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## THE PROS AND CONS OF ROBOTIC SURGERY

### IT ISN'T A ONE-SIZE-FITS-ALL DECISION. HERE'S WHAT TO CONSIDER BEFORE GOING UNDER THE REMOTE-CONTROLLED KNIFE

Exerts from Stewart Pinkerton's fine article in the WSJ, Nov. 18, 2013) & discussed on Grand Rounds.

You need a hysterectomy, and the surgeon wants to do it robotically. Instead of working directly with his hands, he will sit at a console manipulating a set of robotic arms outfitted with tiny surgical instruments.

**Should you go for it?** You'd be forgiven for some hesitation.

There have been widely publicized horror stories, including patients who have bled out after a robotic instrument inadvertently nicked a blood vessel of those who have been injured in other ways, such as accidental punctures, tears or burns.

The rise of such "adverse events" during various robotic procedures has led to new government scrutiny, as well as a cautionary statement from the American College of Obstetricians and Gynecologists: *Robotic surgery is not the only or the best minimally invasive approach to hysterectomy...nor is it the most cost-effective.*

Does any of this warrant your flatly rejecting robotic surgery? Many experts say NO. Every patient profile is different, and a robot is just another surgical instrument: It's only as good as the surgeon using it. Before making a decision on what kind of procedure to elect, here are some things to consider:

**Why the spike in robotic usage?** Back in 2000, there were only 1,000 robotic surgeries world-wide. That number surged to 360,000 in 2011 and 450,000 last year. Boosters say the practice is on the rise because of its strong benefits. For the patient, there's usually less blood loss, a shorter hospital stay and less reliance on postoperative pain medication. There's also the cosmetic benefit of no big scars. As in laparoscopic surgery, the instruments enter the body through small incisions.

For surgeons, the procedures can be less tiring. They don't have to bend over an operating table—they can sit in front of a screen with a magnified, full-color 3-D view of the surgical field. For maneuvering in very tight spaces, like the back of the throat, the enhanced screen image makes it "much easier to see what I'm doing," says Eric Genden, chief of otolaryngology at New York's Mount Sinai Hospital.

But some doctors say robotics is catching on not just because of its merits—there's a "WOW" factor at work. One surgeon states, "I believe the technique is safe and useful for certain procedures. But, it's spreading too fast. We have a culture that marvels at new technology and a propensity to embrace innovations without a lot of rigorous, standardized evaluation."

Some doctors also say there's an arms race by hospitals eager to attract new patients and get a competitive edge. Highway billboards and websites sometime suggest robots improve cancer outcomes, a claim that many doctors say isn't backed up by studies.

Government officials have shown concern about oversight as well. For example, responding to an increasing number of reports of patient complications from robotic surgery, Massachusetts health officials last



### LATE BREAKING NEWS

**Sunday Grand Rounds** now on 14.342 MHz, 11 am Eastern.  
**Reminder:** All MARCO member dues are now payable in January of each year. If you have paid in advance, or if you do so in the future, the next renewal date will be indicated on your mailing list.

Category II CME certificates will be attached to your *Aether* Newsletter. To receive, make sure your membership is active.

The Hotel, MARCO will be using in Dayton has changed its name from *Holiday Inn Dayton Airport* to *Clarion Inn*. The phone number is the same, 937 832 1234. Dayton is May15-18.

Danny W4DAN, Marco Secretary, reports: "If you received an email, concerning your reservations, do not worry about it. I spoke with the sales representative at the hotel and they assured me that nothing has changed except the name."

Clarion Inn is one of many names in the Choice Hotel group of which Quality Inn and Comfort Suite are members. Choice Hotels offers the "Choice Privilege Reward Program" for those interested.

If members wish to make suggestions, comments, or complaints concerning meeting accommodations, please feel free to do so. Your suggestions will gladly be taken into consideration.

**WRITE TO US!**  
 We welcome your comments.  
 Mail to Marco, P.O. Box 127,  
 Indian Rocks, FL,  
 33785. Email to  
 wahrenbrown@aol.com  
 Letters may be edited for  
 brevity & clarity.

**MARCO NET SCHEDULE**

<u>DAY</u>	<u>EASTERN</u>	<u>FREQ.</u>	<u>NET CONTROLS</u>
Any Day	On the Hour	14.342	Hailing Frequency
Sunday	10:30 a.m. Eastern	14.140	CW Net, Chip, N5RTF
Sunday	11 a.m. Eastern	14.342	Warren, KD4GUA

(Alternate **confidential** Grand Rounds frequency—  
 on or about 14.344 or as announced on the air.)

**MARCO'S CW  
 NET IS NOW  
 CALLED THE  
 "Bob Morgan  
 Memorial  
 Net"**  
 Sundays, 10:30 am,  
 14.140 MHz

**Page 2**

**MARCO Grand Rounds is held Sunday at 11 a.m. Eastern Time; 10 a.m. Central; 9 a.m. Mountain, and 8 a.m. Pacific Coast time on 14.342. You qualify for one hour Category II CME credit with your check-in.**

March sent an advisory to the state's hospitals urging caution: "As with any new technology, care should be taken that protocols are in place to ensure appropriate patient selection and the full explanation of risks and benefits for all surgical operations.

**What about risks?** Reports of adverse robotic events to the FDA are on the rise. Based on a draft analysis of these reports by physicians at Rush University Medical Center, the University of Illinois and M.I.T, there has been a sharp increase in the injury and death rate from robotic surgery to about 50 reports per 100,000 procedures last year from only 13.3 in 2004.

Intuitive Surgical Inc.—the dominant manufacturer of robotic surgery gear disputes this analysis, claiming there isn't any "statistically significant trend."

How should patients weigh all of this? The wisest approach is to have your surgeon explain the alternative procedures, including typical postoperative scenarios and why the suggested approach is the best option in your particular case. No single approach is a one-for-all answer for all conditions requiring surgery.

**How much training is required to perform robotic surgery?** Dr. Makary, the Johns Hopkins surgeon, believes that overall, robotic surgery is safe. But, he says, problems can get magnified if a surgeon doesn't have advanced laparoscopic surgical skills to begin with and doesn't have full command of the device. That means its easier to cause inadvertent injury.

Training protocols vary by hospital. There's no magic number of supervised procedures that must be performed before a surgeon is deemed ready. A sign-off usually comes after a more experienced colleagues or a committee is satisfied with a surgeon's skill set on the machine. This usually follows after about 14 procedures.

**What about the cost?** Generally, robotic procedures cost more than other comparable types of surgery. A study last year by surgeons in Boston showed these average total patient costs for different types of hysterectomies: \$49,526 for a robotic procedure, \$43,622 for abdominal, \$28,312 for laparoscopic and \$31,934 for vaginal.

Bear in mind, though, that patients may end up saving on their overall costs. A robotic procedure may mean less need for pricey items like blood transfusion and post-op pain meds. Patients may also spend less time in the hospital and have a lower chance of re-admission for complications.

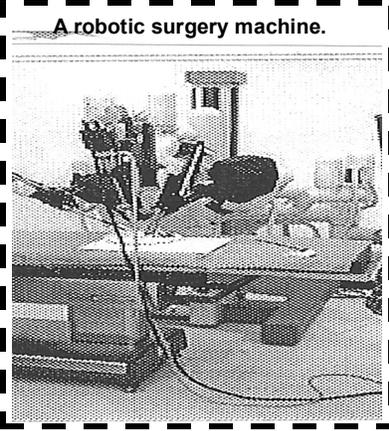
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**U.S. VIEWS SHIFT ON END-OF-LIFE CARE**

Although 2/3 of US residents agree that there are circumstances when a patient should be *allowed* to die, nearly 1/3 believe *clinicians should always do everything possible to save a life*, according to a 2013 survey by the Pew Research Center.

These results suggest a subtle shift is occurring in US attitudes about end-of-life care. The percentage of individuals who support always taking extraordinary measures to save a life has steadily increased in recent years: only 15% reported such a view in 1990 compared with 22% in 2005 and 31% in 2013. Much of this shift may be accounted for by fewer individuals saying they don't know whether physicians should always intervene, but the proportion of those who support the idea of allowing a patient to die declined from 73% in 1990 to 66% in 2013.

A growing majority support an individual's right to commit suicide if they were in pain and had no hope of recovery but doctor assisted suicide is split with 47% approving and 49% disapproving.



**QUESTIONS ABOUT ROBOTIC SURGERY**

**How much does the average robot cost?** About \$1,390,000, while its disposable supply cost is normally \$1,500 per procedure

**How much training is needed to use the robot?** The manufacturers provide training on this new technology, the learning phase is intensive and surgeons must operate on 12-18 patients before they adapt.

**What are the advantages of robot surgery?** Robotic surgery gives the surgeon better control of the surgical instruments and a better view of the surgical site. In addition, surgeons no longer have to stand throughout the surgery and do not tire as quickly. Naturally occurring hand tremors are filtered out by the robot's computer software.

Patient recovery is faster, hospital stay is shorter, there is less blood loss and less scarring.

**What surgical procedures have been performed?** Esophageal, pancreatic, including a Whipple procedure, Coronary MID and Endoscopic coronary artery bypass, Mitral valve repair and replacement, lung resections, tumor resections. Also, bariatric surgery and mastectomy, colon resection, along with gyn procedures such as hysterectomies, total knee and hip replacements, prostate and bladder resections. Also, ablation procedures for arrhythmias and atrial fibrillation.

