Flowchart Modeling Clinical Logic of the tDNA

Data Input

Start

Request patient data from EHR

Geographic location found in EHR? → No → INPUT: Geographic location

Etno-cultural classification found in EHR? → No → INPUT: Etno-cultural classification

Sex assigned at birth found in EHR? → No → INPUT: Sex assigned at birth

BMI found in EHR? → No → INPUT: BMI

Wait circumference found in EHR? → No → INPUT: Waist circumference

Blood pressure found in EHR? → No → INPUT: Blood pressure

Test panel results found in EHR? → No → INPUT: Test panel results

Patient History Input

risk factors count = 0

DISPLAY: "Family history of:"

"high-risk dietary patterns?" → Yes → +1 to risk factors count

"premature cardiovascular diseasae?" → Yes → +1 to risk factors count

DISPLAY: "Patient history of:"

"cardiovascular event?" → Yes → +1 to risk factors count

"liver disease?" → Yes → +1 to risk factors count

"sleep disturbance?" → Yes → +1 to risk factors count

"chronic illness other than diabetes?" → Yes → +1 to risk factors count

"Excessive daily alcohol consumption?" → Yes → +1 to risk factors count

DISPLAY: "Level of physical activity level of:"

"less than 30 min a day?" → Yes → +1 to risk factors count

"less than 5 days a week?" → Yes → +1 to risk factors count

Risk Calculation Process

Determine disease risk based on BMI, WC, sex, and ethno-cultural classification

Is disease risk present? → Yes → +1 to risk factors count

Is blood pressure >130/80 mm HG? → Yes → +1 to risk factors count

Does lipid panel indicate dyslipidemia? → Yes → +1 to risk factors count

Calculate total risk factors count

Is risk factors count >= 1 ?

If High Risk

Calculate nutritional guidelines based on BMI, obesity classification, and daily calories intake

Set goals based on nutritional guidelines

General recommendations (Counseling, Physical activity, Healthy eating)

Is patient overweight/obese? → Yes → Physical activity, Medical Nutrition Therapy guidelines, Formula/caloric supplementation or replacement → Assess bariatric surgery considerations

Is patient hypertensive? → Yes → Antihypertensive and sodium restricted diet

Patient has dyslipidemia? → Yes → Lipid-modifying diet

Common international foods and glycemic indices

If Low Risk

Calculate nutritional guidelines based on BMI, obesity classification, and daily calories intake

Set goals based on nutritional guidelines

General recommendations (Counseling, Physical activity, Healthy eating)

Common international foods and glycemic indices

Follow Up

1-3 month follow up evaluation

Request patient data from EHR

All necessary updated data found in EHR? → No → INPUT: Updated patient data

All necessary new measures found in EHR? → No → INPUT: New measures (BMI WC, Blood pressure)

All necessary new test results found in EHR? → No → INPUT: New test panel results

All necessary urianalysis results found in EHR? → No → INPUT: Urianalysis results

Were goals met? → Yes → Maintain plan → End

Were goals met? → No → Intensify plan → End