



# Standards of services and quality measures in diabetes centres and units



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# Introduction



- Diabetes is a major health issue in the Kingdom of Saudi Arabia affecting about three million citizens and residents. The economic burden of diabetes care is huge, estimated to be around 10 billion SAR, and is increasing with time. Although, hyperglycaemia and cardiovascular complications management has improved over the past few years, diabetes-related complications are still a major cause of morbidities and mortalities. Different governmental and non-governmental organizations are helping to provide diabetes care with different standard used. In the KSA, unfortunately there has not been a clear standards of diabetes care approved by an accreditation body. Each health sector is providing the service either with different quality assurance measures or in extreme cases without.
- Lot of gaps in DM care can be identified within the Saudi health care system, first the deficiency of national governance of diabetes care, lack of standards of services provided for DM subjects, lack of standardized quality measures for diabetes care, scattered efforts by different care providing organizations and clear deficiencies in the statistics and data analysis. Therefore, the national diabetes centre has started several actions to fulfil these gaps. Of these, to set standards for diabetes units and centres that should provide the minimal requirement to provide a good care for diabetes patients including the requirements that should be provided at different levels of health care; primary, secondary and tertiary, which we believe is going to improve the diabetes-related health care. The standards have included items about the structure of the diabetes care units, facilities that should be available and the needed staff with essential qualification. Furthermore, the standards have included the needed tools to diagnose diabetes related complications trying to early diagnose and treat them.



## Cont. Introduction

- Also, in this document SDNC is providing quality standards that should evaluate at least partially the existing services. Quality measures in diabetes care is an evolving and important service that should be available in each diabetes care unit. This will allow monitoring the quality of glycemia control, adherence to screening for complications and also will lead to introducing improvement projects that will help to advance the service. The key improvement indicators (KPIs) set in this document were derived from both national and international benchmarks reviewed and modified to suit the current service.
- These standards were written after several meetings of experts in diabetes field and then was reviewed and approved by the SDNC scientific committee where the members are representing all main health providers in the KSA. Finally, the SNDC will work closely with the representing members to ensure the proper implementation of these standards and to provide the centre with the outcome to help in planning the future services and utilizing the resources in a better way.

# Definitions



- **Diabetes mellitus:** a metabolic disorder characterized by persistent hyperglycemia either due to insulin resistance or deficiency in insulin secretion or both.
- **Prediabetes:** is a state of impaired blood sugar readings not reaching the criteria of DM diagnosis usually manifested as impaired fasting glucose (IFG), impaired glucose tolerance (IGT) or when glycated hemoglobin (HbA1c) of 5.7-6.4%. The individuals with such values are at high risk of developing DM.
- **Primary health care:** is the area where basic curative care takes place, including simple diagnosis and treatment, provided at the entry into the health care system. In this context it is referred to the primary health care centers, primary care clinics in the hospitals or the special clinics run by at least a general practitioner.
- **Secondary health care:** consists of specialized care requiring more sophisticated and complicated diagnosis and treatment than is provided at the primary health care level. In this document, it is referred to the DM service that is provided at the level of general hospitals by physicians qualified in internal medicine, diabetes or endocrinology.
- **Tertiary health care:** referred to highly specialized diagnostic and therapeutic services which can usually only be provided in centers specifically designed, staffed and equipped for this purpose. In this work, it is referred to advanced diabetes care that can only be handled by specialized endocrinologists/diabetologists.



## Cont. Definitions

- **Physical examination clinic:** referred to the doctor's office that is equipped to provide a private history taking and physical examination taking into consideration the national standards of such clinics.
- **Health coach:** a health care provider that have a special training to provide counseling about healthy life style, diabetes related advices and basic nutritional recommendations. here its referred to the trained health care worker who can replace the health educator, nutritionist and coordinators if not available at the primary health care centers.
- **Retinal funduscopy camera:** a digital camera used to take photos of the retina and draw a topographic picture of all areas of the eye fundus. Usually operated by an optometrist or ophthalmology technician however the new generations are easier to operate and can be handled by a trained health care worker.



