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COVID-19 specialized diabetes clinic model for excellence in diabetes care: scientific perspective

ABSTRACT

While diabetes centers are well established by the Ministry of Health, there is no separate specialized diabetes clinics for COVID-19 patients (SDCs). There are several clinical diabetes centers throughout the Kingdom of Saudi Arabia, several of which have been developed through philanthropy funding; nevertheless, it is not obvious what distinguishes SDCs from a therapeutic viewpoint and what the potential would be for such centers. Through this context, we suggest a structure to direct the progress of SDCs. Defining protocols for wider adoption of SDCs as a means to enhance public safety and COVID-19 patient care efficiency (including consistency and satisfaction) and minimize health care expenses becomes increasingly essential when moving

towards value-based sales and reimbursements away from service charges. It is wise to introduce innovative financial mechanisms to pay for diabetes that cannot be covered by fiscally limited private and university medical centers. We foresee potential clinical SDCs to be made up of a well-defined framework and six areas or foundations that act as basic guiding principles for the advancement of diabetes treatment skills that can be easily illustrated by stakeholders, including insurance facilities, consumers, payers and government departments. (Clin Diabetol 2020; 9; 4: 208–211)

Key words: COVID-19, specialized diabetes clinic, model for excellence, diabetes care

Introduction

Diabetes is a significant public health problem. Nearly 30 million individuals in the United States are diabetics [1]. Diabetes accounts for 12% of all deaths in the United States. Significant risks of diabetes lead to death and morbidity, with immense corresponding economic pressures [2]. The cumulative tangible and intangible annual cost of health care for this disease is estimated at 245 billion dollars [3]. Due to the economic and health challenges associated with diabetes,

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it is important to increase access to treatment and the way in which it is provided.

Centers of diabetes are well established by the Ministry of Health, but there is no specific description of the professional specialized diabetes clinics (SDCs). There are several clinical diabetes centers throughout Saudi Arabia, several of which have been developed through governmental funding; nevertheless, it is not obvious what distinguishes SDCs from a therapeutic viewpoint and what the future would be for such centers.

Thereunder, we suggest a system to direct the progress of clinical SDCs. With the move towards value-based payments and discounts, and away from utility charges, identifying protocols for wider adoption of SDCs as a means of enhancing public safety, increasing COVID-19 patient care efficiency (including consistency and contentment) and lowering health care costs are becoming crucial. It's wise to introduce innovative funding mechanisms to pay for diabetes that cannot be covered by financially limited private and university medical centers.

Three separate dimensions lead to success in diabetes treatment: (1) the delivery of clinical services through trained multidisciplinary medical teams headed through skilled diabetic professionals experienced with treating challenging, high-risk COVID-19 patients; (2) scientific performance that includes training, clinical study and student activity; (3) COVID-19 patient awareness, involvement and satisfaction with comprehensive quality care models.

The framework concept and perspective outlined in this article describes the fundamental components of developed SDCs that include exposure to the continuum of "state-of-the-art" of diabetes treatment.

Specialized diabetes clinics vision statement

A systematic SDC model will consist of an architecture and six realms or principles that act as basic guiding standards for building knowledge in diabetes treatment that can be readily communicated to stakeholders, including health care professionals, consumers, payers, and government departments.

Infrastructure

First, the concept of SDC requires the development of a sufficient infrastructure to function as a 'center.' Adequate personnel is a core component of this infrastructure to provide information on diabetes self-management to new and current COVID-19 patients; provide advice on the administration of injectable drugs; invest in diabetes-related technology (e.g., continuous glucose monitoring, insulin pumps, meters). Access and evaluation of glycemic data at the point of treatment during visits to facilitate ap-

propriate improvements in therapy as indicated; explore nutrition, exercise, and usage of medications in relation to COVID-19 patient lifestyles; answer management-related phone calls, messages and e-mails, in a timely fashion. Delivering appropriate clinical behavioral wellbeing and social care, including recognition and referral to community resources; providing medical instruction to clinicians at the center and throughout the community, advising family members and other professionals, and resolving drug pre-authorization liability problems through third party policy. In the absence of such infrastructure a real SDC cannot work.

