



A Weekly Publication of the People of The Queen's Health System



THE QUEEN'S
HEALTH SYSTEM

The Queen's Medical Center • The Queen's Medical Center – West O'ahu • Molokai General Hospital • Queen's North Hawai'i Community Hospital

Grateful Patient Warns Against Sepsis

SEPSIS WAS LIKE A TRAP Katy Grainger fell into, one that she didn't see until it was too late. In a matter of a few days in September of 2018, she went from having normal vitals to being the sickest patient at The Queen's Medical Center.

Doctors were also evaluating Katy's hands and feet, which were dusky in color and rapidly turning a deep purple. It was becoming increasingly likely she would lose them—if she lived. But more critically, they knew that her extremities were an external manifestation of what was happening on the inside of her body where they could not see—to all her internal organs.

In full-blown septic shock, Katy was put on high doses of vasopressors to artificially raise blood pressure in hopes of profusing the brain and other organs so they can get the oxygen they need. "The most important thing we worry about is the brain," said Pulmonary and Critical Care physician Gehan Devendra, MD, who cared for Katy during days 3 to 5 in the Medical ICU. Dr. Devendra is division chief of Pulmonary and Critical Care at QMC and for the John A. Burns School of Medicine. His concern: "Will [the patient] be able to interact with others [if they survive], and be that person they were before?"

Days earlier, Katy Grainger was returning to her home on Kaua'i after visiting her two daughters in college in California. Katy noticed a small oozing bump on her thumb. On the drive home, she visited an urgent care clinic, as her husband Scott was on a fishing trip in Wyoming and she would be alone. Vitals were normal, and there was no fever. There was a small infected cut at the bump, so the doctor gave Katy oral antibiotics and advised her to call if it got worse.



L-R: Thomas Lee, MD; Reid Ikeda, MD; Dean Saiki, PT; Chris Fiack, MD, Physician Lead for Pulmonary Critical Care & Sleep Medicine; Gehan Devendra, MD, QMC Division Chief of Pulmonary and Critical Care; Katy Grainger, former patient; Jill Hoggard Green, PhD, RN, QHS President & CEO; Lucy Lessard, Director of Rehab Services; Masayuki Nogi, MD; Michele Hadano, RN, Director, Acute Care Services; and Brent Tatsuno, MD, Program Lead, MICU. Below right: Ipo visits Katy's family.

It was Friday night and Katy had plans to meet up with friends, but felt she might be coming down with the flu, so she didn't go. On the phone, Scott advised her to tell a friend she was home alone and to call and check on her in the morning. They were cautious: three years earlier, a dear family friend was away at college and thought she had strep throat. She ended up losing a leg to sepsis.

From Saturday morning on, Katy had no memory, just what her friend Tiffany later related and texts on her phone. That morning, Katy was feeling better, a fever had broken, and her temperature was normal. But at midday, she was not feeling well and told Scott she wanted to sleep the rest of the day. That night, she was too tired to talk. Some-



time Saturday night, Katy had fallen and sprained an ankle and broken a foot but had no memory of it. At 6:00 am on Sunday, she texted Tiffany and asked to be taken to the hospital, which was an hour's ride away. She had never felt so sick in her life. Tiffany found Katy completely passed out. Her feet were so sore she could not walk, so they scooted across the floor and down the steps, and Tiffany carried her to the car and put her in the back seat. About 20 minutes into

(Continued on page 2.)

Grateful Patient

(Continued from page 1.)

the ride, Katy began crying because her hands and feet felt like they were on fire. Frightened, Tiffany called the hospital to meet them with a gurney.

Wilcox Memorial Hospital's chart indicated Katy had a dangerously low BP of 52/31; pulse racing at 119; breathing rate and temperature normal at 97; broken foot, sprained ankle, and abrasion on knee consistent with a fall or loss of consciousness; dehydration; kidneys failing. Diagnosis: significant septic shock. Wilcox had a clear sepsis protocol, so they took immediate action, giving broad spectrum intravenous antibiotics, oxygen, and other measures while blood tests were done for pathogens. No clear source of the infection was found. Suspecting the infection on Katy's thumb was a secondary one, they checked all organs but came up with nothing. This was not an uncommon result, as no source can be found in about 50% of sepsis cases.

Katy's symptoms got worse as the day progressed, with her hands beginning to turn purple. Meanwhile, family were contacted, including Scott and their daughters. At first, there were no ICU beds available at Queen's, but by Monday morning, a bed opened, and a transfer was arranged. Chris Fiack, MD, Physician Lead for Pulmonary Critical Care & Sleep Medicine, took the call. The transfer papers indicated: MODS (multiple organ dysfunction syndrome); ARDS (acute respiratory distress syndrome, meaning respiratory failure with inflammation); and DIC (disseminated intravascular coagulation, which was causing her hands to turn purple). Katy was also in full kidney failure. On Monday afternoon, she was placed on an air ambulance to Queen's in a medically induced coma. In the meantime, family and friends headed to Honolulu.

