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Bureau of Health Systems Development
Arizona Healthcare Connection - April 2013



Empowering Providers for a Healthy Arizona
Volume 2, Issue 2

This month the Arizona Healthcare Connection offers a ton of great information including a history of the March of Dimes and its contributions to the health and safety of many babies over the last 75 years, nominations being accepted for an outstanding Registered Nurse deserving of recognition, and some American Red Cross emergency event resources that organizations may find useful. In addition, this issue's Story of Commitment focuses on Joanne Isaacs who shares her path toward becoming a Psychiatric Nurse Practitioner and Arizona resident. Finally there are many events coming up as well as opportunities for Continuing Medical Education and Grants. Enjoy!

Click on a headline below to see the related story.

A Story of Commitment

[Joanne Isaacs was Born in the Shadow of World War II](#)

Contributed by Joanne Isaacs, PMHNP-BC, Winslow Indian Health Care Center

I was born in the shadow of World War II, in the early 1950's, to first and second generation European immigrant parents. We had enough, we did not go hungry, we were not cold in winter, we spent our summers in the mountains or by the beach, We collected rubber bands in balls and constructed tin foil balls from chewing gum wrappers, we used the backs of greeting cards for shopping lists, we never left a light on in a room that we had departed, and television was black and white.

My parents did service through their daily activities, donating time to immigrant organizations both here and abroad, donating clothing, donating army uniforms and a German luger that my father took off of a soldier in Europe, a soldier who begged to be made a POW because he had no food, and my father wanted him to go back to his own army, but eventually took him and his weapon. My mother was active in Hadassah, the women's Zionist organization, and I attended Zionist camps, we campaigned for political activists who supported freedom. I remember attending an Ethel and Julius Rosenberg rally, there was always one more meeting, one more fund raiser.

I grew up with fear of annihilation, as we lived among Holocaust survivors in Brooklyn, and heard their stories, mostly what they did not say, but you could intuit it from their carriage, their demeanor, their unfathomable sadness and generosity. I remember that they always had chocolates in their living rooms, always pinched my cheeks and filled my belly with delicacies. I believe that this is the core of why I am committed to service in health care. Mine was a convoluted path that led me to Indian Health Service some 23 years ago.

There was no 'aha' moment, but often I felt off-course. My first undergraduate degree was from Brooklyn College of City University of New York, it was in Communications and Television Production, and, while fun, it was unfulfilling. I worked at major television stations in NYC, and it was the time of women entering the media, Second Wave Feminism, but I had no ambition in this area of broadcasting...it seems that I had taken the path of least resistance. I went back to school, this time to New York University for my second undergraduate degree, this time in nursing science.

Between degrees, I traveled west, spending a summer at University of California Berkeley studying poetry, and my boyfriend and I



Customer Feedback

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drove back to NYC, passing through the Navajo Reservation, meeting people who were so different from us, and also so very much like us. I loved the space and big sky, the smells and the slower pace, and I made note.

Years added weight upon my shoulders, I bore two fine sons, married, and was able to realize my dream of returning to the Southwest, when those drive-by shootings happened closer and closer to my home. I was feeding my newborn in Prospect Park, Brooklyn, when I felt lots of crunchy particles beneath my feet. They were little glass bottles used for crack - hundreds upon hundreds of them under my feet where I was feeding my baby. So we left for Tuba City, I had a job offer, and we relocated. It was a burden for my children, perhaps an unfair one, and my husband had challenges finding work. But we stuck it out. I returned to school to get my Psychiatric Nurse Practitioner and Master's Degree in Nursing.

I work at **Winslow Indian Health Clinic**, in the Mental Health Department, and I do the best that I can to help my patients optimize their health, through recognition of unhealthy patterns, thru psychopharmacology, combinations of both. I aid them in finding their own path, honoring their struggles, validating their pain and joy. There is absolutely nothing else that I would rather be doing, and nowhere else I would rather do it.



L-R: Joanne Isaacs, Charlene Salabye, Marylou Nells, Emelita Mansfield, and Ethan Pope of the Winslow Indian Health Care Center

My now grown children often reflect on how they struggled to stay afloat in a different culture, trying to fit in while also being respected for their differences. None of it was facile, and maybe it was a burden I should not have assumed for my children. But they are so much wiser than I was, more tolerant, they are students of languages, of other cultures, and I don't believe that they fear annihilation as did their mom, they are peace makers and are changing the world. And we are still living out west.