**Following standards for primary ,secondary and tertiary health care are the minimum requirement in regards of diabetes care .**



## Standards for Primary health care

Structure	Staff	Qualification and specialties	Equipment
<ul style="list-style-type: none"> <li>Physical examination clinic.</li> </ul>	<ul style="list-style-type: none"> <li>Physician Family Medicine/ Internal Medicine /GM</li> </ul>	<ul style="list-style-type: none"> <li>General practitioner/MPSS/internal medicine board.</li> </ul>	<ul style="list-style-type: none"> <li>Fundus camera.</li> <li>Glucometer.</li> <li>Laboratory service.</li> <li>Pharmacy service.</li> <li>Diabetic foot assessment kit or at least monofilament assessment kit</li> </ul>
<ul style="list-style-type: none"> <li>Health educator clinic</li> </ul>	<ul style="list-style-type: none"> <li>Health educator specialist /Health couch.</li> </ul>	<ul style="list-style-type: none"> <li>Bachelor in health education from medical science applied college.</li> </ul>	
<ul style="list-style-type: none"> <li>Clinical dietician clinic</li> </ul>	<ul style="list-style-type: none"> <li>Clinical dietician specialist / Health couch.</li> </ul>	<ul style="list-style-type: none"> <li>Bachelor in Clinical dietitian from medical science applied college.</li> </ul>	
<ul style="list-style-type: none"> <li>Nursing</li> </ul>	<ul style="list-style-type: none"> <li>Nurse</li> </ul>	<ul style="list-style-type: none"> <li>Diploma. / bachelor</li> </ul>	
<ul style="list-style-type: none"> <li>Retinal fundoscopy camera.</li> </ul>	<ul style="list-style-type: none"> <li>Ophthalmology technician /Optometrists /Trained Nurse.</li> </ul>	<ul style="list-style-type: none"> <li>Bachelor / Diploma.</li> </ul>	
<ul style="list-style-type: none"> <li>Laboratory service.</li> </ul>	<ul style="list-style-type: none"> <li>Lab technician / Trained Nurse.</li> </ul>	<ul style="list-style-type: none"> <li>Diploma.</li> </ul>	
<ul style="list-style-type: none"> <li>Pharmacy</li> </ul>	<ul style="list-style-type: none"> <li>Pharmacist</li> </ul>	<ul style="list-style-type: none"> <li>Bachelor pharmacy.</li> </ul>	



## Standards for secondary health care

Structure	Staff	Qualification and specialties	Equipment
• Physical examination clinic.	• Endocrinologist/ diabetologist	• Bachelor in medicine + Saudi board in the specialty or equivalent.	<ul style="list-style-type: none"> <li>• Fundus camera.</li> <li>• Glucometer.</li> <li>• Full Laboratory service.</li> <li>• Pharmacy service</li> <li>• Diabetic foot assessment kit</li> </ul>
• Health educator clinic	• Health educator specialist	• Bachelor in health education + diabetic educator course or equivalent.	
• Clinical dietician clinic	• Clinical dietician specialist.	• Bachelor Clinical dietitian + diabetic course or equivalent.	
• Foot care clinic	• Foot care specialist / Nurse.	• Bachelor of nursing + qualification of diabetes foot care.	
• Ophthalmology clinic	• Ophthalmologist specialist.	• Saudi board in the specialty or equivalent.	
• Laboratory service.	• Qualified specialist + Lab technician	• Lab personal acquiring to CAP / CBAHI acquirement.	
• Pharmacy	• Pharmacist	• Bachelor pharmacy	
• Reception	• Coordinator	• High diploma in secretary bilingual.	
• Social service clinic	• social worker specialist	• Bachelor in social science	
• Accessible services	<ul style="list-style-type: none"> <li>• Psychology.</li> <li>• Nephrology</li> <li>• Cardiology</li> <li>• Neurology</li> </ul>	• Bachelor in medicine + Saudi board in the specialty or equivalent.	



