



Streamlining Patient Care: Patient flow through a Diabetes Center

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Speaker:

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- Has disclosed that he serves on the Speaker's bureau and receives consulting fees and honoraria from Lilly, Novo Nordisk, MSD, AstraZeneca, J&J and Servier
- Will not be discussing the off-label or investigational use of products



The Strategy and Structure

- Define the vision and mission
- Understanding scope of the problem
- Organizing the setup:
 - Planning the Site
 - Determination of access
 - Equipment and supplies
 - Human resources
- Operating Policies and Procedures
- IT Systems
- Implementation Schedule

Scope Of The Problem

- National Statistics
- Regional Statistics
- Catchment Area
- Currently known Diabetic patients under care
- Any existing Registry
- Expected volumes

Site Planning

- Location
- Public Transport, Parking
- Easy access to patients with disabilities
- Compliant with local regulations
- Patient Flow Pattern Analysis
- Patient Privacy and Comfort

Access To The Clinic(s)

- Open Access
- Limited Access based on
 - Cash paying only
 - Employees of Certain Organizations
 - Members of a Certain Insurance Company
 - Certain catchment area
- Referral Criteria: A1C, Complications, Type 1 Diabetes, Pregnancy, Insulin/Other Injection Starts, Age
- Who is the Gatekeeper/referring entity?
- Discharge Criteria & Related Problems: Level of Care, Access to Medications/Strips Etc;

Equipment and Supplies

- Assessment Room
- Exam Room
- Nurse Office
- Dietitian Office
- Retinal Camera
- Podiatry Suite
- Consumables
- General Office Equipment and Supplies

Human Resources

- Staffing Model
- Team Approach
- Establishment of Qualifications
- Ability to speak the local language/dialect for Educators
- Job Descriptions
- In House Training and Orientation
- HR rules in line with the law
- Objective Performance Evaluation
- Career Path to be clearly identified
- Retention Measures need to be in place

Policies and Procedures

- Comprehensive Operations Manual with detailed Policies and Procedures which should be the same or in-line with the local laws and regulations
- Organizational Chart with a clear line of reporting
- Clinical Policies and Procedures need to be revised annually or earlier as required
- Effort should be made to ensure that these are compatible with International Standards such as JCI, in case an Accreditation is desired later

IT Systems

- Goal: Fully Integrated, Paperless, Electronic Health Records
- Compatible with existing IT Network, if applicable
- Front End features
- Back End features
- Security