Community in Need

Marana Health Center had Humble Beginnings

Contributed by Mary A. Carter, MBA, Director of Special Projects at Marana Health Center

Marana Health Center (MCH) had humble beginnings serving migrant farm workers in a single room ranch style structure in rural Marana. In 1957, a group of women called the Cotton Blossoms partnered with the Community Christian Church to provide the financial resources to establish a community clinic. As the need grew and individuals moved to the area to work in the ranching and the agricultural operations in the area, Marana Health Center worked to meet the needs of the community. For 44 years the clinic partnered with The University of Arizona and service agencies to provide services to those in need.

By 2001, Marana Health Center operated one clinic and had grown to provide primary healthcare services to approximately 4,000 patients. With a growing economy, Marana Health Center's Board of Directors and Clarence Vatne, a newly appointed Chief Executive Officer, embarked on a strategy to expand, and reach a greater number of communities. The goal was to bring affordable healthcare to the uninsured and low income patients in census tracks all across the Northwest Pima County and Tucson Metro areas. Today, MHC Healthcare serves 40,000 patients through a network of 15 clinics. MHC has aggressively worked to expand services to include, pediatrics, quick care, dental, pharmacy, women's health, radiology, outreach, patient education and Women, Infants and Children (WIC) services.



1957: Marana Health Center had humble beginnings serving migrant farm workers in a single room ranch style structure in rural Marana.

MHC Healthcare also operates the largest behavioral health department associated with a community health center in the State of Arizona. The MHC Behavioral Team offers over 30 groups weekly, partner with the City and County courts, and offer individual counseling in a variety of fields from domestic violence, substance abuse, art therapy, play therapy and elderly counseling. In addition, the BH Team is working to offer alternative therapies to the community thru a series of classes that are free to the public. In 2011, MHC opened the first Integrated Healthcare Counseling Center (IHCC) in the state. With the growing need for behavioral

health services, MHC plans to expand their operation to two additional clinic sites in 2013.



Marana Health Center today

Community Health Centers are the answer to reducing the cost of medical care. The measurements and process redesigns undertaken by community health centers across the nation enable patients and clients to receive better coordinate care services. MHC Healthcare is actively involved in the Medical Home and Accountable Care initiatives to find new and innovative ways to work with clinics, hospitals and medical specialists to ensure individuals are provided with the proper medical information they can understand and the follow up care and patient navigation to connect them to the services they need.

Since 2011, MHC Healthcare has opened a 74,656 square foot, new tri-level, LEED certified, medical clinic and a 30,000 square foot Counseling and Wellness Center in the downtown area of Marana. The two facilities provide a venue for future growth and partnerships.

- A Farmer's Market is held by the Community Food Bank on the patio of the Health Center.
- The Copper Café is another example of collaboration. The Café is operated by the MHC Behavioral Health Department as a work adjustment program, bringing behavioral health clients together with job coaches to work through their therapy and learn job skills. These skills afford them the opportunity to transfer to a stable and contributing role in society.
- The Thrifty Boutique is a thrift store opened in 2010 to provide another avenue for behavioral health clients to be mentored in a supportive and productive environment. Proceeds are used to support MHC patient education programs.

MHC Healthcare has applied strategy and creativity to grow opportunity for the benefit of the patients and clients we serve. For 56 years MHC has served the community to provide the highest level of service to the greatest number of people and enrich the lives of those in our community.

Community Resources

[Jobs Across Arizona - 3RNet](#)

Contributed by: Joyce A. Hospodar, MBA, MPA, Senior Program Coordinator of Health Systems Development at the University of Mel and Enid Zuckerman College of Public Health, Center for Rural Health

The **Center for Rural Health**, located at the Mel and Enid Zuckerman College of Public Health at The University of Arizona, has been involved in the **National Rural Recruitment and Retention Network** (also known as the 3RNet) for over 20 years. Each state in the US with specific rural/underserved needs for health professionals has two common goals: to provide assistance to healthcare professionals seeking jobs in rural/underserved areas and to support rural/underserved health facilities needing to recruit health professionals to fill new jobs or existing vacancies.