## Standards for tertiary health care

### Structure

### Staff

### Qualification and specialties

### Equipment

Same as Secondary health care service plus			<ul style="list-style-type: none"> <li>• Fundus camera</li> <li>• Glucometer.</li> <li>• Full Laboratory service.</li> <li>• Pharmacy service</li> <li>• Dental health service.</li> <li>• Insulin pump service.</li> </ul>
• Physical examination clinic.	• Endocrinologist/ diabetologist	• Bachelor in medicine + Saudi board in the specialty or equivalent.	
<u>Advance diabetes service:</u> • Psychiatry clinic.	• Psychiatrist/Farm D	• Saudi board in the specialty or equivalent.	
• Nephropathy clinic	• Nephrologist	• Bachelor in medicine + Saudi board in specialty or equivalent.	
• Cardiovascular clinic.	• Cardiologist		
• Neurology clinic.	• Neurologist		
• Retinopathy clinic.	• Ophthalmologist		
• Foot care clinic.	• Podiatrist / other related specialty.	• Medical Bachelor in the specialty.	
• Dental service.+ Oral hygiene clinic	• Dentists. + Dental hygienist	• Bachelor in dentist Medical + Saudi board. +Dental hygienist degree.	
• Social service clinic	• social worker specialist	• Bachelor in social science.	
• Insulin Pump service	• Endocrinologist/ diabetologist	• Bachelor in medicine + Saudi board in Enocrinology/ diabatology or equivalent.	
	• Diabetic educator specialist	• Bachelor in health education + diabetic course or equivalent.	
	• Clinical dietician specialist.	• Bachelor Clinical dietician + diabetic course or equivalent.	



## Quality measures in diabetes

- Quality measures have been used to improve diabetes care for long time worldwide. In fact, in KSA only few centers have been using quality measures and improvement projects. Therefore, SNDC is providing in the following materials the most important quality measures been used in diabetes management. The measures have been adapted from both national and international sources e.g. ADA. The numbers have been adapted to suit the current medical services provided by diabetes centers and units around the kingdom. The aim of these measures are: first, to standardize diabetes-related quality work. Second, to familiarize diabetes health care workers with the importance of applying quality assurance. Third, to formulate and spread diabetes care improvement projects. Fourth, to enable decision makers to know areas of weakness in diabetes management. These measures are going to be distributed to the diabetes centers and units will be monitored by SNDC and the results of these measures are going to be analyzed at a national level. The measures are including KPIs of items directly related to glycemia management such as HbA1c and complications e.g. retinopathy and nephropathy. Applying quality measures is going to improve diabetes care and makes tracking the diabetes related complications easier and feasible.



## Diabetes clinic Key Performance Indecators

Quality measure	ADA requirement	Local benchmark
Target for patient with Diabetes (HbA1c<9%) **	>79%	>60%
Percentage of patients received A1c test in the past 6 months	>93%	>70%
Percentage of patients who had the lipid profile tested in a year time	>80%	>80%
Percentage of diabetes patients who had retinopathy screening *	>61%	>60%
Percentage of new diabetes subjects referred for diabetes education within ( $\leq$ ) 8 weeks from first visit	>70%	>70%
Percentage of DM patients tested for microalbuminuria testing within 12 months	>73%	>70%
Percentage of patients received visual foot exam or monofilament testing	>80%	>80%
the percentage of DM patients with LDL-C < 3.36 mmol/L	>63%	>63%
Percentage of DM subjects with BP <140/80 mm Hg	>50%	>50%

### Assessment

This should be achieved within 5 years, after 1year, we are going to reassess benchmark locally and international and then you put a plan to reach ADA target

- \* Although ADA recommend dilated eye exam but due to deficiency in personal providing the service, we would indorse person with fundus camera service initially instead of dilated eye exam
- \*\* KPI well be 60% first year and then 5% annually increas



## Appendix

### Key Performance Indicators s Definition Sheets

<b>Name of Measure</b>		Percentage of patients with Diabetes with (HbA1c < 9%)
<b>Definition</b>		
<b>Rationale for Measure</b>		Glycemic control for patients with Diabetes (HbA1c <9%)
<b>Sample Criteria &amp; Formula</b>	<b>Numerator</b>	All diabetes patients in DM Clinics
	<b>Numerator exclusion</b>	First Visit
	<b>Inclusions to the population:</b>	All patients with diabetes aged >1 8
	<b>Denominator</b>	All diabetes patient of followed in the diabetes Clinics.
	<b>Denominator Exclusion Criteria</b>	First Visit
	<b>Inclusions to the population:</b>	Diabetes subjects
	<b>Calculation</b>	(Diabetes patients with HBA1c <9 / All diabetes patients)*100
	<b>Patient setting</b>	Outpatients Clinics
<b>Measure Time Perspective</b>	<input type="checkbox"/> concurrent <input type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input type="checkbox"/> Others	
<b>Frequency of Data Collection</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Others 6 month	
<b>Data input Person name</b>	<input type="checkbox"/> EXT <input type="checkbox"/> MOBILE <input type="checkbox"/> Email	
<b>Original source of Data (Data Location)</b>		
<b>Responsible unit/hospital/center</b>	Sample size	
<b>Data validation by</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Random	
<b>Target (SNDC)</b>	60% less than 9 every year we aim 5% more	
<b>Benchmark</b>	Increase the control to 5% (HBA1c <9) each year	Source
<div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">Prepared By:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Reviewed by:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Approved by: (head of the center/unit)</div> </div>		