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**LASER LATEST IN SPACE COMMUNICATIONS**

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The future of space communications may come at the speed of photons instead of radio waves. Researchers for the first time have test communicated with a spacecraft in lunar orbit using a laser system in October and it was highly successful.

Laser wavelengths are 10,000 times shorter than radio wavelengths, delivering much more data than even the best modern radio system yet using less power. On the ground, collecting antennas can be smaller, easier to build and cheaper to maintain.

During the test the Laser Communications Demonstrator (LLCD) beamed data at 622 megabits per second. NASA says that the spacecraft that's carrying this laser experiment would take 639 hours to download an average-length HD movie using the standard S-band radio. LLCD could download the same film in less than 8 minutes.

In 2016, the LLCD will hitch a ride into space on a communications satellite, where it will orbit Earth. In 2017 the LLCD will begin beaming 1.25 gigabits per second of test information from a ground station to the satellite and back to Earth to another ground station. The test satellite will be in orbit for 2-5 years to prove the system is robust enough for commercial use.

## THE CUTTING EDGE E-Cigarettes meeting Heat

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The electronic cigarette, the popular device created as a healthier alternative to smoking is hitting strong headwinds. The three largest U.S. cities—New York, Los Angeles and Chicago—are weighing banning e-cigarettes in places where smoking is prohibited with health officials arguing they are harmful, promote an unsafe habit and are a gateway to smoking.



Three states, North Dakota, New Jersey and Utah ban e-cigarettes in smoke-free venues along with the following cities: Boston, Seattle, Indianapolis, Savannah, Duluth, San Angelo, Gainesville, Pocatello, and Mountain View, CA.

The proposals are the biggest threat yet to what many view as the cigarette of the future in the \$100 billion-a-year U.S. tobacco market.

The public-health debate over e-cigarettes is reaching a boiling point. There is a growing consensus in the scientific community that they are less harmful than conventional cigarettes, which release thousands of toxins through combustion, killing more than 400,000 people in the U.S. annually. E-Cigarette backers argue that they are a powerful tool to wean more than 40 million Americans off smoking, and that there is no evidence vapors are toxic. Critics claim that secondhand vapor is a pollutant. They also argue e-cigarettes serve as a Trojan horse to avoid smoking bans and get more people addicted to nicotine.

E-cigarettes represent only about 1-2% of cigarette sales but the share is growing rapidly with about half of smokers having tried them.

E-cigarette “juice” contains water and propylene glycol, or glycerin, all found in food. But an FDA sample analysis in 2009 found substances including carcinogenic nitrosamines and diethylene glycol, used in anti-freeze.

Few studies exist on e-cigarettes as a quitting tool. A randomized controlled trial of 657 people in New Zealand published this fall found them “modestly effective,” with a 7.3% abstinence rate after six months, roughly the same as FDA approved products such as nicotine patches.

While initial studies suggest secondhand vapor is far less harmful than secondhand smoke, that isn’t the same as harmless. A U.S. study published last week in *Nicotine and Tobacco Research* found e-cigarettes didn’t emit “substantial” amounts of carbon monoxide or toxic volatile compounds and expose people to 10% of the nicotine that conventional cigarettes do.

The New York City Health Commissioner told a packed public hearing this month the city’s ban on smoking in workplaces, bars and beaches should include e-cigarettes. “*If smoking becomes more socially appealing or even glamorous again, we can be virtually certain that smoking rates in teenagers will rise,*” he added.

### COMMAND CENTERS TAKE OVER ICUs

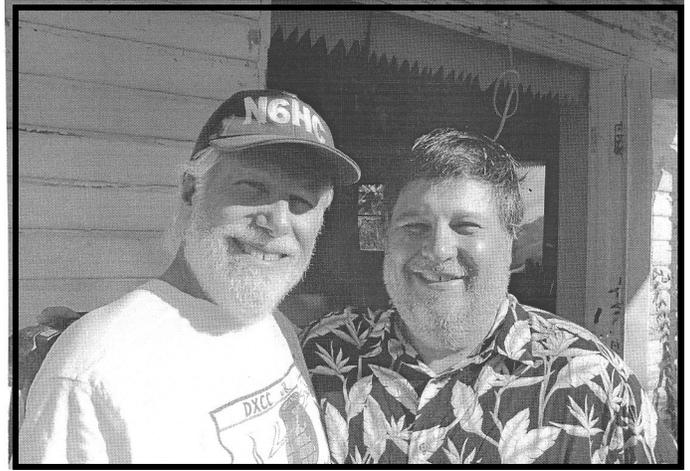
From virtual doctor visits to online diagnoses, information technology is rapidly changing the way patients interact with the health system. An electronic intensive-care unit, or eICU, lets critical-care doctors and nurses check on patients in several hospitals from a remote command center with a bank of monitors displaying patients’ vital signs. They can alert bedside staff if they see a subtle change in a patient that could signal a worsening condition. Remote monitoring by specialists is also catching on for emergency rooms and surgical units to help evaluate patients with stroke, seizures and other conditions.

Patients in a hospital with an eICU program were 26% more likely to survive their stay and were discharged 20% faster than those receiving usual ICU care, according to a study published earlier in December in the journal *CHESTS*. The study analyzed some 120,000 patients in 56 ICUs over five years.

Video cameras can be activated if the remote team needs to visually check the patient, and can be used to check regularly on patients who might be at risk for falls.

The eICU helps especially in rural areas where there can be a shortage of specialists. Phoenix based hospital-and-health system Banner Health currently monitors and supports more than 450 ICU beds across several Western states from command centers in Mesa, AZ and Greeley, CO and even uses some doctors in a Tel Aviv, Israel, center to cover shifts.

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Two happy warriors....Arnold Shatz, N6HC, Santa Ana, CA., and Jay Garlitz AA4FL, Hawthorne, FL. upon their return from the T33A DXpedition to the South Pacific..see you in Dayton

### ENTER YOUR SYMPTOMS; GET YOUR DIAGNOSIS

Patients can crowdsource their symptoms to find a diagnosis. As strange as it sounds, health experts say this may hold promise. On a new website, CrowdMed.com, patients who haven’t been able to get a firm diagnosis can post their symptoms online to crowdsource an answer.

Founded by technology entrepreneur Jared Heyman after his sister Carly went three years with an undiagnosed illness, CrowdMed lets users offer a cash reward that goes directly to the “medical detectives”—be they laypeople or physicians—who help solve their case. Medical detectives may suggest a diagnosis and bet points on others’ suggestions. Each diagnosis is treated as a stock with a share price that moves based on “demand” for the diagnosis. CrowdMed uses an algorithm to calculate the probability of each diagnosis being correct according to betting behavior, ranks the diagnoses from most to least likely and presents the patient with the top 3 to 6. The average reward on the site is currently \$200, the company says. Detectives split the rewards based on how many points they bet on the correct diagnosis.

Mr. Heyman says the idea isn’t to replace doctors, but to come up with a list of possibilities a doctor might not have considered. Before the site launched, doctors diagnosed his sister with a disorder that includes early menopause symptoms. CrowdMed used her case to test the system later and within three weeks it was diagnosed correctly.

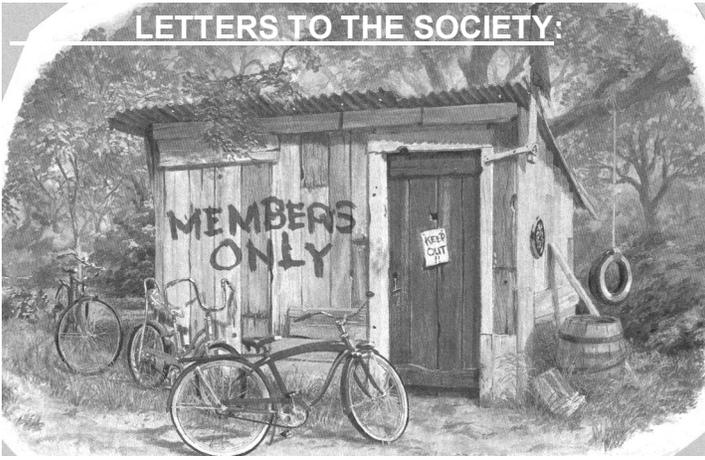
Luke Hoelscher, 31, recently posted his case on CrowdMed.com, after what he describes as several frustrating years of going from doctor to doctor with undiagnosed symptoms that included blurry vision, severe light sensitivity, bodily pain, and fatigue. He is offering a \$500 reward. A former software engineer who can no longer work due to this health issues. Mr. Hoelscher says he has yet to find an answer through the site, but is optimistic.

### CONSULT VIA VIDEO

Hospitals, insurers and health systems are increasingly allowing patients to make an appointment online or consult a physician via video chat. Insurer Cigna, for example, recently teamed up with Sunrise, Fla.-based MDLive to allow some health-plan members to schedule a virtual consultation with a doctor for non-emergency situations such as allergies and sinus infections.

Sharecare, an online health-and-wellness site whose founders include celebrity doctor Melimet Oz, recently launched AskMD, an app that collects information about symptoms, locates doctors, filters results by insurance specialty and distance and directs users to the nearest emergency room if it looks like they need one. Hospital Corp of America, a major hospital chain, is a sponsor of the launch and some of its affiliated doctors and hospitals will be featured.

