SUPPLEMENTARY TABLE 1: KEY COMPONENTS OF DIABETES SELF-MANAGEMENT EDUCATION AND SUPPORT (DSMES)

• Evidence-based
• Individualized to the needs of the person, including language and culture
• Has a structured theory-driven written curriculum with supporting materials
• Delivered by trained and competent individuals (i.e., diabetes care and educational specialist) who are quality assured
• Delivered in group or individual settings
• Aligns with the local population needs
• Supports the person and their family in developing attitudes, beliefs, knowledge, and skills to self-manage diabetes
• Includes core content, i.e., diabetes pathophysiology and treatment options; medication usage; monitoring, preventing, detecting, and treating acute and chronic complications; healthy coping with psychological issues and concerns; problem-solving and dealing with special situations (i.e., travel, fasting)
• Available to the individual at critical times (i.e., at diagnosis, annually, when complications arise, and when transitions in care occur)
• Includes monitoring of the individual's progress, including health status, quality of life
• Quality audited regularly
DSMES is a critical element of care for all people with diabetes and is the ongoing process of facilitating the knowledge, skill, and ability necessary for diabetes self-care as well as activities that assist a person in implementing and sustaining the behaviors needed to engage with diabetes on an ongoing basis. National organizations in the U.S. and Europe have published standards to underpin DSMES. In the U.S. these are defined as DSMES "services," whereas in Europe they are often referred to as "programs." However, the broad components are similar.

SUPPLEMENTARY TABLE 2: KEY DOMAINS TO SUPPORT THE IMPLEMENTATION OF EVIDENCE-BASED INTERVENTIONS FOR THE CARE OF TYPE 2 DIABETES

Domain	Considerations
Delivery arrangements	
How care is delivered	• Is our DSMES program available in both a group and individual format? • What are our measures for quality of diabetes care? • Do hours of operation align with need?
Where care is delivered	• Can some diabetes services be provided outside of the clinic setting (e.g., community, home)? • Do we provide transport services when these are needed?
Who provides care	• What is our approach to team-based care? • Are all members of the team (e.g., physicians, nurses, pharmacists, community health workers) practicing within license and accessing optimal training? • What are specific roles of each team member (e.g., for injection teaching, follow-up after hospitalization, etc.)? • Are there disciplines that we should add to our team to improve diabetes care (e.g., community health workers)? • Do we refer to DSMES at the critical time points to facilitate self-management? How do we support and track these referrals? • Do we refer all persons with type 2 diabetes for medical nutrition therapy? • How can we incorporate mental health services to meet the needs of persons living with type 2 diabetes? • What screening do we do and who does the screening?
Coordination of care and management of care processes	• What is our process for coordinating diabetes care, such as assuring all preventive care is completed and that patients with higher risk (e.g., elevated HbA_{1c}, hospitalizations) are seen more frequently? • Do we have a care pathway for diabetes that addresses both nonpharmacological and pharmacological interventions? • How should/do we incorporate care management? • What is our process for ensuring that all referrals for diabetes care are made and followed up on? • What are our criteria for referrals? • How do we communicate with referring providers and how do referring providers communicate with us? • How do we ensure continuity of care within the clinic and with transitions of care? • How do we facilitate patient-initiated care (e.g., self-scheduling of appointments)? • How do we incorporate shared decision-making in our management of diabetes?
Information and communication technology	• How can our information systems facilitate use of remote patient monitoring (e.g., continuous glucose monitoring data) to improve diabetes care? • How do members of the health care team communicate using available technology? • How do we incorporate telemedicine into diabetes care, including gathering of patient data previsit to ensure timely care? • How can we leverage technology for clinical decision support (e.g., decision support tools on the use of SGLT2i or GLP-1 RA in persons with relevant comorbid conditions)?
Governance arrangements: Accountability for health professionals	
Training and certification	• What are our policies on ongoing training for health care team members on principles of diabetes care? • Can team members access training asynchronously and using technology?
Quality of practice	• What are our policies that facilitate implementation of clinical guidelines?
Implementation strategies	
Health system	• How do we identify and address disparities in diabetes care? • How do we ensure that our organizational culture supports the holistic management of type 2 diabetes? • How do we assess and address social determinants of health? What are our community resources?
Health care setting	• What are the specific roles of primary care providers and specialists in the management of type 2 diabetes in our setting? • Do we have a process for panel/population management so that we are not relying on individual clinic visits to identify issues with diabetes care?
Health care workers	• What quality metrics do we use to assess our diabetes care? • What is our process for continuous quality improvement around diabetes care? • Should we set up a diabetes community of practice? • How is education on new initiatives for diabetes care improvement provided to team members?