<b>Name of Measure</b>		Percentage of patients who received an HbA1c test in last 6 months
<b>Definition</b>		Testing HbA1c using the standard assays which be done annually
<b>Rationale for Measure</b>		To estimate the patients who had A1c testing
<b>Sample Criteria &amp; Formula</b>	<b>Numerator</b>	Number of patients who had the test
	<b>Numerator exclusion</b>	
	<b>Inclusions to the population:</b>	All DM subjects
	<b>Denominator</b>	
	<b>Denominator Exclusion Criteria</b>	
	<b>Inclusions to the population:</b>	
	<b>Calculation</b>	(Diabetes active patients who had the test done / All diabetes patients) *100
	<b>Patient setting</b>	Outpatients Clinics
<b>Measure Time Perspective</b>	<input type="checkbox"/> concurrent <input checked="" type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input type="checkbox"/> Others	
<b>Frequency of Data Collection</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Others 6 month	
<b>Data input Person name</b>	<input type="checkbox"/> EXT <input checked="" type="checkbox"/> MOBILE <input type="checkbox"/> Email	
<b>Original source of Data (Data Location)</b>	Centre/unit data	
<b>Responsible unit/hospital/center</b>	Sample size	
<b>Data validation by</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Random	
<b>Target (SNDC)</b>	>70%	
<b>Benchmark</b>	>93% of the patients	<input checked="" type="checkbox"/> Source Joslin Diabetes Center, ADA
<div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">Prepared By:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Reviewed by:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Approved by: (head of the center/unit)</div> </div>		



<b>Name of Measure</b>		Percentage of patients who had the lipid profile tested in a year time
<b>Definition</b>		
<b>Rationale for Measure</b>		To measure lipids screening (Total cholesterol, LDL, HDL, Triglyceride)
<b>Sample Criteria &amp; Formula</b>	<b>Numerator</b>	Number DM subjects who had lipid testing in a year time
	<b>Numerator exclusion</b>	
	<b>Inclusions to the population:</b>	All DM subjects who had lipid testing
	<b>Denominator</b>	All DM subjects
	<b>Denominator Exclusion Criteria</b>	
	<b>Inclusions to the population:</b>	
	<b>Calculation</b>	$(\text{No. of Diabetes patients who had lipid test} / \text{All diabetes patients}) * 100$
	<b>Patient setting</b>	Outpatients Clinics
<b>Measure Time Perspective</b>	<input type="checkbox"/> concurrent <input type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input checked="" type="checkbox"/> Others <input type="text" value="Annually"/>	
<b>Frequency of Data Collection</b>	<input type="checkbox"/> Daily <input checked="" type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Others <input type="text" value="Quarterly"/>	
<b>Data input Person name</b>	<input checked="" type="checkbox"/> EXT <input type="checkbox"/> MOBILE <input type="checkbox"/> Email	
<b>Original source of Data (Data Location)</b>	Diabetes centre/unit data	
<b>Responsible unit/hospital/center</b>	<input type="text"/> <input checked="" type="checkbox"/> Sample size	
<b>Data validation by</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Random <input type="text"/>	
<b>Target (SNDC)</b>	>80%	
<b>Benchmark</b>	>80% of the DM subjects	<input checked="" type="checkbox"/> Source <input type="text" value="Joslin Diabetes center ,ADA"/>
<div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">Prepared By:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Reviewed by:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Approved by: (head of the center/unit)</div> </div>		