While Katy was in a coma in the MICU, Queen's facility dog Ipo came to visit and comforted Katy's two daughters and husband Scott, helping them forget their despair for a moment. "It was incredible," Katy said later, reflecting on the moment via a photo. "It's something that the hospital provided that you would never think they would, but it made such a difference."

Katy's family watched as her hands and feet became more discolored, turn-

ing purple, red, and black. Near the end of the week, Scott asked what could be expected: Queen's very best doctors were treating his wife and doing everything they could under the hospital's sepsis protocol, but if Katy survived, to be prepared that she may lose her hands and feet.

Finally, Katy woke up. When she saw the blackness of hands and feet, she knew they were dead. There was more trauma ahead, including eight days of ICU delirium. But to get her to this point and beyond, Katy had a pulmonologist in charge of her lungs, respiratory therapists to ensure proper venting, a nephrologist monitoring kidney function, infectious disease specialists, internists, wound care specialists who came by day and night, residents, numerous bedside nurses, pharmacists, a nutritionist who diagnosed her as malnourished, an orthopedist to look after her broken foot (though it would ultimately be lost), PTs who came to stretch her calves, OTs who helped her move in bed and teach her to eat with her damaged hands, a psychologist, a social worker, and more. "Queen's was amazing," said Katy. "The people were incredible."

Queen's used its hyperbaric chambers at the Wound Care & Hyperbaric Center to speed the healing of Katy's hands and feet, as well as nitroglycerin treatments on her hands day and night. After three weeks of treatments, her hands were healed, though she would lose her fingertips. Katy's knees had also healed, but her feet were unchanged and she decided to stop treatments. The family moved back to Seattle where they owned a house and have many family members and friends. There she came to terms with amputation and by mid-December had prosthetic legs. Katy was invited to be on the board of directors of Sepsis Alliance, where she now finds a new purpose—to educate people about sepsis.

"It's amazing that [Katy] made it through," said Reid Ikeda, MD, Medical Director of Respiratory Care Services & Medical Internist in the MICU. "Conservatively, the mortality rate is over 40 percent with the sickest patients in septic shock. It was not likely she would recover to this degree. To see her hands the way they are now is truly amazing."

"People who have what [Katy] had are unlikely to survive," agreed Dr. Deendra. "It's a miracle that she is here with us today, is an advocate for survivors of

Sepsis Facts

Sepsis is the body's overwhelming response to infection or injury. It can lead to tissue damage, organ failure, amputations, and death.

Susceptible to Sepsis

Sepsis is more likely to affect very young children, older adults, people with chronic illnesses, and/or weakened immune systems. However, sepsis can affect people of all ages and levels of health.

Symptoms: T.I.M.E.

Temperature: Higher or lower than normal

Infection: May have signs & symptoms of infection

Mental decline: Confused, sleepy, difficult to rouse

Extremely ill: Severe pain, shortness of breath

If you see a combination of these symptoms, especially if there is a recent history of a cut, surgery, invasive procedure, or infection, call 911 or go to a hospital with an advocate and say, "I am concerned about sepsis."

Causes

Viral, bacterial, fungal, or by a parasite that started in a paper cut, bug bite, or a larger infection like pneumonia or meningitis. Sometimes, doctors are not able to determine the cause.

Prevention

Prevent or treat infections ASAP by staying current with vaccinations, having good hygiene, and seeking medical help when you suspect an infection.

Critical Facts on Sepsis

- It's the leading cause of death in hospitals.
- Up to 87% of sepsis cases start in the community.
- The risk of dying from sepsis increases by about 8% for every hour treatment is delayed.
- Over 1.7 million people in the U.S. have sepsis each year; 270,000 people die, more than from prostate cancer, breast cancer, and opioid overdoses combined.
- More than 75,000 U.S. children develop severe sepsis each year, and 6,800 die.
- Up to 50% of sepsis survivors are left with long-term physical (including amputations) and/or psychological effects.
- Over 34% of U.S. adults haven't heard of sepsis.

Sepsis is a medical emergency. If you suspect sepsis, call 911 or go to a hospital right away. Visit www.sepsis.org/references for more information.

Source: Sepsis Alliance at sepsis.org

septic shock, and is promoting sepsis education. Having her brain intact and to be so vibrant and inspirational—that in itself is a miracle."