**LETTERS TO THE SOCIETY:**



**Kudos from : Max Holland W4MEA, Hixson, TN.**

**From Louis J. Lyell, Jackson, MS:** “(Regarding the story of the blind reading paper money, last edition) Several decades ago, before the Euro, I was in Germany or Austria where they had Braille dots on currency. Germany most likely. It seemed such a good idea that I wrote my Senator, whom I know, but I recall no reply.”

**From Max Holland W4MEA, Hixson, TN...**”You have done it again with a very interesting story of Capt. Kurt Carlsen (see story on page 11). I kind of remember the story but I was only 12 years old at the time. I’m looking forward to the rest of the story. Also, never knew that the Capt. was not a crew member but the owner’s representative aboard.. Two items I read as soon as they arrive in the mail. QST and Aether.”

**Malin Dollinger KO6MD in Los Angeles area, California** reports, “I clearly hear WB6OJB (Pacific Palisades, CA), Indiana, Louisiana, Texas but could not hear the master station well enough to detect a “blank spot” to check in.” Malin is using a vertical antenna in a restricted area. **Jeff Wolf K6JW** his Elmer, thinks a 20-meeter dipole would work better. Malin expects to be in Dayton this Spring so maybe we can line him up! Our former Prez. **Harry Przekop, WB9EDP** in Chicago has lost his wallop (not his wallet). Claims he picks up Europe okay but his transmissions south seem to have deteriorated. His **XYL, Ellen KC9ARN** is recuperating from a Colles fracture—we miss the sweet feminine voices of **Linda KE5BQK** in El Paso, **Mary KD8IDW** in West Virginia and Ellen.

**Fred Simowitz K0FS, St. Louis:** Check me in (Grand Rounds, Jan. 4th) via streaming audio. We live in a condo, so my station is at my daughter’s house which is only a block away, but we are being hammered by a foot of snow, high wind, and below zero temps, so I was reluctant to walk over there. As a resident I saw one case of peripheral neuropathy due to industrial exposure to inorganic mercury. What did I learn from it? I wasted a lot of health care dollars for the next 40 years ordering mercury levels on very case of peripheral neuropathy that I saw.



**EDITOR’S NOTE:** Walter Winchell began broadcasting in 1933 to an audience of 25 million people. The Winchell style was unmistakable. He talked rapidly at 197 words per minute..the voice was high-pitched and not pleasant to the ear; but it was distinctive. The staccato quality made every item compelling. He claimed he talked so fast because if he talked more slowly people would find out what he was saying...he began his radio program with a series of dots and dashes operating the key himself. Telegraphers throughout the country complained that what Winchell tapped out made no sense. He realized he hadn’t the faintest knowledge of Morse code but he refused to have an experienced telegrapher provide the sound effects for him. He wrote like a man honking in a traffic jam.



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 The difference between the Sunni & Shiites...The conflict in Syria began as a pro-democracy movement. But as foreign fighters have poured in on both sides the rebellion has changed into a sectarian civil war that other Islamic nations see as pivotal for the entire region. Syria is the only Middle Eastern country that has a majority Sunni population but is ruled by a Shiite minority. The Assads, who took power in 1970, are Alawites, a subset of Shia Islam that broke away in the 9th century. Together with orthodox Shiites, Alawites make up just 13% of the population, yet they have dominated the government, business and the aristocracy. Now that the regime has lost control of half of Syria, the Alawites and other Shiites fear the wrath of the Sunni majority, and they are appealing for help from Shiites abroad. The Sunni rebels have also asked fellow Sunnis for aid.

The **two sides are no more different than Catholics and Protestants.** Both Sunnis and Shiites follow the five pillars of Islam: revering Allah as the only god and Mohammed as his Prophet, praying five times a day, fasting during Ramadan, giving to charity and making a pilgrimage to Mecca. The split occurred in the religion’s infancy. When Mohammed died in 632, his followers argued over whether they should be succeeded by one of his fathers-in-law, Abu Bakr, or by one of his sons-in-law, Ali. Abu Bakr won, and became the first caliph. Ali, whose followers say Mohammed chose him as heir, briefly ruled as the 4th caliph but was assassinated in 661, and his son Hussein was killed fighting for the caliphate in 680.

Why did the split last? It gave both groups their names, a strong sense of identity, and a different style of worship. Shiite or Shia comes from *shi’at Ali*, meaning followers of Ali, while Sunni means those who adhere to the *Sunna*, or sayings of the Prophet. In Shiite eyes, the defeat of Hussein bequeathed them a legacy of oppression and exclusion. They place great emphasis on identifying and venerating Mohammed’s descendants as Alla’s representatives on earth, and that leads them to give the clergy a central role in political life. Shiites are religiously obliged to follow the teachings of their clerics, imams, and ayatollahs. Sunnis, by contrast, have no formally organized clerical hierarchy but see Islam as accessible to anyone who studies devoutly. That belief allows for the rise of extremist fringe groups like *al Qaida*.

Have the two always fought? No. For most of the 20th century, rulers of the Muslim world kept religion and politics largely separate. (An exception was the Saudi dynasty in Saudi Arabia, which promoted Wahhabism, a puritanical strain of Sunni Islam.) The turning point was the Iranian Revolution of 1979 and the emergence of a Shiite theocracy. Since then, Iran has served as a sponsor to embattled Shiite minorities reaching out to Lebanese Shiites, for example, creating and funding Hezbollah, its strongest military proxy.

What does that mean for the region? Big trouble. Saudi Arabia and Iran are competing for influence over the entire Middle East and are willing to fuel civil wars in pursuit of their goals. Many Sunni-ruled nations have large, restive Shiite populations, particularly Bahrain, Yemen, and Kuwait. Sunni rulers fear that these could become radicalized by the Syrian conflict and stage uprisings of their own. King Abdullah of Jordan, a Sunni, has since warned of a *Shiite crescent* spreading across the Middle East. (Information for above taken from THE WEEK, Nov. 1, 2013.)

**Jan. 1, 2014...The day has arrived** when four aspects of the Affordable Act occur. They are:

1. Currently only 6 states require health insurance companies to comply with the “guaranteed issue” principle, that is, the issuance of individual health insurance policies to all applicants regardless of the absence or presence of preexisting medical conditions. Now, all 50 states will enter into compliance—the rating of individual health insurance policies based on medical history or status will become illegal. The extent to which premiums charge can still vary will henceforth be limited to geography, tobacco use and age.
2. All US citizens must purchase a qualified health insurance plan or else incur a tax penalty.
3. The main reason for uninsurance is the unaffordability of health insurance. Now individuals whose annual household income falls between 133% and 400% of the federal poverty line (between \$15,282 and \$45,960 for a single adult) who lack access to other forms of health insurance will be eligible to receive income-based federal tax credits.
4. Now Medicaid will constitute the health insurance option of last resort for nearly all low-income citizens—in participating states. This is not the case at this time. Since its enactment in 1965, Medicaid eligibility has been limited to select segments of the low-income spectrum. For example, able-bodied, low-income adults younger than 65 without dependent children are ineligible for Medicaid in most states. This group represents the largest category of uninsured Americans. Now they will be included.



**Never has the landscape of US health care changed so dramatically in a single day as on January 1, 2014. Whether one cheers or jeers the transformational events of that date, the US health care system will never be the same again.**

**OREO COOKIE ADDICTION IN RATS**

**By Kathleen Megan, McClatchy-Tribune, Submitted by Danny W4DAN**

Oreos may be as addictive as cocaine—to lab rats, anyway. That’s according to new research from Connecticut College that compared rats’ reactions to the sandwich cookies and to drugs.

In a study designed to consider the potential addictiveness of foods with high fat and sugar content, Connecticut College Professor Joseph Schroeder and his students found that eating the cookies activated more neurons in the brain’s “pleasure center” than exposure to cocaine or morphine.

They also found that the association rats formed between Oreos and a feeding chamber were as strong as associations to places where drugs were dispensed.

“Our research supports the theory that high-fat, high-sugar foods stimulate the brain in the same way that drugs do,” Schroeder said. “It may explain why some people can’t resist these foods despite the fact that they know they are bad for them.”

The study was conducted by setting up two adjoining chambers for the rats. In one experiment, rats were given Oreo cookies in one chamber and rice cakes in the other. It was clear, former neuroscience major Jamie Honohan said, that the rats preferred the Oreos, splitting the cookies apart and devouring the cream first and then going on to eat the cookies. They often didn’t bother to finish the rice cakes. Then the food was removed and the rats were given the option of spending time in either chamber. The rats spent far more time in the chamber where the Oreos had been than in the chamber where the rice cakes had been.

In a second experiment, rats were given a shot of cocaine or morphine in one chamber, while they received a shot of saline in the other. Again, the substances were removed and the rats were given the choice of which chamber to spend time in.

The research showed that the cookie-conditioned rats chose to spend as many hours in the Oreos chamber as the drug-conditioned rats spent in the chamber where drugs had been injected.

In a second part of the research, Schroeder and his students measured the increased neuron activity in the part of the brain that registers pleasure—and the cookies activated significantly more neurons than the drugs.