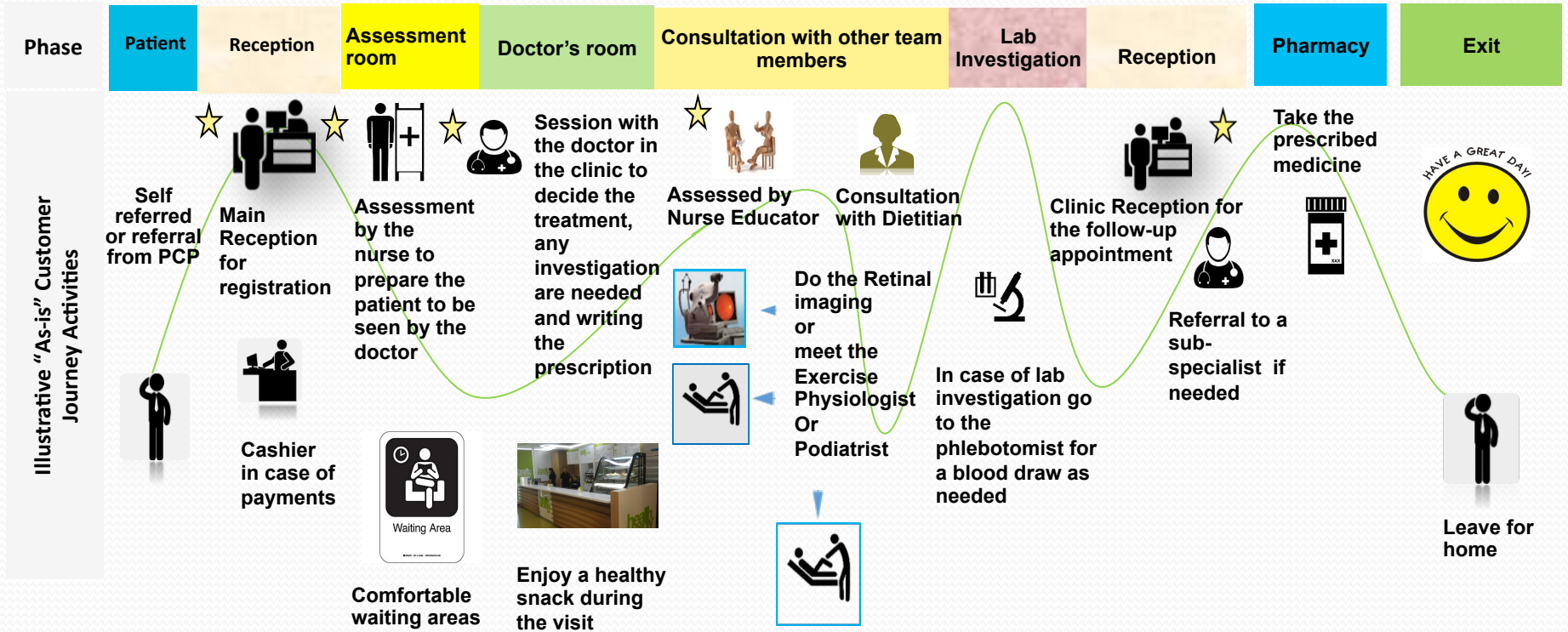
Implementation Process

- Each item should be clearly defined
- A time frame should be established
- Responsible party to be identified for each item
- Required resources should be provided
- A regular meeting schedule to follow the progress with record of the minutes
- Soft Opening
- Grand Opening

Essential steps

- Plan out the Patient Journey
- Seamless team approach
- IT features
- Reception
- Assessment Room
- Role of Patient Care Techs
- Flexible models
- Specialized Sub-Clinics
- Group Classes
- Regular Team Meetings

Patient Journey



★ Components of a usual follow up visit

Team Approach

- Team approach is the proven cornerstone of effective long-term Diabetes management.
- The “core team” comprises of the Physician, Nurse and the Dietitian Educator(s).
- Other members include the Podiatrist, Exercise Physiologist, Mental Health Counselor as well as the Retinal Camera Operator.
- Continuity of Care should be ensured as long as possible.

IT Features

- Electronic Health Records should include:
 - Appointments,
 - Demographic Data
 - Consents
 - Assessment Room Data
 - Physician and other Provider notes
 - Lab Ordering and Data Storage & Retrieval
 - E-Prescription, Clinical Flow Chart including Vital data
 - Medication names and Dosage changes
 - Ability to Analyze data
 - Confidentiality
 - Firewall Security, etc.....

Reception

- Welcoming and pleasant interaction
- Eligibility and Appointment verification
- Consent (preferably electronic)
- Brief overview of the scheduled visit
- Comfortable separate waiting areas
- Patient Educational material
- Media Resources
- Aim: Keep the waiting time to a minimal

Assessment Room

- Vital Signs
- Height
- Weight
- BMI
- Waist to Hip Ratio
- Finger stick glucose & ketones (if indicated)
- HbA₁C
- Microalbumin to Creatinine Ratio
- Other POC Labs, if required

Patient Care Technicians

- Patient Care Technicians play a key role in ensuring a smooth Clinic flow.
- From working in the Assessment Rooms to serving as Translators, they can be critical in making the Clinic experience unique particularly in the Public sector.
- Economic considerations definitely need to be kept in mind.

Specialized Sub Clinics

- Pediatric Endocrinology
- Insulin pump
- Gestational Diabetes
- Pre-Diabetes
- Part-Time sub- Specialty Clinics in Nephrology, Neurology and Cardiology etc. can be initiated later for more comprehensive care
- Retina Clinic including Fundus Fluorescein Angiography (FFA) and Laser facilities
- Gymnasium/pool

Group Classes

- A very cost effective as well as time efficient way of imparting Diabetes Education, especially for people with type 2 Diabetes
- A well established Curriculum is already available that can be tailored for the Local requirements.
- Cultural norms have to be kept in mind prior to initiating these Classes.

Regular Team Meetings

- Each Team Member brings a unique perspective and valuable suggestions to streamline the workflow within the Center.
- Staff Appreciation and Encouragement to share Ideas should be supported.
- This Sense of Ownership goes a long way towards extending a level of Patient Care that one can be rightfully proud of.

Connecting the Center with the Current Health Care System

- Designing a compatible System with a seamless Interface
- Lab, Pharmacy, Demographic and Appointment System unification
- Electronic Referrals from PCPs
- Ophthalmology interaction
- Ability to obtain subspecialty Consultations
- Bilateral availability of Records

Policies & Procedures of Referral to the Diabetes Center

- The role of a Diabetes Center in any given organization needs to be carefully defined given their internal needs.
- The mode and criteria for referral to the Center needs to be clear to both the patients as well as the providers.
- In addition to the criteria for referral, there should also be criteria for discharge.
- A comprehensive but easy to understand Consent Form should be signed by each patient.

