Kidney Health: Secrets we all need to be talking about...

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A patient...

- Michael
  - 36 year old male
  - African-american
  - 6’2” – athletic build
  - Diagnosed with high blood pressure approximately 3 years ago
  - Taking blood pressure medications “off and on” for past 2 years
A patient...

- Michael
  - Ran out of medications for about a month
  - *Otherwise feeling well*, called to get refills
    - Had blood drawn and medications refilled
    - to see PCP in a week to check BP
  - A week later his BP was running in the 200s/100
    - Having some diarrhea and vomiting for a few days
  - Sees PCP and told his kidney test results from week prior are abnormal and sent to ER
A patient...

- Michael
  - Blood tests showed that his **GFR** (Glomerular Filtration Rate) was 3 (normal for him would be around 100)
  - **GFR \approx %** (percent)
  - **His kidney function was only 3%**
  - **He had no symptoms and had no awareness of having kidney disease.**
The National Kidney Foundation has divided chronic kidney disease into 5 stages. Each stage is determined based on the percentage of kidney function remaining.
Is this uncommon?

• Unfortunately not as uncommon as we would like
  o In the US as many as **ONE THIRD** of patients first saw a Kidney Specialist **less than 3 months before starting dialysis**
  o People referred earlier
    • Lived longer
    • Spent less time in the hospital
    • Were better prepared for dialysis
What can we offer?

• Dialysis
  o Peritoneal Dialysis
  o Hemodialysis
    • In Center
    • Home

• Kidney Transplantation
Dialysis

• Dialysis is a lifesaving treatment option for kidney failure that is done all over the world

• In the US >400,000 patients on dialysis

• Despite improvements in survival on dialysis over the years the overall survival rate for patients on dialysis for 5 years is ~40 percent
Dialysis – lifesaving but not perfect

After 5 YEARS on Dialysis
Kidney Transplant

- Kidney transplant is the treatment of choice for patients with kidney failure

- The overall survival rate for patients with a kidney transplant after 5 years is
  - 74% (deceased donor)
  - 87% (living donor)
Kidney Transplant

- But there just aren’t enough organs...
  - On average:
    - Currently ~100,000 people await kidney transplant
    - Nearly 3,000 new patients are added to the kidney waiting list each month.
    - 12 people die each day while waiting for a life-saving kidney transplant
  - In 2013, 4,453 patients died while waiting for a kidney transplant.
There must be something new?

• What about new drugs?
  o Great expectations for new drugs for the management of CKD over the last decade have unfortunately not been met
  o But the search and studies go on...

• Stem Cells?
  o A promising strategy for treating CKD and currently the focus of many preclinical studies

• Bioengineering?
  o “Laboratory Kidneys: Bioengineering Success Offers New Hope for Patients with Kidney Disease”
  o NKFI Research Grant program is supporting such a study
There must be something new?

What's the matter with you?

Kidney dialysis

My god, what is this, the dark ages?

Here, you swallow that

If you have a problem, just call me

The doctor gave me a pill and I grew a new kidney!!
What if we could go back in time?

• What should Michael know?

• What might he do differently?

• Could he change his future?
He should know...

- Your kidneys make urine
- Are your body’s **filter**
  - They clean your blood to get rid of **wastes** and **extra water** from your body
- Control your body's chemical balance
- Help control your blood pressure
- Help keep your bones healthy
- Help you make red blood cells
He should know...

- Chronic Kidney Disease (CKD) means the kidneys are damaged and may no longer
  - Filter (clean) blood well
  - Keep the body healthy

- CKD can lead to Kidney Failure...which means you might need
  - Dialysis
  - Kidney Transplant
He should know...

Top Causes of Kidney Failure in Patients starting Dialysis

#1 Diabetes 45%
#2 High Blood Pressure 30%
Other 25%
He should know...

• Not everyone with high blood pressure or diabetes will get kidney disease

• High blood pressure is both a cause and consequence of CKD
He should know...

• Early kidney disease has no signs or symptoms

• Kidney disease usually does not go away

• Kidney disease can be treated and kidney failure can be delayed or prevented
CKD and High Blood Pressure

- Optimal blood pressure control has clearly been shown to **slow kidney disease**

CKD and Diabetes

- Reduction in proteinuria by blood sugar control and blood pressure control has been shown to **slow kidney disease**
Steps to Slowing Kidney Disease

• #1 – Kidney Disease Awareness

• #2 – Control Blood Pressure

• #3 – Control Diabetes
Awareness of CKD in the United States among NHANES Participants

![Graph showing awareness of CKD stages over survey years (1999-2002, 2003-2006, 2007-2010).]
The Secret to Kidney Health

• Is awareness of Kidney Disease

• And it starts with YOU...
Are you at risk?

• You are at highest risk for kidney disease if you have:
  - Diabetes
  - High blood pressure
  - Heart disease
  - A family history of kidney failure

• 1 out of 3 adults in the US is at risk for kidney disease

...are **YOU** the 1?
The secret to Kidney Health

• But it cannot end with YOU...
YOU WILL LEARN A LOT TODAY

SHARE WHAT YOU LEARN

THANK YOU
Time to go viral...

• “I (state your name), promise to tell my friends and family about what I learn here at Living With Kidney Disease today so that kidney disease will no longer stay secret.”
Why should I be checked?

• Early kidney disease has no signs or symptoms

• Kidney disease usually does not go away

• Kidney disease CAN be treated and kidney failure CAN be delayed or prevented
  - Control Diabetes
  - Control Blood Pressure
  - Medications

• The sooner you know the sooner it can be treated
How do you check for CKD?

• Early kidney disease has **no signs or symptoms**

• The **only** way to know is to **ASK YOUR DOCTOR and GET TESTED**
  
  o Blood Test
    • **GFR** – **Glomerular Filtration Rate**
  
  o Urine Test
    • protein in the urine
Blood Test

- GFR is an important “kidney number”
  What is yours?
Urine Test

- Do you have protein in your urine?

Inside a healthy kidney:
- Blood
- Filter
- Urine

Inside a damaged kidney:
- Blood
- Filter
- Urine