“This correlated well with our behavioral results and lends support to the hypothesis that high-fat, high-sugar foods are addictive,” Schroeder said.

**Hypothermia** is a condition in which core temperature drops below the required temperature for normal metabolism and body functions which is defined as 97.7 degrees F to 99.5 degrees F.

**Classification:** Other cold related injuries that can be present alone or in combination with hypothermia include: **Chilblains** or superficial ulcers of the skin that occur when a predisposed individual is repeatedly exposed to localized areas. **Frostbite** involves the freezing and destruction of tissue. **Frostnip** is the mildest cold injury, a superficial cooling of tissues without cellular destruction. Rewarming usually causes pain. **Trench foot** or **immersion foot** is due repetitive exposure to wet, non-freezing temperatures and is more prevalent in those wearing tight fitting boots.

**Pernio** is often referred to a vasculitis most common among young females with a history of Raynaud’s phenomenon. Nifedipine 20 mg po may be effective.

**Signs & Symptoms:** **Mild**, shivering, hypertension, tachycardia, tachypnea & vasoconstriction. **Moderate**, violent shivering, muscle mis-coordination, stumbling and confusion. Patient becomes pale, lips, ears, fingers and toes may become blue. **Severe**, vital signs slow down, walking impossible. Stupor and cardiac arrhythmias follow.

**Paradoxical undressing** may occur in 20-50% of severely confused patients. **Alcohol** consumption increases the risk of hypothermia via its action as a vasodilator. It increases blood flow to the body’s skin making a person feel warm but increasing his heat loss.

**Management:** Rewarming can be achieved using a number of different methods. Dry clothing and movement generate heat, placing hot water bottles under both armpits and groin. Giving warm fluids I.V., (5% dextrose in normal saline) irrigation of body cavities with warm fluids and warm humidified air helps.

Defibrillation may be needed if the patient has developed an arrhythmia.

There is considerable evidence that children (and rarely adults) who suffer near-drowning accidents in water near 32 degrees F can be revived over an hour after losing consciousness. The cold water lowers metabolism, allowing the brain to withstand a much longer period of hypoxia. While survival is possible, mortality from severe or profound hypothermia remains high despite optimal treatment. Studies estimate mortality at between 38% and 75%. If there are obvious fatal injuries or the chest is too frozen, compression resuscitation is futile.

**DISSOLVING HEART STENT**

**U.S. clinical trials began in 2013 with FDA approval expected in 2015. If the stent allows a patient’s artery to fully heal and return to its normal state, it could revolutionize patient care.**

A stent the size of a ballpoint pen’s spring, delicate enough to hold a cardiac artery open after surgery, it dissolves in the body, enabling more natural recovery without the threat of long-term damage from a standard metal stent.

The stent has been implanted in tens of thousands of patients in India, Hong Kong, Malaysia and New Zealand, as well as parts of Europe and Latin America.

About 1 million US patients receive them each year. The cost? An average price of about \$1,800 by 2016, compared with \$1,100 for a metal stent.

The disappearing stent is made of biodegradable plastic. The stent starts to dissolve after six months and is fully absorbed into the body in about two years, allowing arteries to heal naturally and reducing the risk of stent-induced blood clots.

**WHY NOT SEND A HAM FRIEND  
A MEMBERSHIP IN MARCO, \$15.**

**NOT RESTRICTED TO MEDICS. ANY HAM WHO IS A POTENTIAL PATIENT IS ELIGIBLE.**

**Keep MARCO vibrating.**

Questions over the past few months about whether fish consumption (*one pound of cold-water, fatty fish per week*) have changed since the Fukushima disaster. You may have seen reports in the media about the discovery of radioactive isotopes (*cesium-134 and cesium-137*) in Pacific bluefin tuna that migrated from Japan to California waters. This was covered by more than a thousand newspapers worldwide and several thousand internet, TV and radio outlets.

Unfortunately, despite statements by the authors of the original research to the contrary, these media reports led to widespread belief that fish on the Pacific coast of the U.S. now contain harmful levels of radioactive chemicals.

Due to radiation fears, Fukushima Prefecture fishermen have to dump most of their catch. Two years into the nuclear disaster, the world is growing weary of Japan's seafood, with South Korea even banning Japanese fish and seafood imports. Fish has traditionally not only been an integral part of Japanese food culture but also one of its prized exports. In 2011, before the Fukushima disaster, Japan maintained one of the world's largest fishing fleets and accounted for almost 15% of global catches. Fish factories around the Fukushima prefecture now have to take radiation measurements. *"We're taking samples from every catch we make and if we ever find even the slightest trace of radiation, we'll destroy the whole catch. So far there has been none, this fish is safe. But Japanese fishermen can't convince customers that their fish is safe, even though authorities insist they're doing their best to show they've got a grip on the problem. Most of the fish caught within the 30 kilometer radius is thrown into the garbage because it is radiated.*

While it's natural and appropriate to be concerned about radiation, in this case the concern is unfounded. A recent peer-reviewed study published in the Proceedings of the National Academy of Sciences evaluated the health risks of consuming Pacific bluefin tuna and found the following:

**A typical restaurant-sized portion of Pacific bluefin tuna (200 grams or 7 ounces) contains about 5% of the radiation you would get from eating one uncontaminated banana and absorbing its naturally occurring radiation. All foods on the planet contain radiation. Like every other toxin, it's the dose of radiation (rather than its simple presence) that determine whether it's toxic to humans.**

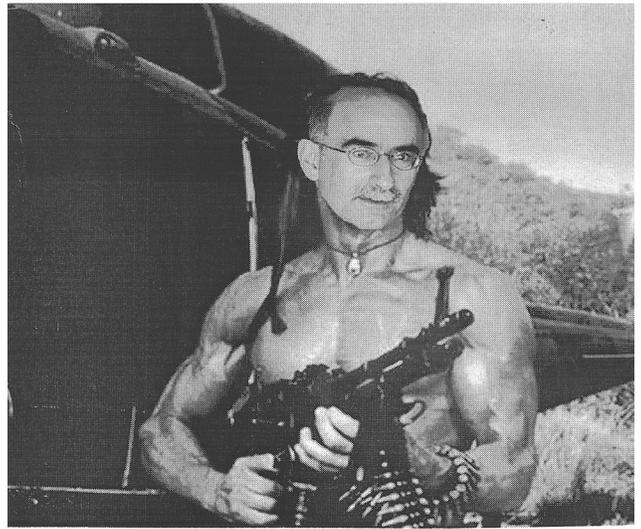
**Even at very high intakes (3/4 of a pound of contaminated bluefin tuna a day) for an entire year, you'd still receive only 12% of the dose of radiation you're exposed to during one cross-country flight from L.A. to N.Y. Some bottom-feeding fish right off the coast of Japan contain much higher levels of radiation than those found in Pacific bluefin tuna. Even if you consumed 1/3 of a pound per day of this highly contaminated fish, you'd still be below the dose limit for radiation exposure from food.**

We must however, keep in mind that the increase of radiation into the ocean is rising. A click or two at a time, but we must keep a vigilant eye on this. Radiation is accumulative. It will not go away in your lifetime. You get to keep what you get. Therein lies the rub.

Japan isn't the only problem. The Vermont Dept. of Health confirmed that more fish in the Connecticut River have tested positive for a radioactive isotope linked to leukemia and other cancers. Strontium-90 have been found that is NOT related to the nearby nuclear power plant that runs the river's water through its machinery as part of everyday operations. Radioactive fish were found in May 2010. At that time, the nearby nuclear plant, Vermont Yankee, was in the midst of a cleanup of another radioactive material called tritium. However, health officials say that the plant does not appear to be the cause of the radioactive fish. Where is it coming from? Nuclear weapons tests and other fallout like Chernobyl officials say. But that doesn't mean you can't eat the Connecticut River's catch. According to an ABC article, strontium-90 has been collecting in all kinds of fish all over the globe. In terms of consumption mercury is a much bigger concern.

**What about mercury contamination in fish?** Commercially caught seafood has always contained trace amounts of organic methylmercury caused by underwater volcanic activity occurring for millennia. That amount has been consistent over the years and does not seem to be increasing.

The consumption of fish is by far the most significant source of ingestion related mercury exposure in humans, although plants and livestock also contain mercury due to bioconcentration of mercury from seawater, freshwater, marine and biomagnifications by ingesting other mercury containing



**Dr. Bruce Small, KM2L, after his rehabilitation trip to Peru and the Galapagos Islands. He is garnering his new automatic typewriter he picked up at a Peruvian flea market.**

organisms and from breathing air from improper disposal of fluorescent lamps.

