centre for confirmation of the diagnosis and institution of treatment. A teaching program should be set up to provide children's families with the skills necessary for managing children safely at home and reintegrating them into the routines of daily living. Children with the following conditions and circumstances, however, should be managed in hospital: • diabetic ketoacidosis, • younger than 5 years, • parents with difficulty understanding the teaching program, • psychomotor delay, families with serious psychosocial problems, and • families who live outside the region. Many parents are shocked when they are informed that their children have diabetes. Some grieve the loss of the child to a disease they fear will lead to severe complications and a shortened life[31].

INTIATING INSULIN:

IT is important to stress the following to children and parents at an early stage.

• Diabetes is a permanent condition.

• Insulin controls diabetes but does not cure it.

• Insulin will not control diabetes without modifications in diet and an exercise program. Home blood glucose monitoring is essential for optimal control of diabetes. This should be carried out three to four times daily in the first few weeks after diagnosis in order to detect the fall in blood glucose levels that heralds the onset of a remission. This phase, the socalled honeymoon period, is marked by a temporary and partial recovery of islet cell function that results in increased endogenous insulin secretion. Risk of hypoglycemia is high at this time unless subcutaneous insulin is promptly reduced in response to falling blood glucose levels. Insulin might need adjustment:

• At the beginning and end of the honeymoon phase,

• At onset and termination of summer vacations,

• with intercurrent infections, • Periodically during growth and development, and

• During adolescence. Preschool children are very sensitive to even small increases in insulin, particularly shortacting insulin. As a result, they might unexpectedly become hypoglycemic. This dictates particular caution during insulin adjustment. For these children, additions of not more than 1 unit of intermediate-acting or short- acting insulin, whichever is appropriate, should be made each time during correction of hyperglycemia.

ROUTINE FOLLOW UP:

Following diagnosis of diabetes, children and their parents are seen by the diabetes team every 3 to 4 months and assessed for the following: General health, including height, weight, and blood pressure; • Glycemic control from a record book, glucose monitor, or computer printout; • Comparison of glycemic control with glycosylated hemoglobin (Hgb AIC) • Accuracy of the glucose monitor compared with • Laboratory blood glucose testing equipment; • Meal plan requirements and adherence; • Knowledge of diabetes, insulin, and diet; • Aattitudes to and management of diabetes; • Psychosocial problems; and • School progress.

LONG TERM FOLLOW UP:

Lipid abnormalities , retinopathy , nephropathy , Cardiomyopathy , Thyroid function

EMERGENCY SITUATIONS:

Hypoglycemia is the most frequent acute complication of diabetes in children. It is present when blood glucose drops below 3.5 mmol/L or when a child develops symptoms . Causes include:

• Excessive insulin therapy, • Missed or delayed meals or snacks, • Unusual amount of exercise without extra calories, • Use of alcohol, and • Changes in schedules. The value of glucagon in reversing severe hypoglycemia should be noted. All families are taught how to use this substance in an emergency. When injected, glucagon raises blood glucose levels by releasing glucose from glycogen stores in the liver and muscles. If use of glucagon fails to raise blood glucose levels in a child or adolescent or if it is unavailable, the child should be taken to hospital where intravenous glucose can be administered immediately.

CHILDHOOD OBESITY:

Pediatric obesity is not limited to industrialized countries; developing countries report an increasing prevalence also. In 38 countries where data were available, 16 showed a rising trend toward obesity, 14 were static, and only eight showed a falling rate[32].Psychosocial and economic problems are also associated with pediatric obesity. Obesity impairs physical function and quality of life, Family physicians have an important role in timely identification of overweight and obese children during periodic health examinations. They also have a role in promoting preventive measures and encouraging positive changes in behavior, as well as identifying and treating obesity-related comorbidity. Family physicians should have the skills to identify pediatric obesity and its risk factors, and knowledge of treatment options. Initial assessment of an overweight child should include a history of gestational and linear growth as well as weight, age of onset of obesity, pubertal history (if applicable), and detailed histories of diet, physical activity, and psychosocial factors (level III evidence) [33]. A full physical examination and Laboratory examination should focus on findings associated with symptoms of obesity identified by the history.

MANGING PEDIATRIC OBESITY:

The goals of treatment are to find the energy balance that best promotes changes in body composition without interfering with normal growth and to teach children and their families about healthy eating and the benefits of physical activity.

HYPERTENSION AMONG CHILDRENS AND ADOLESCENTS:

The importance of hypertension in the pediatric population has not been as well appreciated as in adults. Children with elevated blood pressure (BP) can develop target organ damage, and they are also at increased risk of cardiovascular disease in adulthood.

Prevention of hypertension

Overweight and obesity management , Sedentary behavior correction , Cigarette smoke avoidance , Dietary-behavioral interventions , Reduction of salt intake , Increase in physical activity

INFECTOUS DIEASES AND CHRONIC CONDITIONS:

Growing evidence is emerging for an aetiological role for several infectious agents, particularly viruses, in human cancer. Prominent among these is hepatitis B virus and human papilloma virus (HPV), offering the potential for prevention of hepatic carcinoma and cervical cancer, respectively, through targeted immunization. A bacterium, Helicobacter pylori, which is a cause of stomach cancer, can be easily treated with antibiotics. Other carcinogenic infectious agents include liver flukes, schistosomes, Epstein–Barr virus, herpes simplex, and T-lymphotrophic viruses. Infectious agents causing chronic disease include hepatitis C virus (causing an acute infection and chronic active hepatitis), human immunodeficiency virus (HIV, causing the acquired immunodeficiency syndrome (AIDS), which is now considered a chronic disease in countries where antiretroviral therapy has reduced mortality significantly).

INFICTIOUS DIEASES INTERVENSTIONS:

Current prevention efforts for hepatic cancer and chronic active hepatitis must focus on universal application of hepatitis B vaccine, given to children at birth, in an appropriate schedule during childhood and to household members of infected persons. Hepatitis B vaccine was the first vaccine to prevent a form of cancer.HPV vaccine to prevent cervical cancer has been approved for use in the United States for girls prior to onset of sexual activity. Prevention of gastric cancer must focus on the clinical management of patients symptomatic with dyspepsia, stomach ulcer or gastritis.Endoscopy is reserved for use in patients with symptoms suggesting ulcer complications or cancer, or those who do not respond to treatment.

SUMMARY AND CONCLSION

It is imperative that the increasing magnitude of chronic disease burden is anticipated, understood and acted upon urgently. Chronic disease prevention and control can no longer be ignored as an important means of economic development. Primary health care with its defining features of continuity, comprehensiveness and coordination, is the cornerstone to provide high quality and cost effective chronic disease care to the population. We need top-down stewardship and strong commitment by national leaders, policy makers, health care organizations, community leaders, health care personnel, and patients and families, on quality primary health care that focus on prevention and control of chronic diseases. The solution lies in every person at all levels to become an agent of change by embracing a new way of thinking regarding chronic disease care and to take serious actions on each of the problems highlighted. As long as the acute care model dominates health care systems, health care expenditure will continue to escalate without meaningful improvements in populations' health status. The health of our future generation will depend on our ability to successfully redesign our primary health care system that can meet the needs of a growing population of patients with chronic conditions.

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