<b>Name of Measure</b>	<b>Percentage of diabetes patients who had retinopathy screening</b>	
<b>Definition</b>	Increasing number of patients with diabetes who are screened for retinopathy	
<b>Rationale for Measure</b>	Early detection of diabetic retinopathy to prevent complications. Also, to provide an indicator of medical performance for patient safety, as it has a great impact on the patient's medical condition	
<b>Sample Criteria &amp; Formula</b>	<b>Numerator</b>	Total number of DM patients who received retinopathy screening
	<b>Numerator exclusion</b>	First Visit No show patients, follow up diabetic patients, type 1 diabetic patients with diabetes duration less than 5 years and if the patients already follow up with ophthalmologist
	<b>Inclusions to the population:</b>	All Adult DM Patients
	<b>Denominator</b>	
	<b>Denominator Exclusion Criteria</b>	No show patients, follow up diabetic patients, type 1 diabetic patients with diabetes duration less than 5 years and if the patients already follow up with ophthalmologist
	<b>Inclusions to the population:</b>	All Adult DM Patients
	<b>Calculation</b>	$(\text{No of screened patients in last year} / \text{All patients}) * 100$
	<b>Patient setting</b>	DM Clinics
<b>Measure Time Perspective</b>	<input type="checkbox"/> concurrent <input type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input type="checkbox"/> Others <input type="text"/>	
<b>Frequency of Data Collection</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Others <input type="text"/> Annually	
<b>Data input Person name</b>	<input type="checkbox"/> EXT <input type="checkbox"/> MOBILE <input type="checkbox"/> Email	
<b>Original source of Data (Data Location)</b>	DM centre/unit data	
<b>Responsible unit/hospital/center</b>	Sample size	
<b>Data validation by</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Random <input type="text"/>	
<b>Target (SNDC)</b>	>60% this number should be improve every year .	
<b>Benchmark</b>	>61%	Source <input type="text"/> Joslin Diabetes Center, ADA
<div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">Prepared By:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Reviewed by:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Approved by: (head of the center/unit)</div> </div>		



<b>Name of Measure</b>		<b>Percentage of DM subjects with BP &lt;140/80 mm Hg</b>
<b>Definition</b>		the percentage of patient living with diabetes who have BP at target <140/80
<b>Rationale for Measure</b>		Achieving good control of BP in patient living with diabetes
<b>Sample Criteria &amp; Formula</b>	<b>Numerator</b>	Total number of DM patients visiting the DM <b>clinic with BP &lt;140/80</b>
	<b>Numerator exclusion</b>	DM with secondary hypertension. Non diabetic patients and DM patients with no BP reading recorded
	<b>Inclusions to the population:</b>	DM patients with primary hypertension visiting DM clinic
	<b>Denominator</b>	Total number of DM patients visiting the OEMC DM clinic with measured BP reading
	<b>Denominator Exclusion Criteria</b>	DM with secondary hypertension. Non diabetic patients and DM patients with no BP reading recorded
	<b>Inclusions to the population:</b>	DM patients with primary hypertension visiting DM clinic
	<b>Calculation</b>	No of patient <b>with BP &lt;140/80 mm Hg</b> /all patient x 100
	<b>Patient setting</b>	DM clinics
<b>Measure Time Perspective</b>	<input type="checkbox"/> concurrent <input type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input type="checkbox"/> Others	
<b>Frequency of Data Collection</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Others	
<b>Data input Person name</b>	<input type="checkbox"/> EXT <input type="checkbox"/> MOBILE <input type="checkbox"/> Email	
<b>Original source of Data (Data Location)</b>		
<b>Responsible unit/hospital/center</b>	Sample size	
<b>Data validation by</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Random	
<b>Target (SNDC)</b>	>50%	
<b>Benchmark</b>	>50%	Source: Joslin Diabetes Center, ADA
<b>Prepared By:</b>	<b>Reviewed by:</b>	<b>Approved by:</b> (head of the center/unit)



<b>Name of Measure</b>		<b>the percentage of DM patients with LDL-C &lt; 3.36 mmol/L</b>
<b>Definition</b>		Improving the percentage of low-density lipoproteins to be < 3.36 mmol/L
<b>Rationale for Measure</b>		All patient with diabetes more than 40 years old must be on statin medication and that will reflected the LDL level.
<b>Sample Criteria &amp; Formula</b>	<b>Numerator</b>	Number of patients with diabetes in DM clinics who have LDL-C test <b>less than 3.36 mmol/l (130 mg/dl)</b>
	<b>Numerator exclusion</b>	
	<b>Inclusions to the population:</b>	All Adult patients with Diabetes
	<b>Denominator</b>	all patients with diabetes in DM who have LDL-C test
	<b>Denominator Exclusion Criteria</b>	First Visit
	<b>Inclusions to the population:</b>	All Adult patients with Diabetes
	<b>Calculation</b>	( No of patient with LDL-C < ٣,٣٦ mmol/L / all patient ) * 100
	<b>Patient setting</b>	DM clinics
<b>Measure Time Perspective</b>	<input type="checkbox"/> concurrent <input type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input type="checkbox"/> Others	
<b>Frequency of Data Collection</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Others <input type="text" value="6 month"/>	
<b>Data input Person name</b>	<input type="checkbox"/> EXT <input type="checkbox"/> MOBILE <input type="checkbox"/> Email	
<b>Original source of Data (Data Location)</b>		
<b>Responsible unit/hospital/center</b>	<input type="text" value="Sample size"/>	
<b>Data validation by</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Random <input type="text"/>	
<b>Target (SNDC)</b>	>63%	
<b>Benchmark</b>	>63%	<input type="text" value="Source"/> <input type="text" value="ADA"/>
<div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">Prepared By:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Reviewed by:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Approved by: (head of the center/unit)</div> </div>		



