# INSIGHT

TAPPING INNOVATIVE SOLUTIONS & TECHNOLOGY AT JOHNS HOPKINS MEDICINE

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## New Web Portal Hosts Content for Clinicians, from Clinicians

Recent industry trends show physicians spend an average of 11 hours online each week for professional purposes, and more than two-thirds use online videos to stay up to date on clinical information. Johns Hopkins Clinical Connection recently launched as an online clinical resource to physicians and health care professionals around the world.

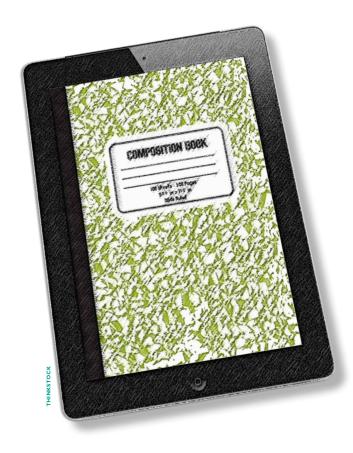
Through videos, news releases, case presentations, articles, and information about clinical trials and upcoming continuing medical education opportunities, the Clinical Connection website shares insights from Johns Hopkins experts on the latest clinical innovations and advances in patient care.

"Every physician's time is limited, and Clinical Connection makes it easy for them to find clinician-focused expertise from Johns Hopkins in one place," says David Eisele, director of otolaryngology-head and neck surgery. "We are using online resources more than ever, and it's exciting to offer Johns Hopkins content in an online space for those who prefer a digital forum." Organized by specialty, the site currently includes resources on gastroenterology, heart and vascular, neurology and neurosurgery, otolaryngology, surgery, gynecology and obstetrics, and patient safety. More specialties and topics will be added.

Physicians and health care professionals can access Clinical Connection for free by creating a username and password at hopkinsmedicine. org/clinicalconnection. Johns Hopkins faculty and staff may use their JHED ID and password to log in.

For questions or to provide feedback, email clinicalconnection@jhmi.edu.





### **A Virtual Journal Club for the 21st Century**



When Tim Plante helped start Wiki Journal Club three years ago, "it seemed like a crazy project," he says. While reminiscing with a former classmate from the University of Vermont, David Iberri, about a wiki in medical school where students shared notes, Plante says a light bulb went off. "Why don't we do it for clinical trials?" he said.

Traditionally, journal clubs meet on a regular basis to evaluate articles in a specific area of academic literature. For medical students, residents and fellows, involvement in a journal club is a standard part of medical training.

Plante, a Johns Hopkins general internal medicine fellow, worked with Iberri and Manuel Lam, Iberri's colleague at Stanford University, to start a virtual journal club, where members could participate at their convenience—when and where they wanted.

Using the same software that powers Wikipedia, the trio created Wiki Journal Club. Members consist of doctors, pharmacists, and medical and pharmacy students who write reviews distilling pieces of medical literature into bite-size morsels.

Each entry includes links to the actual article, PubMed entry and PDF. "We also heavily link to the primary literature of criticisms, like letters to the editor, Cochrane reviews and guidelines," says Plante.

Since its start in 2011, the team reviews an average of four to six new trials per month and now boasts more than 200. In the years that followed the site launch, the trio created apps for Apple and Android.

Sanjay Desai, director of the Osler Medical Residency Training Program, says residents want to learn in brief and in real time. "This adaption of a traditional journal club is great for the current learning environment," he says. "Trainees need immediately applicable content, which is exactly what Wiki Journal Club provides."

The website continues to grow in popularity, and in 2015, Plante estimates the site will receive half a million page views. The apps continue to rank among the top medical apps for sale.

#### To learn more, visit wikijournalclub.org.



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## Acupressure Wristband Prototype Jump-Starts Proper Gut Function



Combining traditional Chinese medicine with modern technology, Jiande Chen hopes to bring relief to millions of people who live with stomach difficulties. Clinical trials are slated for 2015.

As many as one in five Americans suffers from chronic stomach troubles. Ranging from daily upset stomach to heartburn, debilitating vomiting and severe nausea, gastric disorders are common and often difficult to diagnose and treat. For thousands of years, Eastern medicine has treated stomach troubles by stimulating a small spot just below the bend in the wrist.

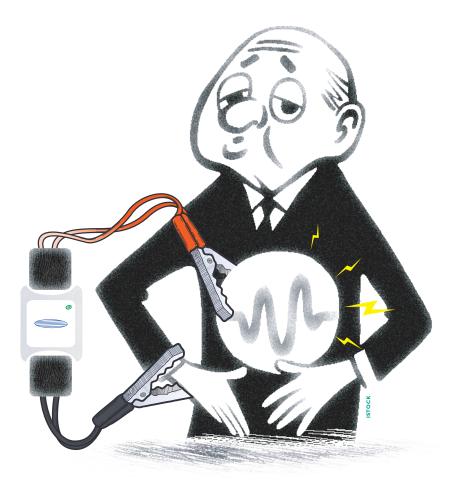
Chen, a professor in the Division of Gastroenterology and Hepatology, is working with researchers, physicians and engineers on a device that's worn like a wristwatch and delivers a faint electrical impulse every five seconds or so to the underside of the wearer's wrist—long known by acupuncturists as the pulse point that regulates stomach function. A kind of pacemaker for the stomach, the wrist device gently jump-starts the stomach's "slow waves" back into a healthy rhythm.

