

# **Nephy: Diet Assistant for Chronic Kidney Disease (CKD)**

# Chronic Kidney Disease (CKD)

- Many pathways to CKD (ex: diabetes, lupus)
- Kidneys can no longer act as filter:
  - Problems with salt, phosphorus, and potassium
- More than 200,000 patients per year
  - Lifetime cost of 500K/patient
  - Many leave the workforce
- Need to manage diet
  - “Afraid to eat”

# Problems as Told by Doctors and Patients

- “Nutrition facts don’t require showing you potassium or phosphorus” – Dr. Avi Gillespie
  - “Bananas have less potassium than orange juice”
- “40% of [CKD] are diabetic, so we when left the hospital, the [CKD] pamphlet told us to eat bread and pretzels because they’re low in potassium, but obviously, it’s all sugar.” – Daughter of patient
- “We’re at a restaurant. Can we eat this or not?” – Daughter of patient

# Solution

Text 1-830-742-0376

# Architecture

- Connected USDA API and Wit.AI bot platform
- Hosted service through Heroku
- Integration with Twilio

# Future

- Google Image Recognition API
- Yelp Integration
- Diet management tool
  - Log food
  - Useful for continuous monitoring
  - Useful for research and machine learning