Since her recovery, Katy attended the wedding of one of her daughters. She spoke at a sepsis summit (watch on YouTube at [rb.gy/ef13it](https://www.youtube.com/watch?v=rb.gy/ef13it)), and is writing a book about her experiences. Katy recently visited Queen's and reconnected with her doctors and other staff, along with a facility dog named Ipo. She says, "My hands will one day hold grandbabies!"

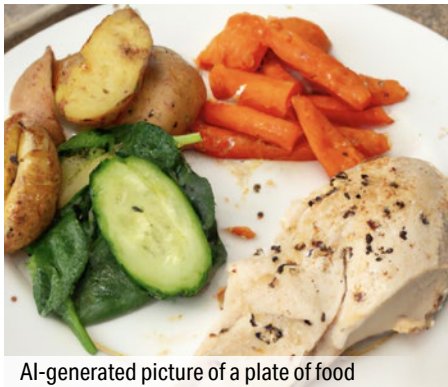
10 Diet & Nutrition Trends in 2023

By Vanessa King, MS, RDN, CNSC, NBC-HWC
QHS Clinical Nutrition Manager

MARCH IS National Nutrition Month. Let's take a look at current nutrition trends.

Artificial Intelligence (AI)

Open.ai's chatGPT and Dall-E, as well as Google's BARD, are a few of the AI products impacting nutrition. Your next article may be written by a large language model rather than a clinician. Ethical concerns and accuracy around AI-generated content continue to be noted.



AI-generated picture of a plate of food

Plant-Based Eating for Kidney Disease

More studies are supporting plant-based eating for chronic kidney disease. Stated benefits include reduced acidosis, more antioxidants, positive gut-microbiome impact from higher fiber, and more phytates and phytic acid which reduce phosphorus absorption. Plant based-proteins such as lentils are encouraged. Iron supplements and multivitamins are still recommended as needed. As food prices soar, plant-based eating continues to grow in popularity as a sustainable eating pattern.

Focus on Behavior Change

A healthy lifestyle is 1% knowledge and 99% habit. We can educate patients, but that alone won't create healthy eating habits. Skill-building and motivation promise to cultivate the self-confidence and self-care needed for sustainable habits.

Social Determinants of Health (SDOH)

It would be amiss to discuss healthy habits without addressing the growing emphasis on SDOH in nutrition. Research shows your zip code can be as important as your genetic code. SDOH environmental factors impact access, availability, and

affordability of healthy food.

Supplements

The U.S. vitamin and supplement market is estimated at more than \$350 billion. Concerns over agriculture practices and quality of soil to grow our food fuel the growth. Farm-raised salmon is believed to have less omega-3 than wild-caught, but recent economic changes have also reduced our ability to purchase wild-salmon. People with food allergies and food sensitivities have also boosted supplements sales.

Lifestyle

A growing body of research shows food as medicine, sleep as medicine, stress management as medicine, and exercise as medicine too. Ideally, lifestyle medicine will accompany medication management rather replacing medication. The whole is greater than the sum of its parts.

Meal Prepping

As the dollar loses purchasing power, meal prepping is an alternative to coping with the economics of dinner. It's a healthy alternative, cost-effective, and reduces food waste. Already a mainstay with elite athletes, it is effective for all. The basics are pantry inventory, menu planning, and grocery shopping. Plan proteins for the week, then starch and vegetables. Make a menu and prep ahead to spend less time cooking before a meal.

Continuous Glucose Monitors for Non-diabetics

Appropriation of the diabetes lifestyle is trending. Maybe it began when Ozempic crossed over as a weight loss drug for non-diabetics. Continuous glucose monitors (CGMs) are being used for weight control by avoiding foods that spike blood sugar. A consult with a registered dietitian can provide training on blood sugar management without a CGM.

Anti-inflammatory Diets

These focus on reducing arthritis, inflammation, and auto-immune discomfort with a diet of antioxidant-rich foods, fiber, phytochemicals such as beta-carotene and lycopene, and omega-3 rich foods to combat chronic, low-grade stress.

Fuel for the Future

National Nutrition Month with QHS Dietitians

March 1 - 31

Registered Dietitian Poster Boards
QMC, Harkness Dining Room

Wednesday, March 1

Fuel for the Future, plant-based recipes
Vegan Power Bowl, sold at lunch
QMC-WO Dining Room

Tuesday, March 7

Plant-based Eating with samples
QMC, Harkness Dining Room, 1:00 - 2:00 pm

Wednesday, March 8

Fuel for the Future, plant-based recipes
Poke Bowl, sold at lunch, QMC-WO Dining Room

Friday, March 10

Snack Station with samples
QNHCH Dining Room, throughout lunch

Tuesday, March 14

Reduce Food Waste & Enact Family Mealtime
Educational information & fruit samples
'Iolani 2 & QET 9 'Ewa. QMC, 1:00 - 2:00 pm