<b>Name of Measure</b>	<b>Percentage of patients received annual visual foot exam</b>							
<b>Definition</b>	Improving the percentage of foot examination to prevent any significant lower extremity complications of diabetes							
<b>Rationale for Measure</b>	Foot screening is an important part of diabetic care as it prevents significant morbidity, loss of function and mortality from diabetic foot complications. However, foot screening is often neglected.							
<b>Sample Criteria &amp; Formula</b>	<b>Numerator</b>	Number of patients with diabetes who received a visual foot exam						
	<b>Numerator exclusion</b>							
	<b>Inclusions to the population:</b>							
	<b>Denominator</b>	All T2DM subjects OR T1DM more than 10 years						
	<b>Denominator Exclusion Criteria</b>							
	<b>Inclusions to the population:</b>	DM patients						
	<b>Calculation</b>	$(\text{No of patient received annual visual foot exam} / \text{all patient}) * 100$						
	<b>Patient setting</b>	DM clinics						
<b>Measure Time Perspective</b>	<input type="checkbox"/> concurrent <input checked="" type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input type="checkbox"/> Others							
<b>Frequency of Data Collection</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Others <input type="text" value="Annually"/>							
<b>Data input Person name</b>	<input checked="" type="checkbox"/> EXT <input checked="" type="checkbox"/> MOBILE <input type="checkbox"/> Email							
<b>Original source of Data (Data Location)</b>								
<b>Responsible unit/hospital/center</b>	<input type="text" value="Sample size"/>							
<b>Data validation by</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Random <input type="text"/>							
<b>Target (SNDC)</b>	>80%							
<b>Benchmark</b>	>80%	<input type="text" value="Source"/> <input type="text" value="Joslin Diabetes Center, ADA"/>						
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<input type="text"/>	<input type="text"/>	<input type="text"/>						



<b>Name of Measure</b>		<b>Percentage of DM patients tested for microalbuminuria testing within 12 months</b>
<b>Definition</b>		Percentage of patients with diabetes who are seen in DM Clinic and screened for urine microalbuminuria annually
<b>Rationale for Measure</b>		microalbuminuria is the earliest clinical sign indicating vascular damage in the kidney, which is reflective of vascular disease throughout the body.
<b>Sample Criteria &amp; Formula</b>	<b>Numerator</b>	No. of patients with diabetes mellitus screened for urine microalbuminuria
	<b>Numerator exclusion</b>	No show patients
	<b>Inclusions to the population:</b>	All DM Patients
	<b>Denominator</b>	Total no. of patients with type 2 diabetes mellitus and T1DM who are eligible for the test
	<b>Denominator Exclusion Criteria</b>	No show patients
	<b>Inclusions to the population:</b>	All DM patients
	<b>Calculation</b>	$(\text{No of patient screened from microalbuminuria} / \text{all patient}) * 100$
	<b>Patient setting</b>	DM clinics
<b>Measure Time Perspective</b>	<input type="checkbox"/> concurrent <input type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input type="checkbox"/> Others	
<b>Frequency of Data Collection</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Others <input type="text" value="6 month"/>	
<b>Data input Person name</b>	<input type="checkbox"/> EXT <input type="checkbox"/> MOBILE <input type="checkbox"/> Email	
<b>Original source of Data (Data Location)</b>		
<b>Responsible unit/hospital/center</b>	<input type="text" value="Sample size"/>	
<b>Data validation by</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Random <input type="text"/>	
<b>Target (SNDC)</b>	<b>&gt;70%</b>	
<b>Benchmark</b>	<b>&gt;73%</b>	<input type="text" value="Source"/> <input type="text" value="Joslin Diabetes Center, ADA"/>
<div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">Prepared By:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Reviewed by:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Approved by: (head of the center/unit)</div> </div>		



