Prepare for a multi-day power outage
Providers often say prediabetes is “reversible” and diabetes is "manageable.” Between November 1, 2018 and May 1, 2019, the Santa Barbara County Health Care Centers saw 2,889 prediabetic patients 7-years or older (according to the American Diabetes Association criteria of HbA1c between 5.7-6.4) (1).

The obesity epidemic is contributing to the rise in prediabetes in children and adults. A review article in *Frontiers in Endocrinology* states, “Obesity is a state of low-grade inflammation”. Obesity desensitizes organs to insulin. High circulating fatty acids compete with glucose for uptake in the organs and resulting hyperglycemia triggers B cell dysfunction and insulin resistance. The article states, “B cell dysfunction supersedes insulin resistance in inducing diabetes” (2). B cell damage is occurring in the prediabetic stage. B cell function is more important in the progression to diabetes than the total number of B cells, because B cells will compensate to insulin demand even when less are present.

A National Institutes of Health manuscript *Prediabetes: A high-risk state for developing diabetes* notes evidence from studies which support the idea that insulin resistance starts years before diabetes is noticed and that decreased B cell function is already present in the prediabetic state. A decrease of up to 80% in insulin secretion in prediabetic people has been linked to increased risks of early forms of neuropathies, chronic kidney disease, retinopathy and macrovascular disease. (3).

More than 470 million people are estimated to have prediabetes by 2030. In the U.S. between 2005-2008, 35% of adults over 20 years old and 50% of adults over 65 years old had prediabetes. (3) Unless people with prediabetes change their lifestyle, most will have Type 2 diabetes within the next 10 years. Research has shown the consequences may be amplified when diagnosed at early ages.

Youth-onset Type 2 diabetes is associated with an increased risk of cardiovascular morbidity and mortality at an earlier age than those individuals who are diagnosed later in life. There is a longer exposure to hyperglycemia and other risk factors and earlier onset of complications. In addition, the co-morbidities appear to be greater in youth with Type 2 as compared to youth with Type 1 diabetes (4).

Dr. Kristin Castorino, DO, a Senior Research Physician at Sansum Santa Barbara said, “Diabetes is one of the most expensive and debilitating diseases affecting the United States. Prevention works and it saves us money. The more we can invest in sustainable prevention strategies, the healthier our community is and the more we save.” Again from the NIH manuscript, “for prediabetic individuals, lifestyle modification is the cornerstone of diabetes prevention with evidence of a 40%–70% relative risk reduction” (3).

**Call to Action:** Let’s not accept a prediabetic state. We can and should help our patients convert from prediabetes back to normoglycemia. The Registered Dietitians at each Health Care Center (HCC) are available and eager for referrals from providers. Change is hard for most people. The RD’s and Certified Diabetes Educators of the Public Health Department are here to educate, guide, and help patients along their journey to better health and quality of life.

**For internal PHD HCC referrals:** Enter an order via EPIC
**For referrals from external providers:** Contact the PHD HCC nearest you
Santa Barbara County Public Health is reaching out to providers to raise awareness about the importance of HIV testing and HIV prevention. Because HIV crosses the boundaries of sexual orientation, gender, age, and ethnicity, risk-based testing fails to identify many people with HIV. Therefore, the Centers for Disease Control and Prevention (CDC) recommends HIV screening for everyone in all health care settings.

Best Practices for Routine HIV Testing in Health Care Settings

- Take a thorough sexual history for all patients as part of routine medical care.
- Provide patients with information on the importance of knowing their HIV status.
- Offer HIV testing routinely to all patients aged 13 to 64, according to CDC guidelines.
- Persons at high risk for HIV infection should be advised to be retested at least once a year. This includes some gay and bisexual men who may benefit from more frequent testing (e.g., every 3 to 6 months).
- Discuss prevention tools with patients, including pre-exposure prophylaxis (PrEP) and services for people who inject drugs.

PrEP Information for Providers

Pre-exposure prophylaxis (PrEP) is an HIV prevention strategy in which antiretroviral drugs are used to protect HIV-negative people from HIV infection. PrEP has the potential to prevent HIV among individuals at very high risk for becoming infected with HIV, and provides individuals and clinicians with another option for HIV prevention. According to CDC, when taken consistently, PrEP has been shown to reduce the risk of HIV infection in people who are at high risk by up to 92%.

CDC recommends that PrEP be considered for people who are HIV-negative and at substantial risk for HIV infection.

For sexual transmission risk:

1. Anyone who is in an ongoing relationship with an HIV-positive partner
2. Not in a mutually monogamous relationship with a partner who recently tested HIV-negative and is either:
   - Gay or bisexual man who has had anal sex without a condom or been diagnosed with an STD in the past 6 months; or
   - Heterosexual man or woman who does not regularly use condoms during sex with partners of unknown HIV status who are at substantial risk of HIV infection (e.g., people who inject drugs or have bisexual male partners).

For people who inject drugs, this includes those who have injected illicit drugs in the past 6 months, who have shared injection equipment, or been in drug treatment for injection drug use in the past 6 months.

** Health care providers should also discuss PrEP with heterosexual couples in which one partner is HIV-positive and the other is HIV-negative as one of several options to protect the partner who is HIV-negative during conception and pregnancy.