The CRH manages the Arizona 3RNet which is free both to providers and to facilities interested in posting their specific workforce interest/needs. The types of opportunities sought are broad and include but are not limited to: Family Practice, Internal Medicine; Obstetrics/Gynecology; Emergency Medicine; General Surgery; Nurse, Nurse Practitioner, Physician Assistant; Social Worker; Dentist; Pharmacist; Radiologist; Psychiatrist; Audiologist; Administrator and Manager.

To enhance the usefulness and broaden the reach of the Arizona 3RNet, the CRH partnered last year with the **Bureau of Health Systems Development** (BHSD) at the Arizona Department of Health Services (ADHS) and the **Arizona Alliance of Community Health Centers** (AACHC), both based in Phoenix. For each organization, the areas of focus, primary contact, phone/email, and website address are as follows:

- **CRH** - Focus: oversee and manage the website; update the site with new information relevant to recruitment and retention; market the opportunity to rural provider organizations around the state; approve all provider organizations interested in posting job opportunities; and, assist employers and potential applicants. Contact: Joyce A. Hospodar, MBA, MPA, Manager, Health Systems Development, 520-626-2432, hospodar@email.arizona.edu
- **ADHS/BHSD** - Focus: manage the **Arizona J-1 Visa Waiver Program**, oversee the **Arizona Loan Repayment Program**, and recruit eligible applicants for the National Health Service Corps. Contact: Ana Lyn Roscetti, MPH, Workforce Section Manager, 602-542-1066, ana.lyn.roscetti@azdhs.gov
- **AACHC** - Focus: recruit and retain medical professionals at the state's Federally Qualified Health Centers. Contact: Lourdes Paez, Workforce Development Programs, 602-288-7550, lourdesp@aachc.org and Kat Bergen, Recruitment and Retention Specialist, katb@aachc.org

For providers and health professionals with questions and/or interest in posting and viewing job opportunities in Arizona's rural/underserved areas, please contact Joyce Hospodar at the CRH. Or, visit the **Arizona 3RNet website**.

[March of Dimes Celebrates 75 Years of Life-Saving Achievements](#)

Contributed by Terri Spitz, State Director of Communications for the March of Dimes

March of Dimes, the leading non-profit organization for maternal and infant health, celebrates its 75th anniversary this year and its ongoing work to help all babies get a healthy start in life. About 4 million babies are born in the United States each year, and the March of Dimes has helped each and every one through research, education, vaccines, and breakthroughs.

The March of Dimes got its name when comedian Eddie Cantor asked Americans to send their dimes to President Franklin Delano Roosevelt at the White House to help defeat polio. The foundation later funded the development of the Salk vaccine which was tested in 1954 and licensed a year later, as well as the Sabin vaccine which became available in 1962. Nearly all babies born today still receive a lifesaving polio vaccine.

Throughout its history, the March of Dimes has supported many important research milestones that have benefitted newborn and child health. The team's work won the Nobel Prize in 1962 and paved the way for modern genetic medicine, including the mapping of the human genome. Another research breakthrough came in the early 1960s when March of Dimes-supported grantee Dr. Robert Guthrie developed the first screening test for PKU (phenylketonuria), allowing prevention of intellectual disabilities caused by PKU through diet. Since that time, the March of Dimes and family groups have campaigned tirelessly for expanded newborn screening.

Today, the March of Dimes is hard at work to prevent the epidemic of premature birth, which affects nearly a half million babies every year. It established the **March of Dimes Prematurity Research Center** at Stanford University School of Medicine that is bringing together the brightest minds from many disciplines - geneticists, molecular biologists, epidemiologists, engineers, computer scientists and many others - to work together and find answers to explain and prevent preterm birth. The March of Dimes current research portfolio consists of about \$100 million in grants to investigators throughout the United States and in about a dozen countries worldwide.

As part of Arizona's ongoing mission to improve babies' health, the March of Dimes Arizona has partnered with Arizona Department of Health Services and the **Arizona Perinatal Trust** to reduce the state's preterm birth rate 8 percent by 2014. This partnership was reported in news outlets throughout the country.