<b>Name of Measure</b>	Percentage of new diabetes subjects referred for diabetes education within ( $\leq$ ) 8 weeks from first visit	
<b>Definition</b>	Increasing the number of patients who referred to Health education to improve glycemic control for patients with diabetes	
<b>Rationale for Measure</b>	Health education is an important collaborative service through which people with diabetes gain the knowledge and skills needed to modify their behavior for improving glycemic control	
<b>Sample Criteria &amp; Formula</b>	<b>Numerator</b>	Number of diabetes patients who are referred to Health Education specialist
	<b>Numerator exclusion</b>	
	<b>Inclusions to the population:</b>	
	<b>Denominator</b>	Number of diabetic patients who attend the diabetic clinic
	<b>Denominator Exclusion Criteria</b>	
	<b>Inclusions to the population:</b>	
	<b>Calculation</b>	$(\text{No of diabetes patient who referred to diabetes HE specialist} / \text{all patient}) * 100$
	<b>Patient setting</b>	DM Clinics
<b>Measure Time Perspective</b>	<input type="checkbox"/> concurrent <input type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input type="checkbox"/> Others	
<b>Frequency of Data Collection</b>	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Others <input type="text" value="6 month"/>	
<b>Data input Person name</b>	<input type="checkbox"/> EXT <input type="checkbox"/> MOBILE <input type="checkbox"/> Email	
<b>Original source of Data (Data Location)</b>		
<b>Responsible unit/hospital/center</b>	<input type="text" value="Sample size"/>	
<b>Data validation by</b>	<input checked="" type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Random	
<b>Target (SNDC)</b>	>70%	
<b>Benchmark</b>	>70%	<input type="text" value="Source"/> <input type="text" value="Joslin Diabetes Center, ADA"/>
<div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;">Prepared By:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Reviewed by:</div> <div style="border: 1px solid black; padding: 5px; width: 30%;">Approved by: (head of the center/unit)</div> </div>		



# Standards workbook



# Primary care

## 1-Structure

structure	Met	Not Met	N/A	Partially met	Notes / Actions Required
• Physical examination clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Health educator clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Nursing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Retinal funduscopy camera.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Laboratory service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## Primary care

### 2-Staff available

Staff	Met	Not Met	N/A	Partially met	Notes / Actions Required
• Physician Family Medicine/ Internal Medicine /GM /GPs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Health educator specialist /Health coach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician specialist / Health coach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmology technician /Optometrists /Trained Nurse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Lab technician / Trained Nurse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## Primary care

### 3-Qualifications

Staff	Qualification and specialties	Met	Not Met	N /A	Partially met	Notes / Actions Required
• Physician Family Medicine/ Internal Medicine /GM/GPs	• General practitioner/MPSS/internal medicine board.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Health educator specialist /Health coach.	• Bachelor in health education from medical science applied college.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician specialist / Health coach.	• Bachelor in Clinical dietitian from medical science applied college.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Nurse	• Diploma. / bachelor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmology technician /Optometrists /Trained Nurse.	• Bachelor / Diploma.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Lab technician / Trained Nurse.	• Diploma.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacist	• Bachelor pharmacy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## Primary care

### 4-Equipment

Equipment	Met	Not Met	N /A	Partially met	Notes / Actions Required
• Fundus camera.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Glucometer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Laboratory service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacy service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Diabetic foot assessment kit or at least monofilament assessment kit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## Secondary health care

### 1-Structure

Structure	Met	Not Met	N / A	Partially met	Notes / Actions Required
• Physical examination clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Health educator clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Foot care clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmology clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Laboratory service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Reception	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Social service clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Secondary health care



## 1-Structure

• <u>Accessible service:</u>					
• Psychology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Nephrology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Cardiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Neurology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Secondary health care



## 2-Staff available

Staff	Met	Not Met	N /A	Partially met	Notes / Actions Required
• Physician Family Medicine/ Internal Medicine /GM /GPs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Health educator specialist /Health coach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician specialist / Health coach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmology technician /Optometrists /Trained Nurse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Lab technician / Trained Nurse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## Secondary health care

### 2-Staff available

• Psychology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Nephrology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Cardiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Neurology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## Secondary health care