DSMES, diabetes self-management education and support; GLP-1 RA, glucagon-like peptide 1 receptor agonist; SGLT2i, sodium-glucose cotransporter 2 inhibitor.

SUPPLEMENTARY FIGURE 1

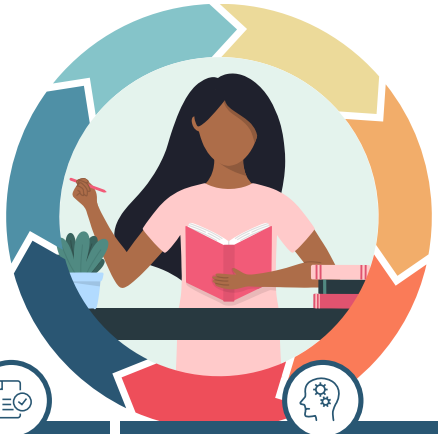
IMPORTANCE OF INTEGRATED CARE

- Acknowledge the lifelong and evolving nature of type 2 diabetes.
- Identify and coordinate with the team.
- Know your local resources.
- Language matters in diabetes care.

INDIVIDUALIZATION OF CARE

- Consider each person living with diabetes as an individual with specific context, risks, and preferences.
- Health care systems should monitor and address inequity in the delivery of evidence-based interventions for type 2 diabetes.
- Assess and address social determinants of health for each individual living with diabetes, particularly in those not achieving goals.
- Incorporate comorbidities when developing and implementing the management plan.

DIABETES SELF-MANAGEMENT EDUCATION AND SUPPORT



- Embrace DSMES as being as important as other aspects of diabetes care, such as pharmacotherapy.
- Identify and know how to access your local DSMES resources.
- Impress upon the person and the health care team the importance of DSMES in the ongoing holistic approach to the management of type 2 diabetes.
- Initiate or refer for DSMES at diagnosis, annually, with changes in social or health status, and with transitions of care or life situation.

DSMES, diabetes self-management education and support.

SUPPLEMENTARY FIGURE 2

FACILITATING HEALTHY BEHAVIORS AND WEIGHT MANAGEMENT

Specific health behavior and weight management goals should be agreed upon between the person with type 2 diabetes and the care team; shared decision-making is an important component of this discussion.

Emphasize self-monitoring behaviors and review data collected (e.g., glucose monitoring, weight, tracking physical activity) in clinical visits to convey their importance in achieving the desired health behavior goals.

People taking insulin or a sulfonylurea should be educated about the risk of hypoglycemia when undertaking physical activity or adopting a specific nutritional plan. Perscribe glucagon in people at high risk of severe hypoglycemia.

DSMES and MNT can help the person living with diabetes to identify and address barriers to implementing healthier behaviors.

CHOICE OF GLUCOSE-LOWERING MEDICATION

Providers should continually update their knowledge on the efficacy and side effects of diabetes pharmacotherapy (see Table 1).

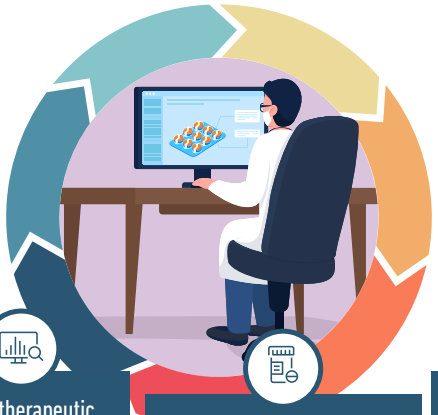
Identify relevant comorbidities (e.g., obesity, CVD, HF, CKD, NAFLD).

