

Part 1 - Modeling the Current State

DIABETES

What is Diabetes?

Diabetes is a disease that occurs when blood glucose (also called blood sugar) is too high.

It occurs when the body does not make enough or any insulin (a hormone made by the pancreas) or doesn't use insulin well.

Insulin helps glucose from food get into the cells to be used as energy. A lack of insulin means glucose stays in the blood and doesn't reach the cells.

DIABETES HAS NO CURE

Steps can be taken to manage diabetes and stay healthy. Different treatments are prescribed based on the type of diabetes.

7th cause of death in the United States in the year 2017

Types of Diabetes

1 Type 1 Diabetes

In this type of diabetes, the body does not make insulin. The immune system attacks and destroys the cells in the pancreas that make insulin.

Usually diagnosed in children and young adults. People with type 1 diabetes need to take insulin every day to stay alive.

2 Type 2 Diabetes

In this type of diabetes, the body does not make or use insulin well.

Can develop at any age, but mostly occurs in middle aged and older people.

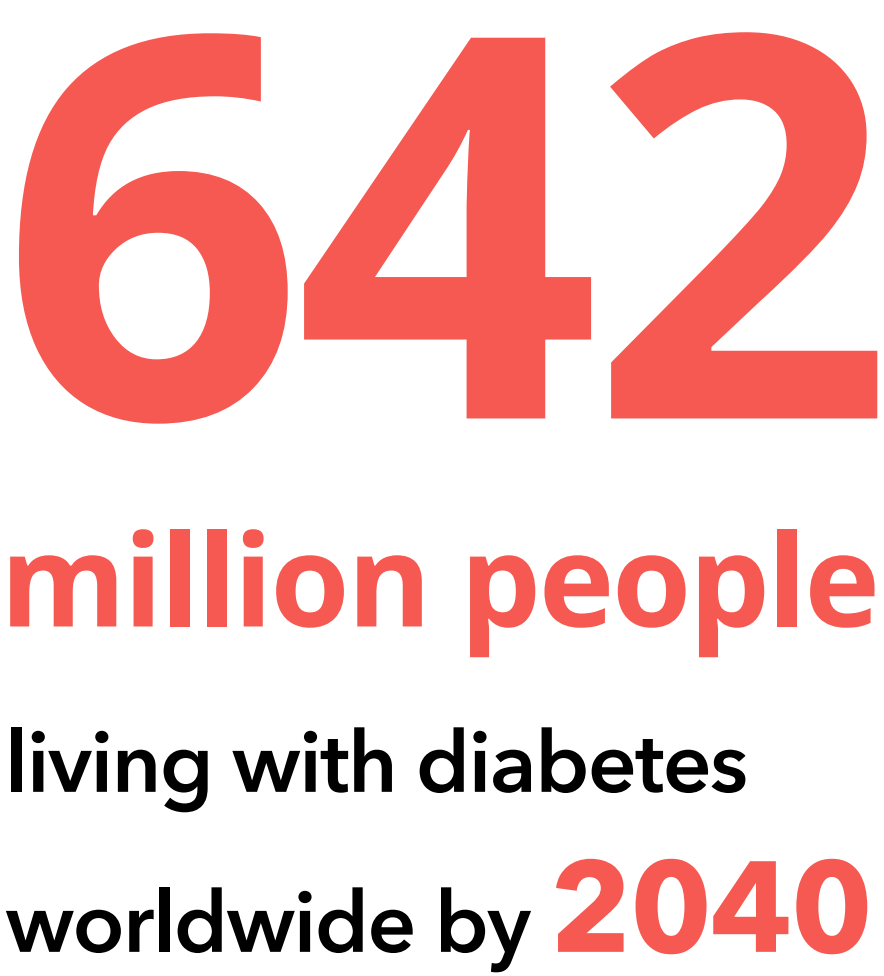
It is the most common type of diabetes.

3 Other types

Gestational diabetes - Develops in women when they are pregnant.
Monogenic diabetes - an inherited form of diabetes
Cystic fibrosis-related diabetes



The figure is expected to rise to



Stats



What does a diabetic person measure?

Blood Glucose level

A person with diabetes measures the blood glucose level. Doctors call high blood glucose hyperglycemia.

They can do this with blood glucose meters with a finger prick or continuous glucose monitoring (CGM) which includes a sensor and a reader.

