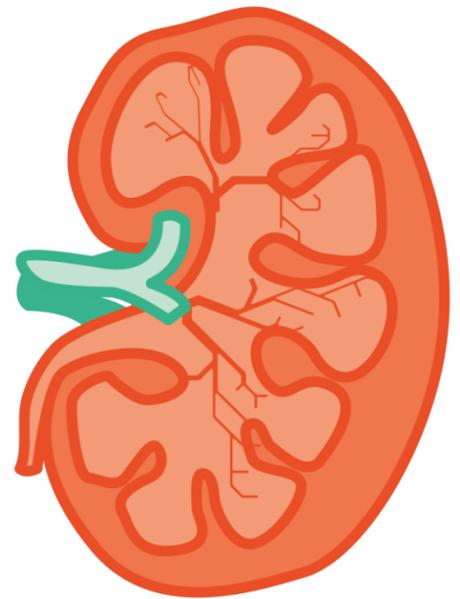


# CHRONIC KIDNEY DISEASE (CKD)

## FACTS AND FIGURES

- NAUSEA
- LOSS OF APPETITE
- SWELLING OF FEET AND ANKLES
- CHANGES IN HOW MUCH YOU URINATE
- COVID 19 ACUTE RENAL FAILURE
- VOMITING
- MUSCLE TWITCHES AND CRAMPS



- Stage 1**  
With normal or high GFR  
(GFR > 90 mL/min)
- Stage 2**  
Mild CKD  
(GFR = 60-89 mL/min)
- Stage 3A**  
Moderate CKD  
(GFR = 45-59 mL/min)
- Stage 3B**  
Moderate CKD  
(GFR = 30-44 mL/min)
- Stage 4**  
Severe CKD  
(GFR = 15-29 mL/min)
- Stage 5**  
End Stage CKD  
(GFR < 15 mL/min)

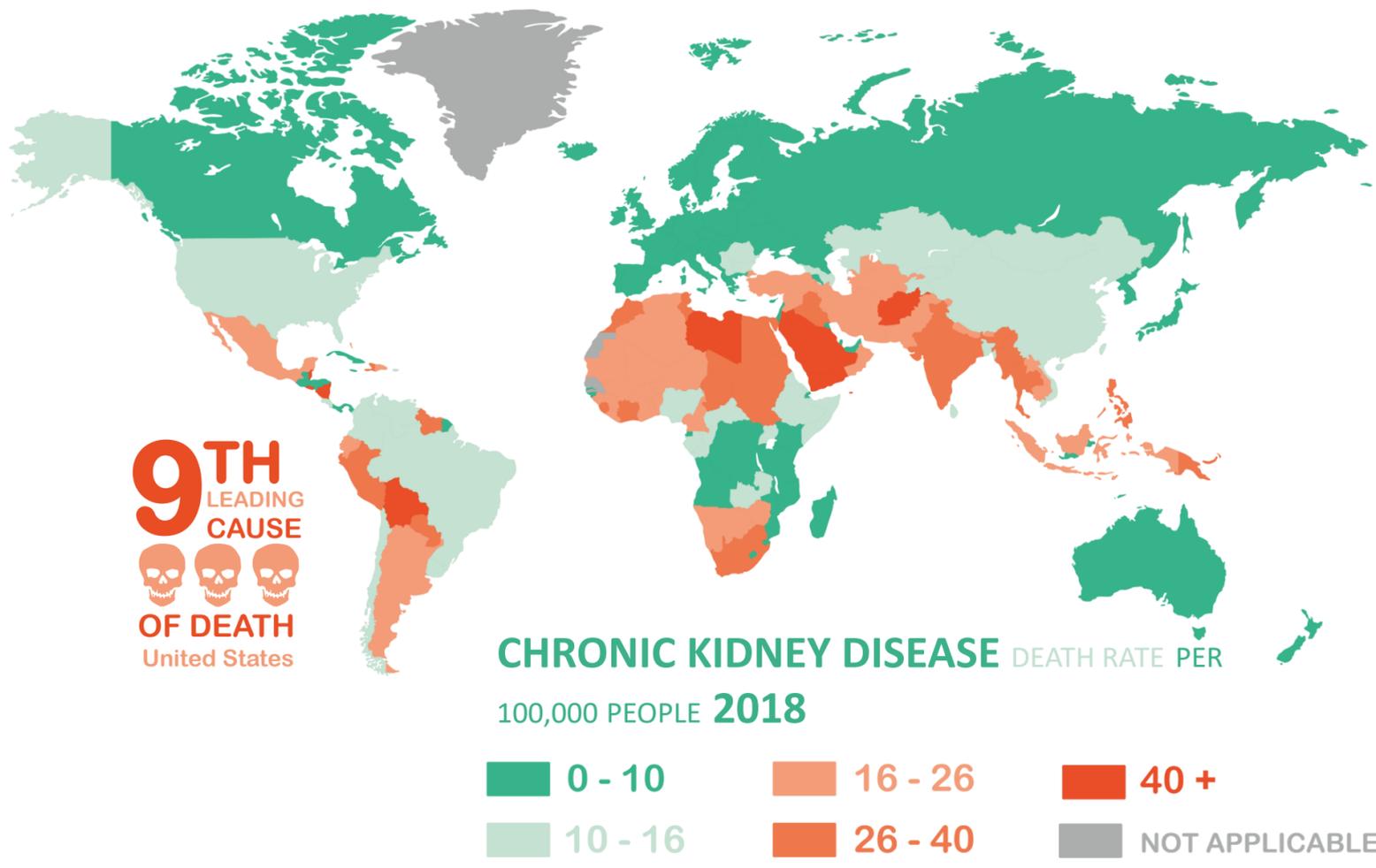
**Everyday** Two kidneys filter about **120-150 QUARTS OF KIDNEY BLOOD** produce **1-2 QUARTS OF URINE**