Principles for specialized diabetes clinics Non-exclusive emphasis on high-risk people and open-door policy

With the current diabetes crisis SDCs must face the number of COVID-19 patients qualifying for treatment that frequently surpass capability owing to a nationwide scarcity of endocrinologists [4]. There are, 6500 endocrinologists in the United States, half of whom do not treat diabetes patients with COVID-19. Recent estimates reflect the actual scarcity of 1,500 clinically engaged adult endocrinologists, a number that is predicted to increase [5].

This problem can be addressed by two potential, preferably complementary pathways.

Systematic training of nurses trained with diabetic treatment will help improve coverage for those who may profit more from accessing treatment in the SDCs. This covers all people with type 1 diabetes and those with inadequate glycemic regulation, compromised hypoglycemia, various complications, cystic fibrosis, post-transplant diabetes, atypical types of diabetes, and complicated medical dilemmas. This method helps the emphasis to be on population control and risk stratification prior to referral.

At the same moment, whenever practicable, an "open door" strategy will make sure that COVID-19 patients require treatment were not rejected. For this reason specialized professionals such as nurses, medical assistants, and allied health practitioners (clinical pharmacists, registered nutritionists, and accredited diabetes educators) may be qualified and equipped to play a greater coordinating function in the control of COVID-19 patients receiving treatment at the SDC.

Collaboration through the medical system to direct treatment

Structured and consistent contact and continuity of COVID-19 patient care is another critical factor in delivering efficient and quality care of COVID-19 patients across the continuum of diseases identified in SDC. Co-

ordinating treatment through patient-centered medical homes (PCMHs) starts with treatment arrangements that define requirements, duties and commitments at the point of admission to primary treatment [6].

Pre-consultation exchanges. Pre-consultation exchanges resolve clinical issues that may not require in-person visits, such as the need for slight drug modifications. Addressing these issues in a timely manner compensates for the requirement for comprehensive in-person visits to the SDC and enables ongoing treatment by primary care physicians. It also reduces the waiting period for new COVID-19 patient consultations for those listed as having the greatest need. Reimbursement for pre-consult transactions focused on a perfected model offers a financial reward for the time invested in such consultations. In places where accredited diabetes educators and expert doctors are not eligible, online consultations (e-consults) can be used to assess the necessity for in-person visits [7, 8]. Many health care organizations have tested e-consultations or telehealth as emerging forms of treatment management [9, 10]. While e-consults are used more widely in pharmacy, they play a role in the treatment of diabetes.

It poses challenges. For instance, despite having experience of when and how to start insulin (or other intravenous) therapy, there is a shortage of resources for many policies and procedures (PCPs) to implement. Among many cases, e-consultations do not resolve the problem of limited supply of personnel to handle pre-authorizations and appeals against certain current diabetes insurance programs. E-consultations could also be a great opportunity to incorporate advice from experts with continuing education. The SDC could help to overcome these challenges.

Structured appointments and communal management

Some COVID-19 patients require a number of in-person visits to the SDC to initiate injection therapy, such as the use of various options or co-formulations to promote basal-bolus insulin or insulin pump treatment, or the use of professional or personal continuous glucose monitoring. Such COVID-19 patients will also go back to their PCP for a referral. Integrated healthcare and comprehensive patient management should be considered, once the problems of PCPs have been resolved. Continuity of treatment is maintained by the COVID-19 patient remaining in the PCMH with his or her PCP for day-to-day control while retaining access to the SDC.

Specialized diabetes clinics management may include communal management of diabetes. An example could be a COVID-19 patient who begins insulin at the SDC, returns to the PCP, and visits the SDC every 6 to 12 months.

Creative approaches

The use of technical innovations, including more articulate and unbiased online communications between suppliers of medical information, will render hospital care more effective around the board and spectrum of care, along with transition periods, such as from medical facility to home [11].