The March of Dimes founder, President Franklin Delano Roosevelt established the Foundation in 1938 to "lead, direct and unify" the fight against polio. In FDR's day, polio was an epidemic disease that paralyzed or killed up to 52,000 Americans, mostly children, every year.



Dr. B.J. Johnson and Will Humble at a March of Dimes Event in June of 2012

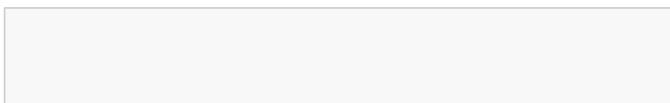
March of Dimes also has made considerable efforts to educate about the spread of pertussis, a vaccine-preventable disease that can be life-threatening to children. In a unique partnership with 16 health agencies throughout the state, March of Dimes leads an effort to secure commitments from Arizona health facilities to immunize their workers. The partnership, **Arizona Partners Against Pertussis**, already has secured more than 100 health facilities and 3,500 workers collectively to take the pledge to be immunized.

Volunteers have always been the heart of March of Dimes and without their support, much of the research, education and advocacy would not be possible. Beginning with the fight against polio, March of Dimes has always had a special relationship with the nursing community. In Arizona and 22 markets across the country, nurses are honored for their achievements and quality of care. The link between March of Dimes and nurses began with the fight against polio.

March of Dimes Arizona Chapter will celebrate its 10th year for the Nurse of the Year Awards Gala which will be held at Sheraton Phoenix Downtown in August.

[Nominate an Outstanding Registered Nurse](#)

The call for nominations is now open and the winners will be announced in August at the night of the event. **Nominate an outstanding Registered Nurse.**





Arizona Nurse of the Year Awards Gala Winners 2012

Hallway Talks - Behavioral Health Integration

Behavioral Health and Primary Care Integration at MHC Healthcare - Contributed by Michelle Ellis, Ph.D., Chief, Behavioral Health Services at Marana Health Center

The term 'integration' has many definitions. Some refer to integration as having a behavioral health staff member who has an office in the Medical Department and works 'under' the medical staff. This is actually the **Strosahl Model** which MHC is doing in 3 clinics, Marana Main, Wilmot Clinic in East Tucson and Clinica del Alma in South Tucson. Others define integration as the co-location of services or even the necessity of one medical record. Finally and perhaps the most profound of all definitions defines integration as a clear and successful collaboration between behavioral health and medical staff towards one end - the overall health of the patient. Research shows that it is difficult to compartmentalize health. Physical health affects emotional and mental health and emotional and mental health affects physical health. Interesting enough however, for the last few decades, federal and state regulations have made it difficult for these two disciplines to work together towards this end. Regulations insisted that services be separate, and a patient receiving both services must receive these services in two separate locations making collaboration difficult, if not impossible.

In the late 1990's MHC was licensed as a behavioral health outpatient clinic and also licensed as an outpatient medical clinic. We had one waiting room, 1.5 hallways, and behavioral health and medical clients intermingled in all areas of our little clinic. On a daily basis medical and behavioral Health staff discussed patients in common as they passed in the hallways. Medications were discussed, patient progress was discussed and collaboration was a way of life.

When behavioral health staff and clients were moved 'up the road' it was a sad day at MHC. The separation was difficult not only for the staff but for the clients who had been receiving 'integrated services' for years. Three years later with the opening of the new MHC Medical facility, we were thrilled again to be able to do 'integrated' work with our patients/clients. However, there was one problem. When we discussed our plan of moving our Seriously Mentally Ill (SMI) clients and their staff into the new facility to receive behavioral health services alongside medical, we were told that the regulations didn't allow this. Our confusion was appropriate as we had been doing this type of integrative work for decades. We were told we needed doors in the 'internal medicine hallway' to separate the services. We were told we could not have our SMI clients waiting in the Internal Medicine waiting room. Initially we were told that it 'just wouldn't work.'

After several meetings with **State and Regional Behavioral Health Authority** (RBHA) we were finally given the 'go ahead'. Our only restriction was that behavioral health clients needed to use the waiting room on the other side of Internal Medicine, the Women's Health waiting area. In addition, we were asked to put signs up that stated "Integrative Healthcare Center (IHCC)." The IHCC opened in November 2011.