### 3-Qualifications

Staff	Qualification and specialties	Met	Not Met	N / A	Partially met	Notes / Actions Required
• Endocrinologist/ diabetologist	• Bachelor in medicine + Saudi board in the specialty or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Health educator specialist	• Bachelor in health education + diabetic educator course or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician specialist.	• Bachelor Clinical dietitian + diabetic course or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Foot care specialist / Nurse.	• Bachelor of nursing + qualification of diabetes foot care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmologist specialist.	• Saudi board in the specialty or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Qualified specialist + Lab technician	• Lab personal acquiring to CAP / CBAHI acquirement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacist	• Bachelor pharmacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Coordinator	• High diploma in secretary bilingual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• social worker specialist	• Bachelor in social science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## Secondary health care



### 3-Qualifications

<ul style="list-style-type: none"><li>• Psychology.</li></ul>	<ul style="list-style-type: none"><li>• Bachelor in medicine + Saudi board in the specialty or equivalent.</li></ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"><li>• Nephrology</li></ul>	<ul style="list-style-type: none"><li>• Bachelor in medicine + Saudi board in the specialty or equivalent.</li></ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"><li>• Cardiology</li></ul>	<ul style="list-style-type: none"><li>• Bachelor in medicine + Saudi board in the specialty or equivalent.</li></ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"><li>• Neurology</li></ul>	<ul style="list-style-type: none"><li>• Bachelor in medicine + Saudi board in the specialty or equivalent.</li></ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## Secondary health care

### 4-Equipment

Equipment	Met	Not Met	N /A	Partially met	Notes / Actions Required
• Fundus camera.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Glucometer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Laboratory service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacy service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Diabetic foot assessment kit or at least monofilament assessment kit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Tertiary health care

## 1-Structure

Structure	Met	Not Met	N /A	Partially met	Notes / Actions Required
• Physical examination clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Health educator clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Foot care clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmology clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Laboratory service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Reception	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Social service clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Tertiary health care

## 1-Structure

<u>Advance diabetes service:</u>					
• Psychiatry clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Nephropathy clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Cardiovascular clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Neurology clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Retinopathy clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Dental service.+ Oral hygiene clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Insulin Pump service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Tertiary health care

## 2-Staff available

Staff	Met	Not Met	N / A	Partially met	Notes / Actions Required
• Endocrinologist/ diabetologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Health educator specialist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician specialist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Podiatrist / other related specialty.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmologist specialist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Qualified specialist + Lab technician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Coordinator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Social worker specialist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Tertiary health care

## 2-Staff available

• Psychiatrist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Nephrologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Cardiologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Neurologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dentists. + Dental hygienist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• <b><u>Insulin Pump service</u></b>					
• Endocrinologist/ diabetologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Diabetic educator specialist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician specialist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Tertiary health care

## 3-Qualifications

Staff	Qualification and specialties	Met	Not Met	N/A	Partially met	Notes / Actions Required
• Endocrinologist/ diabetologist	• Bachelor in medicine + Saudi board in the specialty or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Health educator specialist	• Bachelor in health education + diabetic educator course or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician specialist.	• Bachelor Clinical dietitian + diabetic course or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Podiatrist / other related specialty.	• Medical Bachelor in the specialty.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmologist specialist.	• Saudi board in the specialty or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Qualified specialist + Lab technician	• Lab personal acquiring to CAP / CBAHI acquirement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacist	• Bachelor pharmacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Coordinator	• High diploma in secretary bilingual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• social worker specialist	• Bachelor in social science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Tertiary health care

## 3-Qualifications

• Psychiatrist.	• Saudi board in the specialty or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Nephrologist	• Bachelor in medicine + Saudi board in the specialty or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Cardiologist	• Bachelor in medicine + Saudi board in the specialty or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Neurologist	• Bachelor in medicine + Saudi board in the specialty or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Ophthalmologist	• Bachelor in medicine + Saudi board in the specialty or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Dentists. + Dental hygienist	Bachelor in dentist Medical + Saudi board. +Dental hygienist degree.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• <u>Insulin Pump service:</u> • Endocrinologist/ diabetologist	• Bachelor in medicine + Saudi board in Enocrinology/ diabatology or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Diabetic educator specialist	• Bachelor in health education + diabetic course or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Clinical dietician specialist.	• Bachelor Clinical dietician + diabetic course or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## Tertiary health care

### 4-Equipment

Equipment	Met	Not Met	N /A	Partially met	Notes / Actions Required
• Fundus camera.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Glucometer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Laboratory service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Pharmacy service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Diabetic foot assessment kit or at least monofilament assessment kit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• Insulin pump service.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Thank You