How do they manage blood glucose levels?

By taking insulin

Apart from diet, exercise and medication to lower blood glucose levels, a diabetic person may need to take insulin.

They can do this with a needle or syringe, insulin pens, pumps, inhalers (only for rapid-acting insulin), injection port or jet injector.

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THE CAREGIVING NETWORK

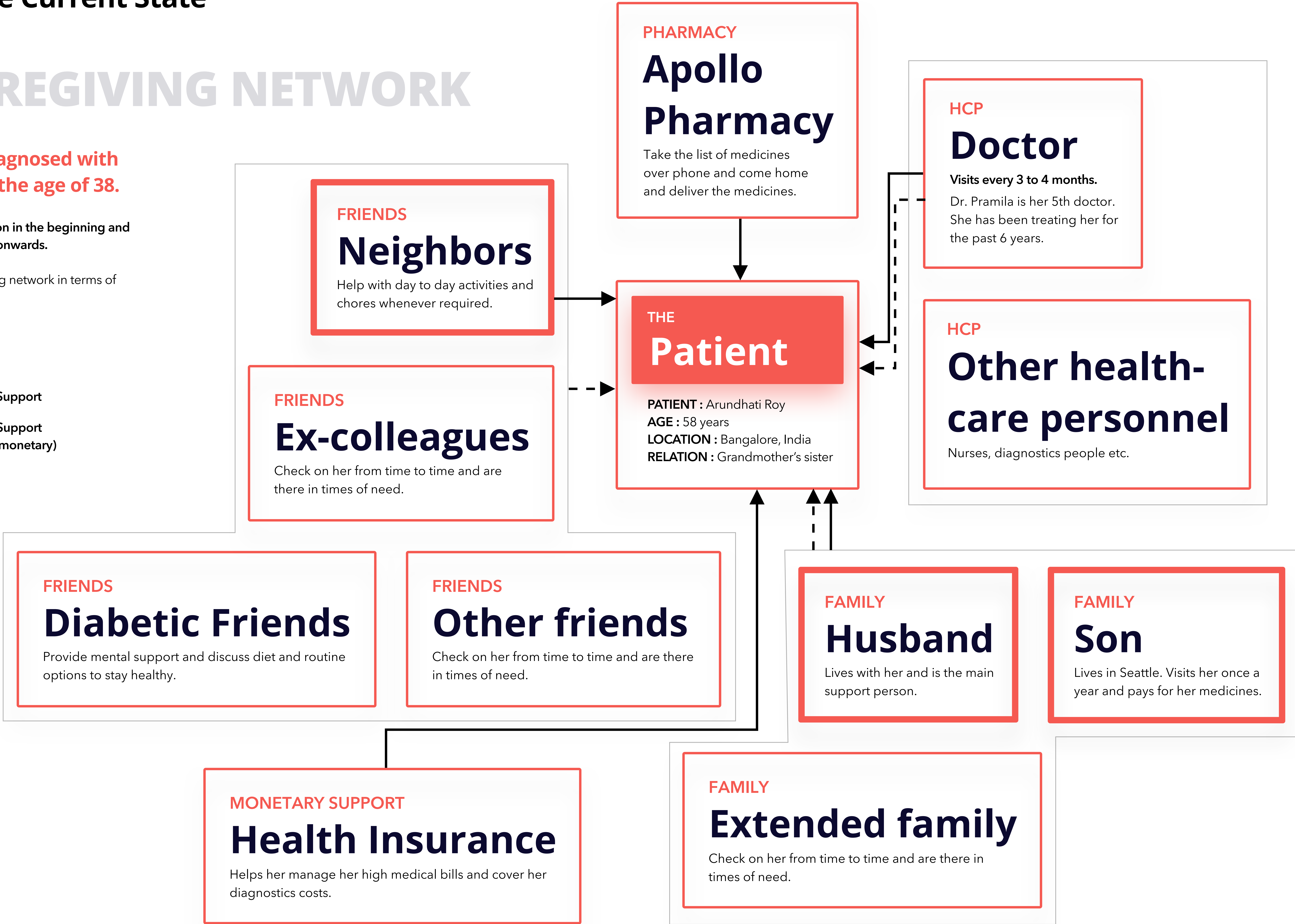
The patient was diagnosed with Type 2 diabetes at the age of 38.

She started with oral medication in the beginning and switched over to insulin 1997 onwards.