So was that it? With the exception of one medical record, was the integration of Behavioral Health and Medical complete? We quickly found that co-location of services, even with the ability to view each other's medical record was just the top of what could be a very cold iceberg, an iceberg that that was not present in the preceding decades. Medical staff were busy, behavioral health staff were busy and no one seemed to mingle in the hallways. Where was the collaboration? We were all in one long hallway and yet the voice of collaboration was silent. Many behavioral health employees who had been working at MHC for over 10 years were perplexed. We had done this before without even knowing it. What was the problem?

The IHCC staff began to discuss client outcomes among themselves and with other behavioral health staff. We solicited the assistance of our Network Administrator to help us determine who of our SMI clients are also being seen by our medical providers. In November 2011, 65% of our SMI clients were being seen by MHC Medical providers. Currently this number is almost 80%. In April 2011, we began working with MHC IT staff to track outcome data. We discussed specific outcomes and decided to focus on SMI clients with Diabetes, Hypertension, and Hyperlipidemia and measure the affect that integrative services might have on these outcomes. In addition, we wanted to track behavioral health hospitalizations and pharmacy utilization.

IHCC staff began to talk with internal medicine physicians and family practice providers on a daily basis. Shortly thereafter the IHCC Meeting was born: a weekly meeting including the CEO, CIO, Medical Director, Chief of Behavioral Health, BH Operations Manager, Practice Manager and IHCC Coordinator. Each week we discuss outcomes, 'what is working, what isn't working and how we can fix it'. The initial data is looking very good showing increased 'controlled' diabetes, hypertension, and LDL as well as decreased pharmacy utilization and hospitalizations.

Lastly we all understood that 'data', even good data, does not make a successful program. 'One hallway' doesn't make a successful program. One medical record or medical record access doesn't make a successful program. Medical and behavioral health staff needs to talk to one another, discuss patient medication issues, discuss patient progress and how medical issues affect behavioral health and vice versa. How can this best happen with the increased push for productivity? Providers no longer walk past each other in the hallways, they jog by each other. How do we communicate? Should we schedule lunch meetings, block provider's schedules, or send emails?

Recently we met with the physicians and nurse practitioners asking "how can we best meet with you to discuss patient progress?" And their answer? "Let's talk in the hallway." And so we are.

If you have any questions on Integration, you are welcome to contact Michelle Ellis, Ph.D., Chief, Behavioral Health Services at mellis@maranahealthcenter.org or (520)616-6218.

[Information on Health Care Reform](#)

Contributed by Sheila Sjolander, Assistant Director of Public Health Prevention Services, Arizona Department of Health Services

A great resource to get a sense of the future of public health is a [Trust for America's Health](#) report titled "[A Healthier America: Strategies to Move from Sick Care to Health Care in Four Years](#)." While there have been several advancements within the public health system, in particular the way we approach population health through policy change, the report identified major priority areas of improvement at the federal, state and local levels. Specifically the report places an emphasis on moving from a cost containment approach towards more prevention. Trust for America's Health identified two major goals which the public health sector, both public and private, should try to obtain:

1. Advancing the nation's public health system by establishing a set of core capabilities; restructuring federal public health programs; and ensuring that public health departments at all levels receive adequate funding to focus on activities they are uniquely qualified to deliver.
2. Build community prevention partnerships within and outside of the health field, including traditional partners such as health care payers and providers; as well as non-traditional partners such as education, transportation and business. In addition, the report identifies new strategies which should be implemented within 10 priority areas including obesity prevention, healthy aging, tobacco prevention and control, environmental health, infectious disease prevention and control, healthy women and babies, food safety, injury prevention, emergency preparedness and health disparities. The report also includes an issue brief about incorporating Prevention and Public Health in a [Reforming Health Care System](#). Check it out for new ideas to explore including the development of [Accountable Care Communities](#) (recognizing that health is achieved inside and outside of the doctor's office through many different sectors that interact with public health); the increased use of technology to identify and prioritize public health interventions; and expanding coverage of preventive services by public and private payers to community prevention programs such as the [YMCA Diabetes Prevention Program](#).