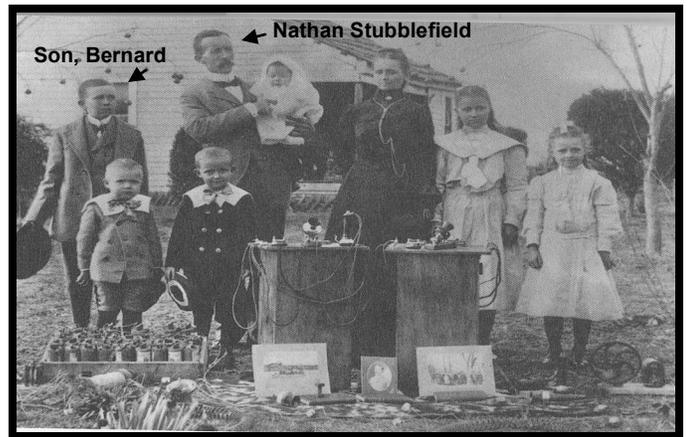
Human-generated sources, such as coal-fired power plants, emit about half of atmospheric mercury, with volcanoes responsible for the remainder

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**MEET NATHAN STUBBLEFIELD,**  
**RADIO'S TRUE INVENTOR.**

He was a lonely, impoverished hermit when he was found starved to death in a shack near his hometown of Murray, KY, in 1928. His body went into an unmarked grave. The world had forgotten Nathan B. Stubblefield, who had invented the radio!

It was about 1890, when the Italian wizard Guglielmo Marconi was still in his teens,



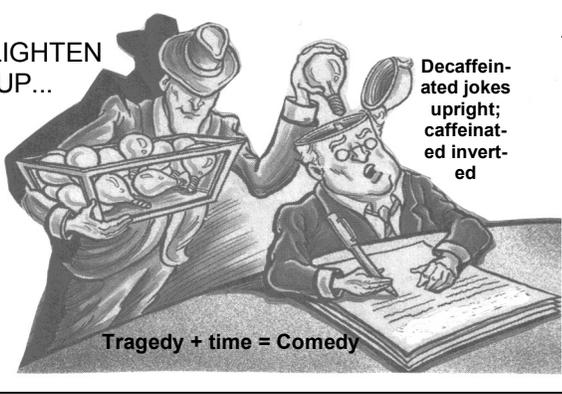
that Stubblefield demonstrated his wireless telephone for a few friends on his farm. He filed no patent then, just went on tinkering. Finally, on Jan. 1, 1902 (*less than a month after Marconi had transmitted the letter "S" across the Atlantic in Morse code*), the Kentuckian got around to a public demonstration. About 1,000 friends and neighbors watched in amazement as, speaking softly into a two-foot-square box, he was heard at half a dozen listening posts around town. Then his 14-year-old son, Bernard, whistled and played the harmonica. Later that year Stubblefield gave a more impressive and better publicized demonstration in Washington, D.C. from a steam launch on the Potomac River.

At this point, the inventor should have capitalized on his ingenuity. He did patent his wireless telephone and from a company to promote it, but it never did anything more than sell stock.

Marconi, known today as the father of radio, actually pioneered wireless telegraphy, the transmission of Morse code. Stubblefield sent voices and music over the air. In a 1908 patent he described how to put radios in horseless carriages, making him the father of the car radio—another invention that did not make him rich. In fact, none of his inventions, including a battery devised for radios, made much money.

His marriage later broke up, his house burned down, and his spirit withered. Still, he continued to work on new inventions. But shortly before this death he destroyed them all and burned their plans.

LIGHTEN UP...



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HISTORY OF THE MEDICAL AMATEUR RADIO COUNCIL

In the fall of 1965, at the Astor Hotel in New York City, Dr. William L. Sprague WA0CRN, held a meeting of physicians and dentists interested in exploring the formation of a medically oriented amateur radio operators organization. A group of 95 members was organized. The organization was formalized at a meeting in New York on April 16, 1966. M.A.R.C.O. was chartered as a Corporation in the State of New York.

Marco is basically interested in medical and technical education and help to the less fortunate using our MediShare division. We offer one hour of category II CME for check-ins to our weekly Sunday "Grand Rounds of the Air," on 14.307 at 11 am Eastern time.

One word or two? An elderly couple had been going out with each other for a long time. Before the wedding, they went out to dinner and had a long conversation regarding how their marriage might work. They discussed finances, living arrangements and so on. Finally he asked "How do you feel about sex?" "I would like it infrequently," she replied. The old man pondered, "Is that one word or two?"



In a dark and hazy room, peering into a crystal ball, the mystic delivered grave news: "There's no easy ws to tell you this, so I'll just be blunt. Prepare yourself to be a widow. Your husband will die a violent death this year." Visibly shaken, Laura stared at the woman's lined face, then at the single flickering candle, then down at her hands. She took a few deep breaths to compose herself and to stop her mind racing. She simply had to know. She meet the Fortune Teller's gaze, steadied her voice and asked, "Will I be acquitted?"

MY SURGERY.....When I first noticed that my organ was growing larger and staying erect longer, I was delighted as was my wife. But after several weeks, it had grown fifty centimeters. I became quite concerned. I was having problems dressing and even walking. So the wife and I went to see a prominent urologist. After an initial exam, the doctor explained to us that, though rare, My condition, called Donkey Doodle, could be fixed through corrective surgery. "How long will he be on crutches?" my wife asked anxiously. "Crutches? Why would we need crutches?" responded the doctor. "Well," said the wife coldly, "You're gonna lengthen his legs, aren't you?"

Confucius Say: "It's okay to let a fool kiss you, but don't let a kiss fool you."

My Living Will...Last night, my kids and I were sitting in the living room and I said to them, "I never want to live in a vegetative state, dependent on some machine and fluids from a bottle. If that ever happens, just pull the plug." They got up, unplugged the computer and threw out my wine. The little bastards!

Sometimes I laugh so hard the tears run down my leg!

For all of you with any money left, be aware of the next expected mergers so that you can get in on the ground floor and make some BIG bucks

Watch for these consolidations in 2014:

Hale Business Systems, Mary Kay Cosmetics, Fuller Brush and W.R. Grace Co, will merge and become: Hale, Mary, Fuller, Grace.

Polygram Records, Warner Bros., and Zesta Crackers join forces and become: Poly, Warner Cracker.

Zippo Manufacturing, Audi Motors, Dofasco and Dakota Mining will merge and become: ZipAudiDoDa.

FedEx is expected to join its competitor, UPS and become: FedUP.

Grey Poupon and Docker Pants are expected to become: PouponPants.

Victoria's Secret and Smith & Wesson will merge under the new name: TittyTittyBangBang.

TIME TO GROAN !

I know a guy who's addicted to brake fluid. He says he can stop any time....I stayed up all night to see where the sun went. Then it dawned on me..... I didn't like my beard at first, then it grew on me.... Did you hear about the cross-eyed seamstress who couldn't mend straight? I dropped out of communism class because of lousy Marx.....All the toilets in New York's police stations have been stolen. Police have nothing to go on....Earthquake in Washington obviously government's fault. Be kind to your dentist....he has fillings too.... I used to be a banker, but then I lost interest & When you get a bladder infection, urine trouble.

Hi, I'm Bruce



**MEMORIES OF YEARS AGO IN**

**MARCO**

Our History Book

*Bruce Small, KM2L*

Marco Webmaster

**TWENTY FIVE YEARS AGO IN MARCO**

Newsletter Editor Ed Briner WA3TVG reported in the January 1989 MARCO Newsletter that he adventured forth into the exciting new arena of desktop publishing. He also wished members a happy New Year. Ed reported that the organization appeared healthy and that net participation was booming.

We welcomed new members Patrick Thomas N5MMW, Maria Evans KT5Y, John Walterscheid N0HEN and Merrill Knopf, W6LRN. Raphael Escoc WA2MMT contributed a story about Mahlon Loomis, an early experimenter in wireless communication and also a dentist. Loomis coined the term "aerial" in reference to an antenna.

**TWENTY YEARS AGO IN MARCO**

The January-February 1994 MARCO Newsletter was the first in a series of compact 7 x 8.5 inch issues. The reason for the change, explained WA3TVG, is that this format fit the paper tray size of his newly-acquired HP laser printer. So, instead of sending the copy out for printing, he did the publishing directly in his basement. Page 2 was graced by a photo of Bob Morgan VE3OQM and his wife Marian.

Ron Lewy K2AIO contributed a piece about EMF exposure, concluding that not enough was known about its effects. An article entitled "Do you Know What the Competition is Doing" surveyed alternative medicine approaches to the treatment of the common cold. Secretary Bill Sprague WA6CRN sent a letter from Yuri Medinets UB5UG, an engineer at the Ukrainian Research Institute of Oncology and Radiology. He described using RF to enhance tumor cell uptake of chemotherapeutic agents.

**FIFTEEN YEARS AGO IN MARCO**

The January-February 1999 issue of the MARCO Newsletter featured a complaint about poor propagation adversely affecting the 40 meter MARCO Net. Bruce KM2L presented a detailed computer analysis using VOCAP indicating that the recent change in net time to one hour earlier was in fact, a very good idea in addition, rising sunspot numbers should help conditions to improve.

The MARCO Grand Rounds of Oct. 11, 1998 on myeloproliferative disorders was reprinted. This is interesting reading, in that a scant 15 years ago there was no mention of the JAK gene mutations that underlie many of the syndromes, or of current highly effective treatments such as imatinib (Gleevec) and its congeners.

"MARCO Minutes" started appearing on the email reflector.

These medical news tidbits were primarily the products of Warren KD4GUA and Smitty W6JZU's efforts, and several were included in the NL. Sample topics included "Vaccine found helpful in colon cancer," "Combination nicotine Rx works best" and "Canadians running south for Viagra."