This is a model of the caregiving network in terms of physical and mental support

--- Emotional Support
— Functional Support (Physical + monetary)

■ Daily support
□ Non-daily support

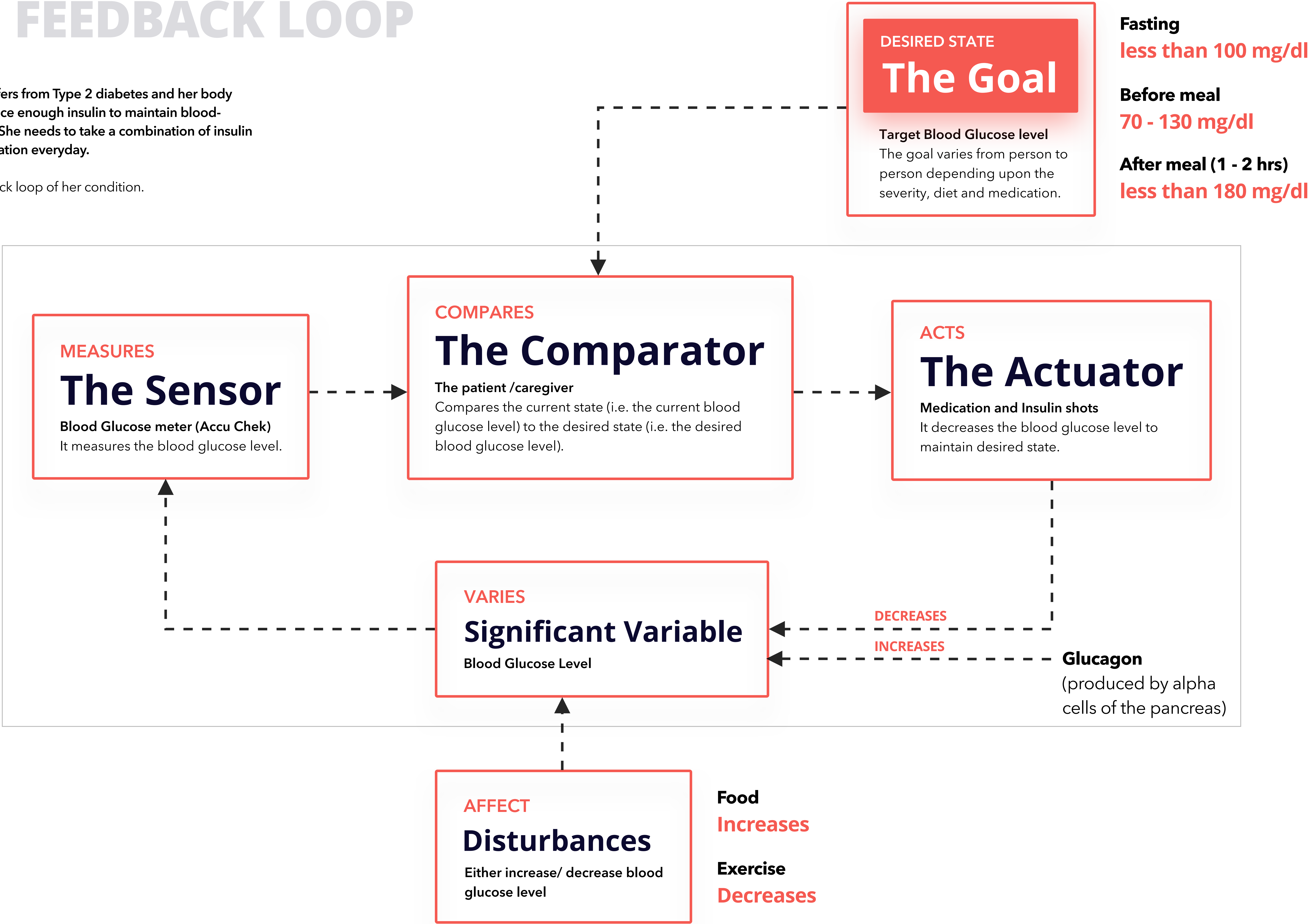


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THE FEEDBACK LOOP

The patient suffers from Type 2 diabetes and her body does not produce enough insulin to maintain blood-glucose levels. She needs to take a combination of insulin and oral medication everyday.

This is a feedback loop of her condition.



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A DAY IN HER LIFE