Different than strong, post-meal stomach contractions, slow waves happen about three times per minute in a healthy empty stomach. When those waves fall out of rhythm, the stomach becomes prone to any number of troubles.

Before his slow-wave regulator, Chen pioneered a device similar to an electrocardiograph that measures stomach waves through electrodes placed strategically on the patient's skin. That device, the electrogastrograph (EGG), has become part of the Johns Hopkins Motility Center's arsenal of diagnostic tests, helping physicians solve patients' medical mysteries like gastroparesis and functional dyspepsia.

Though Western medicine has known about the gut's electrical system for almost a century, without an invasive sensor placed deep inside a patient's digestive system, physicians couldn't detect the faint electrical waves. Chen's EGG measurement tool, which produces images depicting the highs and lows of slowwave activity, offers physicians important diagnostic data.

Chen has gotten interest and funding from the National Institutes of Health for his wristworn electrical stimulator. It is set for clinical trials at Johns Hopkins in early 2015.



## Psychiatry App Supports Clinical Decisions

When Joe Bienvenu was a medical resident, he carried small reference guides in the pockets of his white coat. Today, he says, "if you ask medical students to look something up, they use a mobile device."

The times have changed, and now Bienvenu finds himself as one of two editors-in-chief of a mobile and Web reference guide for psychiatry. "Instead of flipping through pages, you can click links to get exactly what you are looking for," says the Johns Hopkins psychiatrist. "Plus, it weighs a lot less than a paper guide."

The Johns Hopkins Psychiatry Guide, also called the Phipps Guide, is preceded by digital clinical decision support guides on antibiotics, diabetes and HIV. Powered by Unbound Medicine and available to view on the Web or to download as a mobile app for Android or Apple devices, health providers now have the most upto-date guidance at their fingertips.

"Primary care physicians prescribe three-quarters of the antidepressants in the United States," says Bienvenu. "I think the psychiatry guide will be extremely helpful to them and other providers seeking evidence-based guidance for diagnosis and treatment."



## How to Create Tailor-Made Web Content

(WWW)

"Who is the audience? Why would they be seeking this content? How will the content be relevant? What's the best way to present it?" These are just a few of the questions the Johns Hopkins Medicine Internet Strategy team asks as they plan and promote new initiatives.

This approach is part of the reason that hopkinsmedicine. org saw the highest percentage increase in visitors among the websites of the top 10 hospitals in the country in 2014. Stacia Jesner, senior Web content strategist in the Marketing and Communications Department, shares one example of how it works.



"Sharon," a young mother of twin girls from Delaware, might read a Johns Hopkins breast cancer

infographic that catches her eye on her personal Facebook feed during Breast Cancer Awareness Month—even though she wasn't thinking about breast cancer. But three days later, when her older sister is diagnosed with invasive ductal carcinoma, Sharon remembers the infographic. This leads her to visit hopkinsmedicine.org, where she reads expert content about symptoms, staging and diagnosis. Then, she investigates treatment options so she can better understand and support her sister.

For example, if a patient reports sadness, a clinician can quickly view the definitions for a major depressive episode versus another depressive syndrome. Providers can review how common conditions are and in what populations, as well as the medical and nonmedical treatments.

Some sections of the guide include additional information on emergency psychiatry, suicidality, homicidality, involuntary commitment and the priority in which the patient needs to be seen. "It can help with triage decisions," says Bienvenu. "When should a referral be made? Does the patient need to be in the hospital?"

Outside of Johns Hopkins, the guides are sold in bundles or as stand-alone products. Inside Johns Hopkins, when logged in to the network, employees with a JHMI email account have free access to content at hopkinsguides.com.

WEB EXTRA How likely are you to use the Johns Hopkins Psychiatry Guide? Tell us by taking the poll at hopkinsmedicine.org/ insight. As a relative, Sharon might also seek out information about breast cancer research. She also may be more vigilant about scheduling her own mammograms and will possibly look into 3-D scans.

Health awareness month content packages and their supporting social media campaigns bring together expert content from all of these Johns Hopkins Medicine points, delivering it in relevant ways for audience members with multiple needs like Sharon. The Web team presents health awareness month packages for diseases like colorectal cancer, diabetes, heart health and prostate cancer. Check out the full lineup at hopkinsmedicine.org/ health/awareness.

"Content is created in collaboration with stakeholders across the institution—clinical faculty, department administrators and researchers," says Jesner. "Grouped in packages, the content is easier to find and presents the multidisciplinary approach many of these complex conditions require, which is the hallmark of Johns Hopkins Medicine's patient-centered care."

To learn how to raise awareness of the condition for which your team provides care, reach out to Johns Hopkins Medicine's Internet Strategy team online at bit.ly/jhmwebrequest, or follow the team on the Left Nav blog at bit.ly/leftnav.