**TEN YEARS AGO IN MARCO**

The February 2004 edition of the MARCO Newsletter led off with a discussion of prospects for prolonging life. One item was the "polypill," a combination statin, thiazide, ACE-inhibitor, calcium channel blocker, folic acid and low-dose aspirin. Stopping aspirin (bad idea) and a new treatment for heart failure were also part of the discussion. This theme continued with KA7LOT's review of aging and senescence.

Smitty W6CS retold the story of the Jonestown massacre and MARCO's peripheral involvement. Dr. Larry Schact, the doctor at Jonestown, claimed to be WB6MID/8R3, and at one time applied for MARCO membership.

**FINAL 2013 CME RANKINGS**

**8 BOB CURRIER MARCO GRAND ROUNDS OF THE AIR**

14.342, Sundays, 11 a.m. Eastern, One Hour Cat. II CME

CALL HRS NAME QTH  
Because of poor propagation we may have missed you—please correct by sending to [warenbrown@aol.com](mailto:warenbrown@aol.com)

KD4GUA	44	Warren	Largo, FL
KG6DQF	43	Glen	Palo Alto, CA
KC9CS	42	Bill	Largo, FL
NU4DO	42	Norm	Largo, FL
W1BEW	41	Bobbie	Tennessee
KNOS	40	Dave	Virginia
N2JBA	40	Ed	Amenia, NY
KM2L	37	Bruce	Clarence, NY
WB6OJB	37	Arnold	Pac.Pal., CA
KA4JWA	37	Jim	W. Virginia
N6DMV	37	Paul	Torrance, CA
K9CIV	36	Rich	Knox, IN
W4DAN	36	Danny	Cleveland, TN
N4TSC	35	Jerry	Boca Raton, FL
N5RTF	35	Chip	New Orleans, LA
W6NJY	35	Art	Beverly Hills, CA
WB5BHB	35	John	Vancleave, MS
KK1Y	35	Art	Seminole, FL.
WB1FFY	33	Barry	Syracuse, NY
WA1EXE	30	Mark	Cape Cod, Mass
N4MKT	30	Larry	St Petersburg, FL
KD8IDW	29	Mary	W. Virginia
N9YZM	28	Mike	Crystal Lake, IL
WA9HIR	27	Bill	Berwyn, IL
N9RIV	26	Bill	Illinois
KE5SZA	24	John	Marietta, OK
N2OJD	24	Mark	Sidney, Ohio
N4DOV	22	David	Ft. Lauderdale, F
AE4BX	22	Mary	Myrtle Beach, SC
WA3QWA	21	Mark	Chesapeake, VA
W1RDJ	21	Doug	Cape Cod, Mass
KD5QHV	21	Bernie	El Paso, TX
K0FS	21	Fred	St. Louis, MO
KE8GA	19	George	Fairview, NC
W0RPH	18	Tom	Denver, CO
W3DRB	17	Miles	Elizabethtown, PA
K1WDR	17	Wayne	Connecticut
N9GJ	17	Greg	Cleveland, TN
W8LJZ	17	Jim	Detroit, MI
K6JW	16	Jeff	Palos Verdes, CA
KB5FLA	15	Rich	Arkansas
W2PAT	14	Marvin	S. Carolina
N5AN	14	Bud	Louisiana
WB9EDP	13	Harry	Chicago, IL
WB2MXJ	8	Joe	New Orleans, LA
KG6JLE	8	Paul	Atherton, CA
KE5BQK	6	Linda	El Paso, TX
K4RLC	6	Bob	Raleigh, N
K3IK	5	Ian	Shavertown, PA
W4TX	5	Doc	Dixie

YEAR	TOTAL CHECK-INS	AVERAGE PER SUNDAY
1998	694	14.46
1999	766	15.95
2000	1,035	20.29
2001	1153	22.60
2002	1383	26.15
2003	1489	28.63
2004	1534	29.50
2005	1517	29.17
2006	1531 (one extra Sunday)	28.89
2007	1591 (one extra Sunday)	30.02
2008	1524 (Only 46 nets)	33.14
2009	1533 (46 nets)	33.32
2010	1591 (44 nets)	36.22
2011	1514 (44 nets)	34.41
2012	1602 (44 nets)	36.41
2013*	1400 (44 nets) (New Freq)	31.82 (Year of Terrorist)

Record number of stations checked-in was 51, on Feb. 24, 2013

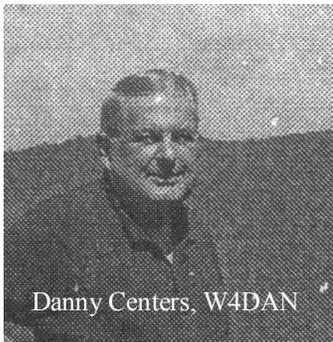
\*This was the year we had to change frequency due to the terrorist, thus losing a lot of stations in the freq. shift.

## TOPSI TURVEY

By Danny Centers, W4DAN

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You may have noticed that Solar Cycle 24 seems to have finally reached a peak after many earlier mis-leading predictions indicating that it should have happened as early as two years ago. This led many to believe that the cycle was really a big "fizzle." In November and December 2013, and January 2014 the bands were very alive with lots of DX on 10 through 20 meters, plus absolutely great DX on 40 meters. The DX on 80 meters was pretty good too.



Danny Centers, W4DAN

According to reports from NASA, the sun very recently made a complete magnetic field reversal. The north and south magnetic poles of the sun have swapped places. This marked the midpoint of Solar Cycle 24. This phenomenon occurs during each solar cycle when the sun's polar magnetic fields weaken to the point that no fields are detectable. Soon afterward, the fields reappear, and emerge as reversed polarities on opposite sides of the sun's sphere. This is what happened in late December 2013.

In remembering past solar cycles, we all reminisce about how strong DX signals were on the upper bands during the peak. Well, it seems that it is happening again, even though according to many predictors, it is occurring late. What seems to have been left out of the earlier prognostications is the history of the sun's magnetic field reversals that always occur during each solar cycle. This event for Cycle 24 stalled for a while during the developing stages of the reversal, and took more time than usual to transpire. It is surprising that this fact got little attention while many thought the peak had passed based on the time frame alone. By this, I mean the time from the beginning of the cycle to the time of the peak.

The sun's magnetic influence, known as the heliosphere, reaches billions of miles beyond Pluto. When the sun's magnetic fields change, the ripple of the event extends to the edge of interstellar space. Though no catastrophic repercussions for the galaxy occur during this change, cosmic rays are emitted that can possibly interfere with space exploration, and cause danger to astronauts and space probes. Some researchers say the Earth's climate is affected when the reversal happens.

The aurora borealis and the aurora australis are set to become broader, more frequent, and more visible when this event reaches its final stages. Enjoy the good propagation, the northern lights, and the southern lights as we slide down the far slope of Cycle 24.

\*\*\*\*\*

**James Bond**, after British scientists analyzed the vast amounts of alcohol quaffed by the superspy in Ian Fleming's novels, and concluded 007 would develop "alcoholic liver disease, cirrhosis, (and) impotence," and would probably die at age 56.

RADIO REFERENCE BOX	
Ultra-Low Frequency.....0 to 30 KiloHertz	
Low Frequency (LF).....30 to 300 kiloHertz	
Medium Frequency.....300 to 3000 KiloHertz	
High Frequency (HF).....3 to 30 MegaHertz	
Very High Frequency (VHF).....30 to 300 MegaHertz	
Ultra High Frequency (UHF).....300 to 3000 MegaHertz	
Audio Frequency (ability to hear).....20 to 20,000 Hertz	
Radio Frequency.....20,000 Hertz plus	
*****	
60 Hertz = Power Lines	
200-500 Kilo (thousand) Hertz = Navigation Beacons	
All below are known as High-Frequency (HF) Bands	
*****	
1.8-3 Mega (million) Hertz = 160 Meter Band	
3.5 to 4 MHz = 75/80 Meter Band (126' dipole)	
7 to 7.3 Megahertz = 40 Meter Band (66' dipole)	
10.1 to 10.150 Megahertz = 30 Meters (CW & FSK only)	
14.0 to 14.350 Megahertz = 20 Meter Band	
18.068 to 18.158 Megahertz = 17 Meter Band	
21 to 21.450 Megahertz = 15 Meter Band (22' dipole)	
28 MHz to 29.7 MHz = 10 Meter Band (17' dipole)	
40, 20, 17, 20, 28M are called "short-wave bands"	
*****	
All below are known as Very-High Frequency (VHF) Bands	
*****	
50.1 to 54 MHz = 6 Meter Band (Radio Control Models)	
54 MHz = Television Channels 2 to 6	
72 MHz = Radio Controlled Models, 1 Watt output	
88 MHz to 108 MHz = FM Commercial Radio	
108 MHz = Aircraft frequencies begin.	
144 to 148 MHz = 2 Meter Band (Satellite & Repeaters)	
222 to 225 MHz = 220 Band (FM Repeaters)	
*****	
All below are known as Ultra-Hi Frequencies (UHF)	
*****	
420 to 450 MHz = 440 Band (Amateur TV)	
470 MHz = Television Channels 14-69	
825 MHz to 870 MHz = Cellular Phones	
*****	
All below are known as Super-Hi Frequencies (SHF)	
*****	
2450 MHz = Microwave Ovens	

## THE PREZ SAYS:

By Dr. Mary Favaro, President of Marco

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Recently I spoke with Sister Connie Fahey, who was one of the organizers for the donations to the Solwezi hospital in Zambia. She reported that the three laptops we donated have been put to good use in the hospital. They are used to follow inventory both for general items and in the pharmacy as well as for correspondence, record keeping and billing purposes. They are a long way from computerized records at this point.