COVID 19  
**Angiotensin-converting enzyme 2**  
(receptor of SARS-CoV-2 in kidneys)  
plays a **key role in Mediating renal injury**

**850 Million Cases 2019**  
**CKD deaths 2.4 million**

- COVID 19  
Biomarkers signifying **kidney impairment** among severe **COVID-19 patient**
- 66.7%** Glomerular filtration Rate (eGFR)
  - 41.7%** Creatinine clearance (CrCl)
  - 41.7%** Microalbuminuria (UACR-Urine Albumin-to-Creatinine Ratio)

**Renal replacement therapy** projected to double to **5.4 million patients by 2030**



https://ncdd.cdc.gov/ckd/detail.aspx?Qnum=Q185, https://www.cdc.gov/kidneydisease/basics.html, https://nephcare.org/livingwithkidneydisease/what-is-kidney-disease-2/, https://www.mayoclinic.org/diseases-conditions/chronic-kidney-disease/symptoms-causes/syc-20354521, https://www.cdc.gov/kidneydisease/publications-resources/ckd-national-facts.html, https://www.worldkidneyday.org/facts/chronic-kidney-disease/, https://www.karger.com/Article/Fulltext/512683#:~:text=Background%3A%20SARS%2DCoV%2D2,patients%20with%20chronic%20kidney%20disease, https://www.firstpost.com/india/world-kidney-day-2019-ckd-is-6th-deadliest-disease-worldwide-causing-2-4-million-deaths-per-year-heres-how-to-reduce-risk-of-renal-ailments-6256331.html, https://www.worldlifeexpectancy.com/cause-of-death/kidney-disease-by-country/

CKD is a type of kidney disease in which there is a gradual loss of kidney function over a period of three months and more. Initially there are generally no symptoms; later, symptoms may include leg swelling, feeling tired, vomiting, loss of appetite and confusion.

CKD is usually caused by other conditions that put a strain on the kidneys. This could be high blood pressure, diabetes, high cholesterol, kidney infections, polycystic kidney disease, etc...

THROUGH THIS CAREPLAN WE HIGHLIGHT DATA FROM A COLLECTION OF

56 painpoints

77 respective solutions

are connected to 11 different stakeholders

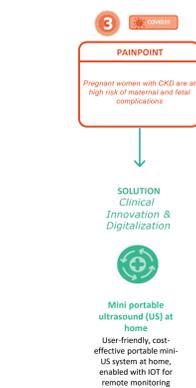
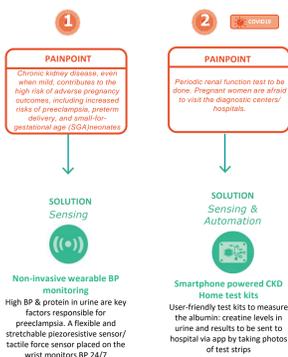
## 1 PRENATAL

**LOCATION**  
In a doctor's office

### STAKEHOLDERS



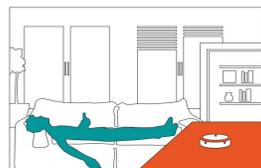
Pregnant women have polycystic kidney disease & a history of diabetes, hypertension.