Guidelines for referral to a Diabetes Center

Most people with diabetes receive their medical care from general physicians, including family physicians and internists. Some receive from other specialists such as cardiologists and nephrologists. These referral guidelines are intended to serve as voluntary practice parameters to assist physicians in determining when to refer their patients to a Diabetes Center. It is important to note that the clinical judgment of the referring physician is the most critical factor in making such a decision regardless of these clinical guidelines.

Priority	Criteria	Examples (not an exhaustive list)	Referral Action
IMMEDIATE	Serious metabolic derangement or diabetes complication that requires an immediate hospitalization.	<ul style="list-style-type: none"> • Newly diagnosed Type 1 with ketoacidosis. • Decompensated Type 1 or Type 2 diabetes with strongly positive urinary ketones present, dehydration or vomiting. • Acutely decompensated Type 1 • Foot ulcer with infection 	<ul style="list-style-type: none"> • Send patient to the nearest Accident/ Emergency Dept.
URGENT (likely to receive an appointment within 1 week)	Metabolic deterioration or complication that can be expected to deteriorate rapidly if not attended to.	<ul style="list-style-type: none"> • Marked or symptomatic hyperglycemia not responding to current therapy (i.e. BGL consistently >300mg/dl) • Newly diagnosed diabetes with blood glucose levels >300 mg/d • Recurrent severe hypoglycemia • Acute foot ulceration without active infection • Diabetes in pregnancy 	<ul style="list-style-type: none"> • Obtain an appointment with the Diabetes Specialist/ Consultant. • Ensure patient is aware of time and date of the appointment
SOON (likely to receive an appointment within 1-2 weeks)	Diabetes symptoms or complications severely impairing daily functioning or likely to rapidly lead to irreversible deterioration in health	<ul style="list-style-type: none"> • Marked or symptomatic hyperglycemia not responding to current therapy (i.e. BGL consistently >250mg/dl) • Mild hypoglycemia • Uncontrolled Diabetes with painful neuropathy • Nephropathy with deteriorating renal function • Poorly controlled hypertension • Deteriorating retinopathy • Preconception planning 	<ul style="list-style-type: none"> • Fax relevant information to the Specialist/ Consultant.

Priority	Criteria	Examples (not an exhaustive list)	Referral Action
<p>INTERMEDIATE (likely to receive an appointment within 2-4 weeks)</p>	<p>At higher risk of diabetes complications or suffering from a relatively stable chronic complication</p>	<ul style="list-style-type: none"> • Newly diagnosed Type 2 diabetes without marked or symptomatic hyperglycemia • Previously diagnosed Type 1 or Type 2 diabetes with sub-optimal diabetes control (HbA_{1c}>7.0% at least twice over the past 4-6 months) • Diabetic nephropathy or micro-albuminuria • Peripheral neuropathy or peripheral vascular disease • Refractory hypertension • Dyslipidemia 	<p>Obtain an appointment with a Diabetes Specialist/ consultant</p> <ul style="list-style-type: none"> • Ensure patient is aware of time and date of appointment.
<p>NON-URGENT</p>	<ul style="list-style-type: none"> • At low risk of rapidly progressive complications of diabetes • Low risk of diabetes complications or less likely to benefit from early specialist review 	<ul style="list-style-type: none"> • Well-controlled Type 1 diabetes known to be without current complications • Known Type 2 diabetes with good control and without complications • Known Type 2 diabetes with chronic and stable complications 	<ul style="list-style-type: none"> • Obtain an appointment with a Diabetes Specialist/ consultant • Ensure patient is aware of time and date of appointment. • Consider periodic review at the Diabetes Center

Management of Type 1 DM in Diabetes Centers: Insulin pumps, CGMS and the team

- Insulin pumps: Patient identification, acceptance by the patient, carb counting skills, correct pump selection and training, entire team support, peer interaction.
- CGMS: Indications, training, data analysis, therapeutic changes.
- Team approach in diabetes: The cornerstone of diabetes management. Includes the Physician, Nurse educator, Dietitian, Mental Health Counselor, Exercise Physiologist, Sub-specialists, Pharmacists, Family, Friends and Colleagues

Role of the Psychologist in management of diabetes

- One of the most overlooked aspects of diabetes management
- The mental health issues range from denial to eating disorders to depression
- Adolescents usually require a lot of attention
- Patients are usually reluctant due to the perceived stigma associated with mental disease which is a major barrier
- Screening tools are generally helpful

Problem Areas In Diabetes (PAID) Questionnaire

INSTRUCTIONS: Which of the following diabetes issues are currently a problem for you?
 Circle the number that gives the best answer for you. Please provide an answer for each question.