Proper treatment

The Unified Referral Network guarantees diabetes treatment is given effectively and securely by the SDC. As the bulk of cases should be assigned to SDC, free and continuing contact via their corresponding family physician ensures that both companies have the correct reviews and accessible participation in other areas of diabetes treatment. Two of them, the theoretically successful approach is to schedule monthly group research. Sessions for endocrinologists and partners providers where COVID-19 patients are presenting limited or more difficult performance problems should be addressed. Usage of other specialties linked to diabetes necessary for intensive diabetes treatment COVID-19 patients and suppliers in the establishment of screening or early diagnosis and treatment of diabetes-related complication. This can be achieved by positioning specialties that operate as a one-stop shop for COVID-19 patients. Convenience could be reached by scheduling on-line meetings with colleagues, the same day of screening and/or treatment of diabetic COVID-19 patients by multidisciplinary teams.

Healthcare information system

Constant emphasis improving consistency and engagement in the SDC is an important subject of clinical studies to improve pharmacology and the public medical treatments with diabetes mellitus. You should use the SDC, the Model of Health Care Education that Connects Persons, including details on the community in a consolidated including systematic manner database [12] or register that requires the evaluation to be carried out in interest. Such registries are optimally planned to fulfill the minimum criteria. Adherence to standards, for providing secure exposure for studies and many experts who will support the center in the extraction process will lead to significant clinical and epidemiological results. Determined COVID-19 patient details would allow feasible relations from SDC, science promotion and quality management approaches that can go beyond the United States to global groups.

The SDC will act as a sign of continuous improvement measures that aim to insure that the most relevant robust and up-to date treatment is given in the community requires modern technology and innovations of clinical research. Ideally, the Defence Centers of Excellence

will implement initiatives such as the iterative do-check method system for long term ventures [13] Kaizen Activities short-term development programs [14] and Lean Six Sigma (a process that depends on a joint effort by the team improving efficiency by consistently reducing waste reducing variation) [15]. When approaches are tested systematically, within the context of a health literacy network, successful approaches can spread quickly through the health sector then after that, by a group of SDC.

Determination of the outcome

A constant endeavor must be made to preserve the SDC preservation of good quality treatment through the development of verifiable evidence for analysis and feedback from other parties, such as funding associations or insurance providers, as well as COVID-19 patients. Present indicators, such as target-directed measures of HbA_{1c}, lipid and blood metrics. Pressure is necessary but of limited value. Scale, such as pause in development of complications severity of hypoglycemia, reduction in coronary condition, morbidity, death and general lifespan and the standard of life is going to be more critical than that measures by the researcher alone.

Awareness and distribution

Dissemination of results and professional practice SDC positively impacts the other organizations concerned about treatment of diabetes. Personal, regional, global conferences, grand rounds and small group meeting will do the utmost to encourage practices within and outside an agency. Grand rounds and small group meetings will do the utmost to encourage practices within and outside an agency. In Pennsylvania there is a Chronic Health Program, which funds and promotes training primary care procedures in the PCMH model and extension of the Public Healthcare Outcomes program, that supports the tele-mentoring of PCPs by diabetics, details of these partnerships [16, 17].

Quick "expert classes" that have information on the topic core factors in the treatment of diabetes can aid disseminating specialist treatment for diabetes outside isolation it's a SDC. Outside the structured educational courses, SDC had the chance to consult with an "initiate endocrinologist" programs under which the center's experts visit or create near ties with corresponding family physician at the same time or to other organizations to pass experience and grow it mutually advantageous ties.

Conclusions

Specialized diabetes clinics are an essential component in innovative approaches in cost-conscious health care distribution, interconnected, COVID-19 patient-centered treatment for people with diabetes.

Optimizing health results when evaluating expense, efficacy and consistency can result in cost-effective treatment. The suggested SDC model for an effective and well thought-out solution. The network, combined with six main components, is a practical approach to the production of verifiable and transferable standards in treatment with large COVID-19 patient groups. The System may act as a prototype and a comparator for new and emerging versions. Emerging SDC in an effort to standardize and build good treatment for diabetes.

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