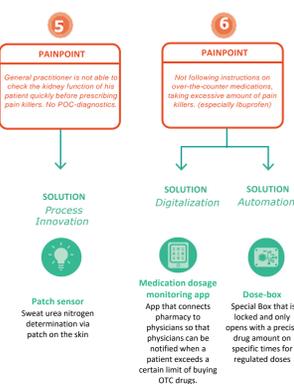
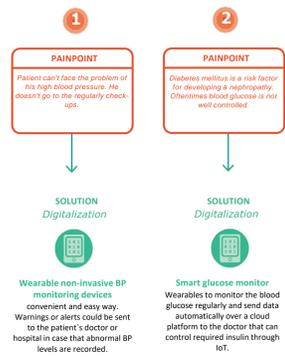
## 2 PREVENTION

**OUTSIDE**  
For control in the doctor's office

### STAKEHOLDERS



Patient has an unhealthy lifestyle (smoking, nutrient deficiencies, no physical exercise)



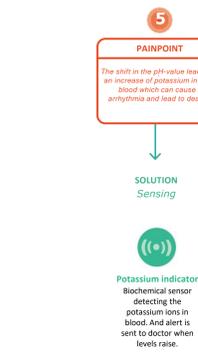
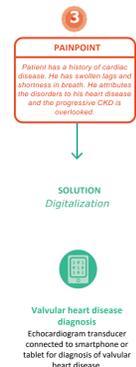
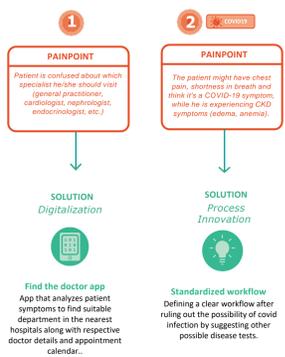
## 3 SYMPTOMS

**OUTSIDE**  
Resting at home

### STAKEHOLDERS



Patient suddenly feels weight loss, muscle cramps, increased need to pee, difficulty in sleeping etc. So, decides to visit general practitioner.



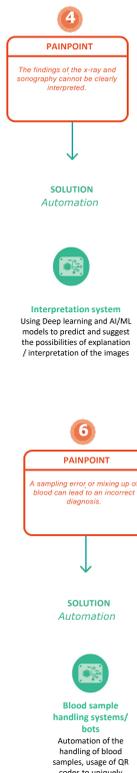
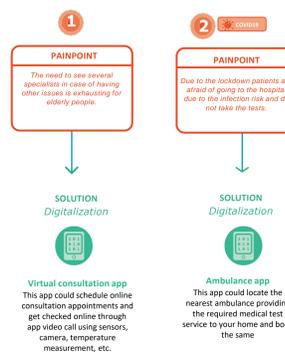
## 4 DIAGNOSIS

**OUTSIDE**  
Initial Observation/control

### STAKEHOLDERS



Patient was advised to take blood test, urine test and scan for assessing the working condition of kidneys.



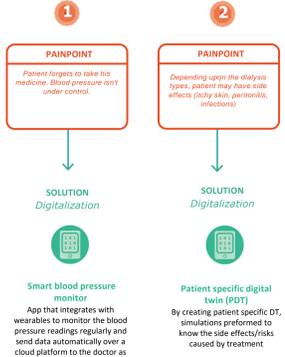
## 5 TREATMENT

**OUTSIDE**  
General treatment recommendations are given

### STAKEHOLDERS



Depending on the patient condition, the treatment would be dialysis, drug treatment or a transplant.



## 6 FOLLOW-UP

**OUTSIDE**  
Daily Life

### STAKEHOLDERS



Regular check-ups have a look over the given treatment, dietary management, and monitor LDL for improvement.