Wednesday, March 15

Fuel for the Future Plant-based recipes
Vegan Curry, sold at lunch, QMC-WO Dining Room

Tuesday, March 21

Healthy Habits Webinar
Online event, 1:00 - 1:45 pm
(Link to be posted in Exchange Admin email)

Wednesday, March 22

Fuel for the Future Plant-based recipes
Vegan Tinola, sold at lunch, QMC-WO Dining Room

Tuesday, March 28

Treats for Blood Glucose Management
Tofu Pie samples, Harkness Dining Room, 1:30 - 2:30 pm

Wednesday, March 29

Fuel for the Future Plant-based recipes
Cheesy Tofu Scramble, sold at breakfast,
QMC-WO Dining Room

Friday, March 31

Snack Station samples
QNHCH Dining Room, throughout lunch

Perimenopause Diets

There is a growing interest in foods for menopause-associated symptoms: weight gain, hot flashes, and sleep disruption. A diet rich in antioxidants, protein, fiber, fluids, and melatonin, with caffeine management and physical activity regimens, are the general guidelines.

Join QHS Registered Dietitians throughout March for non-trendy healthy topics that are delicious, evidence-based, sustainable, and tailored to your unique needs. We promote informed food choices, healthful eating, and regular physical activity habits.



QHS HAS UPDATED its COVID-19 policies to better serve patients and staff. Masks are no longer required in outdoor spaces and non-clinical buildings where no patient care is provided. Caregivers may choose to continue to wear masks as a personal choice in these areas. Masking is still required in all patient care areas, such as patient floors, waiting rooms, and procedural spaces where clinical care is provided, including in hospitals, clinics, and Physicians Office Buildings. QHS will re-evaluate opening break rooms and expansion of seating in the dining rooms.

Daily symptom check-ins through LumiSight are no longer required, but please continue to check yourself for symptoms of illness. If sick, call Employee Health and don't come to work.

Eye protection is no longer required unless caring for a patient who requires eye protection as part of their transmission-based precaution. Unvaccinated staff are no longer required to perform weekly COVID surveillance testing. Instead, they must wear an N95 mask (or equivalent) in all clinical buildings.

Patients are allowed four visitors a day, two at a time. Thermometers used for temperature screenings will be removed from entrances, expediting entry into facilities for visitors and patients.

If you have any questions, please email Todd Allen, MD, at toallen@queens.org or Julius Pham, MD, at jpham@queens.org.

NOMINATE outstanding nurses throughout QHS for a 2023 Nursing Excellence Award. Individual nurse award categories include: MGH Nurse of the Year; APRN of the Year (QHS award); QNHCH Mentorship and Professional Development; and New Knowledge, Innovations & Improvements. QMC/QMC-WO/QUMG/QHS awards include Exemplary Professional Practice; Mentorship and Professional Development; New Knowledge, Innovations & Improvements (individual or team);

Transformational Leadership; Rising Star; I Ulu No Ka Lāla I Ke Kumu ("the branches grow because of the trunk") – Creating a Healing Environment; Nurse Consultant of the Year; APRN of the Year (QHS award); and Queen Emma Nursing Leadership Award. Nomination forms are available on the Queen's intranet at www.queens.org/nursing-awards/awards.html. The nomination deadline is Wednesday, March 15.

QNHCH HAS SEVERAL college scholarship opportunities available. The Peggy Dineen-Orsini Scholarship offers \$2,000 to a resident of Hawai'i County who will be attending a National League of Nursing accredited program. The privately funded scholarship commemorates Peggy, who was a QNHCH RN and is remembered for her compassion toward patients, colleagues, and friends. Hawaii Emergency Physicians Associated offers a \$3,000 scholarship to a graduating high school student who demonstrates financial need and who without assistance would have no opportunity to attend college. Applications and instructions are available at www.nhch.com/news or call Fund Development at 808-881-4420. Completed applications and required documents must be received or postmarked by April 30, 2023.

ALL POB PHARMACIES and the hospital discharge pharmacies at QMC and QMC-WO will be temporarily closed starting late afternoon Friday, March 10, in preparation for Queen's conversion to the new Willow Ambulatory (WAMB) system. All providers should be prepared to send all prescriptions to outside retail pharmacies. POB 1, 2, 3 and QMC-WO pharmacies will STOP collecting prescriptions at 5:00 pm Friday, March 10.

Discharge pharmacies will STOP collecting prescriptions at 3:30 pm on Friday, March 10. We apologize for any inconvenience. Go-live for WAMB starts Sunday, March 12, with operations resuming and business as usual. Thank you for your continued support. Should you have any further questions, please contact Gavin Sanjume at 808-691-4342 for POB Pharmacy questions, or Marcy Rapp at 808-691-4407 for hospital discharge pharmacy questions.