Resources available to clinicians prescribing or considering prescribing PrEP:

- The PrEP Clinical Consultant telephone line at (855) 448-7737 is available Monday – Friday, 8 a.m. – 3 p.m. PST.
EMERGING PUBLIC HEALTH ISSUES (CONT’D)

EMERGENCY PREPAREDNESS: PREPARING PATIENTS DEPENDENT ON ELECTRICITY FOR A PUBLIC SAFETY POWER SHUTOFF (PSPS)

Southern California Edison (SCE) and Pacific Gas and Electric (PG & E) have developed a plan to proactively shut off power in high fire risk areas to reduce the threat of wildfires. The Public Safety Power Shutoff (PSPS) program could lead to multi-day power outages in many areas during periods of extremely hot, dry and/or windy weather. There may be warning in advance, from 2 - 48 hours, and the power companies are asking the public to be prepared for an outage of 3 - 5 days.

Healthcare providers are urged to prepare their patients for electrical outages. It is especially critical to prepare those patients who use equipment such as oxygen concentrators, ventilators, electric wheelchairs, or who use medications that require refrigeration.

Ask your patients what their plan is for power outages. Hospitals should not be a source of electrical support or oxygen during a power outage. Patients that use oxygen concentrators are encouraged to have back-up or travel oxygen tanks and a plan for connecting the tubing to the tank.

Encourage patients to:

- Take an inventory of items they need that rely on electricity: oxygen concentrators, CPAP, electric wheelchairs, garage door, refrigerated medications, at home dialysis and many other devices.
- Assemble a power outage kit: Patients should have battery operated lanterns, flashlights, back up batteries for electrical equipment, and generators if they plan to stay in their residence during any outage.
- Plan for a place to go during a power outage: Patients should also have a plan on where to go to access electricity outside of their home, such as a hotel or family member.
- Sign-up for county alerts: All residents are encouraged to sign up for alerts from the County of Santa Barbara by going to www.ReadySBC.org or Nixle by texting their zip code to 888777.
- Call their local power company: Patients with life sustaining electricity needs can sign up to be a Medical Baseline customer with SCE or PGE. By signing up the individuals will be automatically contacted during or prior to emergency or rotating power outages that will affect their location.

- SCE Medical Baseline
- PG & E Medical Baseline

The Public Health Department has developed a planning document - Preparing for Power Outage: Persons with Dependent on Electricity- for healthcare providers to review with and disseminate to patients. Click here for additional information and to download the planning document.

Additional Resources:

- More information on PSPS: https://prepareforpowerdown.com/
- For resource sheets on power outages please go to https://www.ready.gov/power-outages.
- Checklists for People who use electricity & battery dependent assistive and medical devices.
UPCOMING PHD EVENTS

National Health Center Week in Santa Barbara County

The Board of Supervisors proclaimed August 4-10, 2019, as National Health Center Week in Santa Barbara County.

To mark the event, the PHD Health Care Centers will host a number of National Health Center Week events that celebrate the ways they are “Rooted in Communities”.

[Click here for Health Center Week Activities]

Swim Safety Sunday

AUGUST 11, 2019
11:00AM-3:00PM
LOS BAÑOS POOL, SANTA BARBARA, CA

Please join us for a fun and FREE water awareness and safety fair!

Swim assessments for your child, education on water safety, skin cancer prevention, and fun activities!

The PHD and the Emergency Medical Services Agency are partnering up with Cottage Health and local partners on Sunday, August 11 to host a water safety education event in South County. Everyone is welcome!

Find us at the Pacific Pride Festival

Come visit the PHD HIV Surveillance and Partner Services tent at the annual Pacific Pride Festival! We will be educating the public on the array of services offered at the PHD and bringing along some of the wonderful health educators serving our community.

WHEN: August 24, 2019, 12 p.m. - 7 p.m.
WHERE: Chase Palm Park in Santa Barbara
Test your public health knowledge with this quick 3 question quiz based on recently published events.

https://www.surveymonkey.com/r/PHknowledge

Visit the Epidemiology Reports webpage to review the most recent reports published by the Public Health Department. Keep an eye out this month for the local HIV and STD reports!

### SOURCES

1. The ADA (America Diabetes Association) criteria for the screening and diagnosis of prediabetes
   [https://professional.diabetes.org/content-page/practice-guidelines-resources](https://professional.diabetes.org/content-page/practice-guidelines-resources)

   [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3608918/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3608918/)

   [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3891203/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3891203/)

   [http://care.diabetesjournals.org/content/diacare/early/2018/10/26/dci18-0052.full.pdf](http://care.diabetesjournals.org/content/diacare/early/2018/10/26/dci18-0052.full.pdf)

### ISSUE CONTRIBUTORS

Adrienne Star RD, CSOWM, CDE - Nutrition Services Site Supervisor
Adriana Almaguer - HIV Prevention Program Administrator
Stacey Rosenberger, MPH - Emergency Preparedness Planner
Gabby Modglin, EMT-P - Emergency Medical Services Specialist
Michelle Wehmer, MPH - Epidemiologist, Editor
Jackie Ruiz, MPH - Public Information Officer