The contents of this 40' container provided almost untold riches to this very impoverished hospital and school. The school children in Wisconsin collected pencils, the schools donated used books and paper. Women in the mid west donated treadle sewing machines with instruction and gave native women a way to have an employable trade. The men donated many



Sisters at St. Francis Mission Clinic with the new MARCO-sent laptop.

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tools which were used to dig wells and build modest shelters.

The used hospital equipment came from a surplus storage area in Springfield, IL. Hospital beds, chairs, tables, bedside stands, gowns, latex gloves and medical equipment were included. This material was all packed in the container which was crowded from top to bottom. A parish in Janesville, WI paid for the shipping and insurance of the container, others met it in Africa, paid customs and followed the overland trip to the hospital.

Even the empty container has been put to good use, it has been used as an office on the grounds of Bishop Kasonde. Although the government builds the hospital and school buildings the Catholic Church provides much of the actual operation. And all this is on a shoestring budget. The average weekly collection in the parishes is less than \$2 and from this the priest must support himself and buy gas. The bishop gets a limited amount of money from Rome and uses it to help where he can for the 40 priests in his care, so all was very appreciated and our gifts made many deserving people very happy.

*Mary Kaye Favaro, AEAEBX, Prez.*

**Mars One narrows applicants...**More than 200,000 people signed up for a 1-way trip to the red planet with Mars One, but only 4 will be selected for its 1st crew. The company narrowed down the applicants to 1,058. Of those selected applicants, 55% are male 45% female 63% of them have at least a bachelor's degree vs. the 7% of people on Earth with a degree. 76% of the selected applicants had jobs while 15% were still in school; 43% came from the Americas with the U.S. Accounting for 28% of selected applicants.

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### NEW ELECTRIC FORK

Eat too fast? The new \$100 HAPIfork from Hapilabs vibrates in your mouth when you eat too fast and wirelessly reports your habit to your smartphone. It will help you eat slower, curb your appetite and lose weight.

In recent years, the term *biologics* has come to be synonymous with protein-based therapeutics that are produced using living organisms. Compare with more traditional small-molecule drugs like aspirin, biologics are inherently more complex and cannot be synthesized in a laboratory by chemical means alone.

On Dec. 7th, 2013, we discussed on MARCO Grand Rounds where the complicated names of biologics came from....infliximab (*Remicade*), etanercept (*Enbrel*), etc. Little did we know that we had an expert in the audience, Dr. David Justis, MD, PhD, FACEP, KPAAEM Emeritus and also known as KNOS/4 Virginia, who kindly submitted the below.....

I enjoyed your review of the pharmaceuticals this past week and after years doing research in medicinal biochemistry had to chuckle at some of the names and how they are arrived at. To share a few examples: Most of the generic names follow standard nomenclature such as ACE inhibitors end in “*pril*” and Betablockers end in “*olol*” so when we hear the name we can recognize what class of medication it is.

The chemical names often have Latin roots as well for those of us who enjoyed 4 years of that ancient language in high school...ubi ignus ist (*where is the fire?*)

One of the first chemicals I worked on for the Petroleum Research Foundation and National Science Foundation, was called “norbornene aziridine...the azide part of the name tells us that it contains a nitrogen in a tight 3-membered ring and the “-ene” suffix tells us that the double heptane ring is not fully saturated.

Later at the University of Iowa in the mid-60’s, I worked on a pyridimine carbamate drug that was a choline esterase inhibitor that was to become **Robaxin**, the centrally acting muscle relaxant though when we were compounding it—it was for wartime use as a nerve agent. While in grad school at the University of Cincinnati and doing consulting for Eli Lilly, I learned that the cancer drug Vincristine (*Oncovin*), was derived from the Vinca vine, hence the name Vincristine and the name Oncovin seemed logical to us.

Later, I worked on Verapamil (*Calan & isoptin—a CA++ Channel blocker*) and did dose ranging studies on Diltiazem (*Cardizem*)....I was on the naming committee as well for these still useful medications. The sales people come up with the Trade names after doing market research.

Much of my research was in the heparin family, from initial work in Ubiquinone biosynthesis by gut organisms (*Vitamin K, Aquamephyton*), to species differences in bovine vs porcine derived natural extraction and later the whole field of low molecular weight heparins: *Enoxaparin—with the root name “-parin”, (Lovenox, Xaparin and other names in Europe now)* I was on the naming committee of many of these chemicals derived from natural products or produced by *E. Coli* or by recombinant DNA technology after serving on the National Speakers bureaus. Genentech and its famous tPA (*Alteplase & Tenecteplase TNKase*) hired consultants to help name their products Humulin was one sold to Eli Lilly.

We sometimes sat at a table in speaker’s conferences or later via webinars on the internet and discussed appropriate names and offered up names for new investigation drugs that often only had a number or an alphanumeric designation that certainly was not very imaginative. The marketing people seem to be more right brain dominant since many of us more scientific types wanted to follow strict IUPAC, ([www.International Union of Pure and Applied Chemistry.org](http://www.International Union of Pure and Applied Chemistry.org)) names that sometimes get rather long and cumbersome. Names are sometimes based on what the drug is supposed to do as well as from what it is derived, since nearly 80% of our medications come from the natural world...Herudin from leach saliva from *Herudo medicinalis* & Podophyllin from the lovely may apple plant *Podophyllum peltatum* are two classic examples. As a result, we now have to be careful to not to be politically incorrect and offend someone in a foreign country by putting out a name that may mean something totally different in another language. Most drugs therefore end up with a language-specific names for both their generic as well as trade name such a Paracetamol or Acetaminophen for our very own Tylenol....depending on if you are in Britain or the U.S.



Dr. David L. Justis, KNOS/4, an emergency physician received the Virginia Governor’s EMS Award for Physician with the Outstanding Contribution to EMS on Nov. 10, 2013 in Norfolk, VA. At the annual Emergency Medical Services conference. Dr. Justis has been involved in medical research for more than 40 years.

### SUNDAY, APRIL 14, 1912, SOS FROM THE TITANIC !

At 10:25 pm on Sunday, April 14, 1912, a single message brought wireless, Marconi, and eventually David Sarnoff to prominence: the *Titanic*, fastest and most luxurious ocean liner of its time, was sinking in the North Atlantic. The catastrophe would serve to make radio communication indispensable to safety at sea.

“*The Titanic disaster brought radio to the front,*” Sarnoff was fond of saying in later years. The *Titanic*’s wireless distress call was heard fifty-eight miles away by the Marconi operator on the *Carpathia*, which enabled those in lifeboats to be rescued three and a half hours later, saving them from certain death by exposure. But inadequate wireless installations on two other ships in the vicinity (*which were in fact closer than the Carpathia*) meant that the *Titanic*’s distress signal “*CQD*” and the recently adopted “*SOS*” went unheeded. Conflicting messages about the fate of the passengers caused confusion among their relatives waiting in New York.

Marconi, who was in the city at the time (*and held a ticket for return passage on the liner*) wrote to his wife in Italy, “I’ve witnessed the most harrowing scenes of frantic people coming here to me and to the offices of the Company to implore and beg us to find out if there might not be some hope for their relations.” Because he had invented the one link to survival for the fortunate few who managed to secure a place in the lifeboats he became a hero to all mobbed everywhere he went and lionized in newspaper editorials.

There are a number of questions about Marconi and the role wireless played in the disaster and the days following. From Monday morning, when the *Carpathia* picked up the survivors, until 8:35 pm, Thursday night, when it docked the wireless operator and operator rescued from the *Titanic* gave out only a partial list of those saved and none of the tales of heroism and ignominy that went with the story. Why was the *Carpathia* so silent? The explanation, that the wireless apparatus aboard the ship had a range of only 85 miles does not coincide with the facts.

Disturbed that his longtime aide Archie Butt had been lost, President Taft ordered two navy vessels to sail within transmission range to learn about survivors. Their messages were acknowledged but not answered. Yet at the same time survivors such as the infamous Bruce Ismay, head of the White Star Line who took a woman’s place in a lifeboat instead of going down with his company’s ship, made reservations by wireless for accommodation at the Ritz-Carlton Hotel in New York.

Evidence suggests that Marconi himself colluded with some of his operators to limit news of the *Titanic*’s demise, even the list of survivors. The longer the public remained in suspense, the more his company would benefit, as the delay underscored the importance of making wireless mandatory on all ships. Marconi was not the only one to manipulate the news. The story was also possibly manipulated by David Sarnoff.

(This interesting radio story will be continued next issue only if requested.)