Assess the profile of the person with diabetes (e.g., younger age, frailty, limited life expectancy, cognitive impairment, social determinants of health).

Consider risk factors for medication adverse events (e.g., hypoglycemia, volume depletion, genital infections, history of pancreatitis).

Prioritize the use of organ-protective medications (GLP-1 RA, SGLT2i, TZD) in those with cardiorenal disease or NASH or at high risk.

PROACTIVE CARE: AVOIDING INERTIA



Consider initial combination therapy with glucose-lowering agents, especially in those with high HbA_{1c} (i.e., >70mmol/mol [8.5%]) at diagnosis, in younger people with type 2 diabetes (regardless of HbA_{1c}), and in those in whom a stepwise approach would delay access to agents that provide cardiorenal protection beyond their glucose-lowering effects.

Avoid therapeutic inertia and reevaluate health behaviors, individuals' medication-taking behaviors, and side effects of agents at every clinic visit.

When additional glycemic lowering is needed, incorporate, rather than substitute, glucose-lowering therapies with complementary mechanisms of action.

Consider fixed-dose combinations to reduce prescription burden.

Consider de-intensification of therapy, e.g., in frail older adults, in the setting of hypoglycemia-causing medications, and in those with glycemic metrics substantially better than target.

CKD, chronic kidney disease; CVD, cardiovascular disease; DSMES, diabetes self-management education and support; GLP-1 RA, Glucagon-like peptide 1 receptor agonist; HF, heart failure; MNT, medical nutrition therapy; NASH, nonalcoholic steatohepatitis; NAFLD, nonalcoholic fatty liver disease; SGLT2i, sodium-glucose cotransporter 2 inhibitor; TZD, thiazolidinediones.

SUPPLEMENTARY FIGURE 3

PLACE OF INSULIN IN TYPE 2 DIABETES

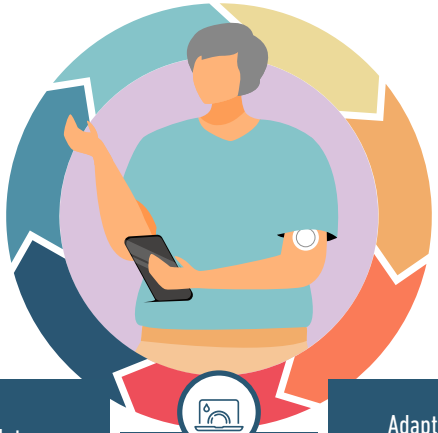
The use of a GLP-1 RA should be considered prior to initiation of insulin.

When initiating insulin, start with a basal insulin and intensify the dose in a timely fashion, titrating to achieve the individualized fasting glycemia target set for every person.

When insulin is initiated, continue organ-protective glucose-lowering medications and metformin.

Refer for DSMES when initiating insulin or advancing to basal-bolus therapy.

PLACE OF TECHNOLOGY



Technology can be useful in people with type 2 diabetes but needs to be part of an holistic plan of care and supported by DSMES.

Consider CGM in people with type 2 diabetes on insulin.

Adapt the clinic/system to optimize effective use of technology among people with type 2 diabetes, particularly to support behavior change through self-monitoring.

WORKING WITHIN THE SYSTEM TO DELIVER IMPROVED CARE

Identify and incorporate continuing education activities on the management of type 2 diabetes for all members of the health care team.

Team-based care is required for integrated care of diabetes; this includes coordination between multiple disciplines (diabetes care and education specialists, dietitians, psychologists, etc.) and often other medical specialties (primary care, endocrinology, ophthalmology, nephrology, etc.)

Management of type 2 diabetes requires continuous quality improvement interventions tailored to the local setting.

CGM, continuous glucose monitoring; DSMES, diabetes self-management education and support; GLP-1 RA, glucagon-like peptide 1 receptor agonist.