	Not a problem	Minor problem	Moderate problem	Somewhat serious problem	Serious problem
	0	1	2	3	4
1. Not having clear and concrete goals for your diabetes care?	0	1	2	3	4
2. Feeling discouraged with your diabetes treatment plan?	0	1	2	3	4
3. Feeling scared when you think about living with diabetes?	0	1	2	3	4
4. Uncomfortable social situations related to your diabetes care (e.g., people telling you what to eat)?	0	1	2	3	4
5. Feelings of deprivation regarding food and meals?	0	1	2	3	4
6. Feeling depressed when you think about living with diabetes?	0	1	2	3	4
7. Not knowing if your mood or feelings are related to your diabetes?	0	1	2	3	4
8. Feeling overwhelmed by your diabetes?	0	1	2	3	4
9. Worrying about low blood sugar reactions?	0	1	2	3	4
10. Feeling angry when you think about living with diabetes?	0	1	2	3	4
11. Feeling constantly concerned about food and eating?	0	1	2	3	4
12. Worrying about the future and the possibility of serious complications?	0	1	2	3	4
13. Feelings of guilt or anxiety when you get off track with your diabetes management?	0	1	2	3	4
14. Not "accepting" your diabetes?	0	1	2	3	4
15. Feeling unsatisfied with your diabetes physician?	0	1	2	3	4
16. Feeling that diabetes is taking up too much of your mental and physical energy every day?	0	1	2	3	4
17. Feeling alone with your diabetes?	0	1	2	3	4
18. Feeling that your friends and family are not supportive of your diabetes management efforts?	0	1	2	3	4
19. Coping with complications of diabetes?	0	1	2	3	4
20. Feeling "burned out" by the constant effort needed to manage diabetes?	0	1	2	3	4

Role of the Psychologist in management of diabetes

- Problem Areas in Diabetes (PAID) scores are calculated using a five-point Likert-scale with options ranging from "0-not a problem" to "4-serious problem". Summing all item scores and multiplying by 1.25 resulted in an overall PAID score. A minimum score of 0 indicated no diabetes-related distress. A maximum score of 100 indicated significant diabetes-related distress
- Generally a cut-off of 40 is used. Any one scoring above 40 would be referred to the Psychologist.
- It is very important to have the Psychologist speak the same language as the patient in our experience.

Managing diabetes related emergencies in the Diabetes center

- 1- Define Diabetes Emergencies: DKA, HHNK, Hypoglycemia, Cardiovascular, Neurologic, Renal, and visual etc;
- 2- Requirements in terms of trained personnel, equipment, diagnostic labs, supplies and other resources.
- 3- Is it cost-effective?
- 4- Facilities to hold the patients for a long term
- 5- Referral guidelines as well as a practical transfer mechanism to a corresponding acute care facility

Endocrinology Clinic

- Most Endocrinologists prefer to practice the entire range of their chosen specialty.
- The support staff of an established Diabetes Center usually has a tough time to convert to an Endocrinology practice if not trained from the start.
- Additional equipment (e.g. an Ultrasound) as well as supplies (e.g. FNAB) are required.
- If within an organization, processes should be in place prior to start for referral to concerned Departments such as Radiology, Lab, Pathology, Endocrine Surgery and Nuclear Medicine etc.
- Facility for endocrine tests should also be available.

Patient and staff satisfaction

- Patient and Staff Feedback
- Dedicated customer service process
- 24 hour helpline (if possible)
- Patient encouragement and reward programs
- Staff Recognition and awards
- Flexible staff working hours (if possible)

Ongoing Measures

- Identification and Follow Up of Key Performance Indicators (KPIs), both Clinical and Administrative
- Continuous Quality Improvement Process (CQIP)
- Non-Punitive In House Objective Audit
- Consider comparative Third Party Evaluation on a monthly basis covering both the KPIs

Flexible Model

- One size does not fit all.
- Based on requirements of an individual Center, different models can be utilized.
- However, this should not be done at the expense of the team approach.
- The time duration can be adjusted as well as other time utilization techniques such as pairing can be implemented.

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for your attention**

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