**BACKGROUND:** At the recent Marco meeting in Myrtle Beach, SC., Wayne Rosenfield, K1WDR came to the Aether News Editor with a wonderful story of the heroism by a ham operator named Capt. Kurt Carlsen W2ZXM of the “*Flying Enterprise*,” a ship caught in a hurricane in the North Atlantic in 1951. Ironically, the News Editor, at the time, was a Navy medical officer aboard the USNS General Leroy Eltinge that stood by to possibly rescue passengers aboard that very ship. On top of that, the News Editor’s “Elmer” was a South African ham, Olliver Pierce WU4i, who at that time was corresponding by radio with Carlsen. Below, is this wonderful story, “*Simple Courage*,” written by Frank Delaney, ISBN 1-4000-6524-0, available at Amazon.com

In late December 1951, Capt. Kurt Carlsen, 37, had run into a hurricane off the South English coast aboard his cargo vessel *Flying Enterprise*. The Captain ordered “abandon ship” and a line was passed from a rescue lifeboat and passengers and crew were ordered to jump into the raging waters with lifelines attached, but the Captain remained on board. Prior, by the time she was ready to return to New York from Hamburg, *Flying Enterprise* was loaded with consignments of which have contributed to the half century of questions hanging over her—just why did *Flying Enterprise* become a mystery ship and why did her Captain refuse to leave his ship. The ship left Hamburg on Dec. 21, 1950 for New York and the unexpected.

By the time the Elbe River flows into Hamburg, she has traveled over 700 miles. The river has always worked for her living, a trade route of large ships, with every cargo imaginable. The hospitable and deep central draft, navigable from the North Sea deltas back down to Prague, make her one of Europe’s most effective waterways. Beyond Hamburg, the river first tapers into a long, winding estuary and then widens out like a fan.

Throughout that first night, Capt. Carlsen stayed on the bridge as the Elbe’s banks crept by in the fog. The spiked mines of the war still bobbed in the sea-lanes of Europe, and even though the keepers of the river had swept a course, they had not succeeded in creating a straight one—but they had marked all remaining ordnance with warning buoys. For the next thirty hours, Carlsen never took his eyes off this course; he wanted to make sure that he navigated every one of those lethal porcupines. And so, early on Saturday, Dec. 22, we find *Flying Enterprise*, muffled and all but invisible, leaving the soft jaws of the Elbe, gliding slowly in to the North Sea, about to change course from NW to SW, looking for the moment when she can at last turn her face west toward New York.

“From Hamburg to the English Channel the vessel encountered continuous heavy fog and the master deemed it impractical to hold boat drills,” said the U.S. Coast Guard report. Understandably so; in that visibility, the crew would scarcely have been able to find the ten passengers had they ventured on deck.

These “civilians” had boarded on the morning of sailing. A cargo ship was allowed up to a dozen fares—thirteen and she’d have been re-classified as a passenger ship. Though obviously less suave than a liner, *Flying Enterprise*—and many freighters of the day—offered a reasonable travel deal. Carlsen’s voyagers, European emigrants, all had relatives or friends waiting to accept them into the New World.

The ship’s “*Manifest of Inbound Passengers (Aliens)*” lists them with their luggage. Curt and Elsa Muller and their two children, Leanne and Lothar, all registered as “*German*.” Leonore Von Klenau, a 39 year-old photographer, was listed as “*Danish*” and had 3 cases, 2 trunks and 3 parcels.” Rolf Kastenholz, a 27year old *German* accountant hoped to meet his father for the first time in 20 years and had a “2 trucks, 1 suitcase.” Nina Dannheiser, 56 and also *German*, stowed “10 suitcases, 3 parcels”; she also carried a small fluffy white dog.

The “stateless” Nikolai Bunjakowski, 54, had 8 collis (a new archaic word for a package or bundle). 70 year old Frederic Niederbruning had “1 trunk, 1 case, 2 collis.” And Maria Duttonhofer, 45 and *German*, had “3 trunks, 2 suitcases and 2 collis. She was listed as “*single*”, as were all the others except Mr. Niederbruning and the Muller parents; Mrs. Dannheiser and Mrs. Duttonhofer were widows. All of their possessions except their most immediate cabin essentials were listed as “*general*” in the cargo manifest and stowed below. And all found their cabins roomier and more comfortable than the word *freighter* might connote.

That first Saturday, the watch change as usual, in its universal way,

every four hours. By then, all ten passengers had succumbed to some of the weather’s dank torpor, and the Mullers and Mrs. Dannheiser and Mrs. Duttonhofer and most of the others left their cabins only—to go to the saloon at mealtimes.



Sensible travelers facing a long sea voyage prepare mentally. After the first romantic thrill of embarkation, the unprepared passenger feels, to begin with, massive boredom—nothing to do, nowhere to go. Until landfall, the limits never change; that distant, permanent line of horizon defines all. An experienced or prepared passenger starts a schedule for every day at sea, plots the number of hours spent reading, eating walking on deck, looking out to sea, and does not rely on the other passengers for diversion. Many fear to socialize aboard, lest sea-sickness become a humiliating fact.

Now and again, an incident out on the water will call every passenger to the side in excitement; a passing ship, a school of creatures showing off their arcs and prancings, a gossipy piece of flotsam—cords from a torn old net, a bottle, a spar of wood, loose wheels of weed. Seabirds will drift over, and if there’s a thunderstorm, lightning will likely find the ship, because to its vicious fingers—indeed, to all of the sea’s wanderers—you are, for that moment, the nearest solid point in a constantly shifting world. And at sea, many people sleep better than they can ever imagine, with an unforgettable quality of soft, safe oblivion.

On Sunday, Dec. 23, the fog began to lift, and showed *Flying Enterprise* the English Channel, 21-miles wide, frantic with history and ships. The busiest sea west of China, this strip of water gets as frazzled as a city street; craft warnings crowd the frequencies.

Every veteran sailor knows to respect the Channel, and to fear the weather in her approaches. Sure enough, early on Monday morning, as though to prove the Channel’s love of chicanery, the fog came in again. Carlsen, who had grown up within the moods of northern Europe, knew how to deal with this; he also knew that these waters, though fully swept for mines, had a notorious reputation for collisions, and he slowed down, half speed ahead, followed by dead stop.

Then a wind came in from the NW, a wind so disrespectful that the weather forecasters immediately began to track its threat. It saw the fog off—and saw it off fast.

Notwithstanding, “*Captain Carlsen of the Flying Enterprise*,” as the world was about to know him, began to relax. He left the bridge at last, went to his quarters, and took a little time off. When he awoke, he radioed his wife, Agnes, and his two daughters, Sonia and Karen, in Woodbridge, NJ to wish them the compliments of Christmas. He said he would see them after he decked, in ten days’ time. No, he would not.

Henrik Kurt Carlsen began his seafaring on sailing ships. As a boy of 14, he got apprenticed to the square-riggers still trading grain out of Denmark in the 1920s. First a cook’s assistant and then general deckhand, he soon had to learn how to mend a sail.

When the salt spray drenched those old masts, the canvas got stiffer than a body in rigor mortis. Fingers, broke, fingernails ripped, wrists sprained, nobody had hands like a sail maker—that weathered, rough skin, those yellow welts deep as the cleats on the sole of a boot. By the age of 37, and long a skipper of steam, Carlsen had softer, almost cultured hands—but he still had calluses so thick and ridged that his fingerprints would have been difficult to take.

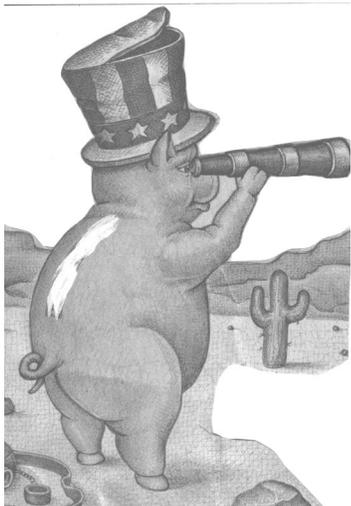
He never lost his sewing skills, however. While he was commanding a different Isbrandtsen ship across the Indian Ocean, one of his crew slashed off a shipmate’s ear. Carlsen, using the ship’s medical kit, sewed it back on, giving the man a proud lifetime badge; the restored lug stuck out at a jaunty angle. On another voyage, in another fight, a crazed sailor handed the third engineer twelve ghastly stab wounds. Again Carlsen’s needlework saved the day, and for the rest of his life the third engineer proudly bared the railroads of stitches on his chest. Nor had the strength in Carlsen’s hands diminished. Even though others now did the rough work on board his ships, in the *Flying Enterprise* crises he took a thick steel cable in his hands and hauled it in.

He had the physical characteristics of the south Scandinavian islanders: thick, Viking-blond hair, blue eyes, excellent skin, and a stocky frame, height about 5’ 6”. Photos showed a serious man who smiled a lot.

*Continued Next issue.*

**NEW FACES\* for MARCO & RENEWALS, as of Jan. 7, 2014**

- Alperstein, David N4DOV
- Brewer, Tom W0RPH
- Brusoe, Terry K8IB
- Gerber, Mark WH7W\*
- Haydon, Glen KG6DQT
- Kring, Roy N3IRY
- Lukas, Paul N6DMV
- McCann, John WB5BHB
- McNew, Wm. N9RIV
- Rabin, Barry WB1ffl
- Rosenfield, Wayne K1WDR
- Rossio, Jeffrey N5EQ
- Shatz, Arnold N6HC
- Small, Bruce KM2L
- Stenberg, Wm. AL3D
- Stewart, John AA5KV
- Toor, Dalvinder\* VA7DST
- Urich, Norman NU4DO
- Walker, Larry K4KZA
- Wolf, Jeffrey K6JW



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