Data and Statistics on Health Professional Shortage Areas (HPSAs)

[Designation Update](#)

Contributed by Tracy Lenartz, MPH

The following Arizona areas have been designated as Health Professional Shortage Areas by the [U.S Department of Health and Human Services \(DHHS\)](#), [Health Resources and Services Administration \(HRSA\)](#) as [Health Professional Shortage Areas \(HPSAs\)](#) during the past quarter: [Designation Update](#) 

For more information on Health Professional Shortage designations with regard to the Medicare bonus programs, contact Tracy Lenartz at 602-542-1772 or at tracy.lenartz@azdhs.gov.

Emergency Preparedness

[Emergency Preparedness Volunteer Registry](#)

Contributed by Antonio Hernandez, Partner Integration Chief, ADHS Bureau of Public Health Emergency Preparedness

The season for unpredictable weather across the country is fast approaching. While [AZ-ESAR-VHP](#), Emergency System for Advance Registration of Volunteer Health Professionals, has been highlighted before, this timely article warrants repeating.



If an emergency happens in Arizona and public health officials need your help, here are a few key questions that can make a difference:

- Is your license current and unencumbered?
- Are you willing to be called upon for volunteer support?
- Are you registered in advance with AZ-ESAR-VHP?
- Have you completed free online [Incident Command training](#) (IS-100, IS-200, IS-700)?

The potential for a public health emergency exists every day. While these types of emergencies are hard to predict, we can limit the damage and impact by making sure qualified health professionals are ready to volunteer and serve their communities.

To ensure our nation is ready to respond, the U.S. Department of Health and Human Services, [Office of the Assistant Secretary for Preparedness and Response Preparedness Home](#) (PHE) has worked with each state to implement the ESAR-VHP as a national network of state-based programs that verify volunteers' identity, licenses, and credentials before an emergency happens. It allows registered health professionals to accept or decline a request to respond, and streamlines the verification process so that once on-site, health professionals can work at their highest capacity.

From doctors, nurses, dentists, and veterinarians to medical technicians, social workers, medical records technicians, and mental health counselors, a diverse group of qualified health professionals may be needed to respond quickly to a disaster or public health emergency.

[Register online](#). Let's help make every minute count!

[American Red Cross Disaster and Safety Library](#)

The American Red Cross has created this [Disaster and Safety Library](#) to assist you in preparing your home, school and workplace in the event of a disaster or emergency. Here you will find fact sheets, preparedness checklists, recovery guides and other helpful information to keep you informed and safe. Each topic can also be read in Arabic, Chinese, French, Haitian, Korean, Spanish, Tagalog and Vietnamese.



American Red Cross
Grand Canyon Chapter

Please refer to their site for all of the [emergency resources](#) for the following topics:

Water Safety	Chemical Emergency	Drought
Earthquake	Flood	Flu
Food Safety	Heatwave	Highway Safety
Home Fire	Landslide	Pet Safety
Poisoning	Power Outage	Terrorism
Thunderstorm	Tornado	Tsunami
Volcano	Wildfire	Winter Storm

Health and Wellness

[Eating Well](#)

Contributed with Permission from the Wellness Ambassador Newsletter



Overview

The food you eat is the source of energy and nutrition for your body. Eating should be a pleasurable experience, not one that causes guilt or remorse. Getting enough food is rarely a problem, but getting enough good nutrition can be a challenge. What should you eat to stay healthy? Nearly everyone has an opinion, from your best friend to the daily newscaster. There is a lot of advice available, but the basics for good health have not changed since the first fad diets were introduced centuries ago.

Nutrients

Your body needs over 45 different nutrients every day. These nutrients are essential for health and must be provided in the foods eaten. These nutrients can be divided into five classes:

- Carbohydrates (starches, sugar, and fiber)
- Proteins (includes 22 amino acids)
- Fats (saturated, monosaturated, and polyunsaturated fatty acids)
- Minerals
- Vitamins

These nutrients work together and interact with body chemicals to perform several functions:

- Provide materials to build, repair and maintain body tissues
- Supply substances that function in the regulation of body processes
- Furnish fuel for energy needed by the body

Each nutrient has a certain special job to do in the building, maintenance, and operation of your body. Some jobs require that nutrients work together as a team. These jobs are nutrient-specific. They cannot be done by other nutrients—an extra supply of one nutrient cannot make up for a shortage of another. That's why a balanced diet including all food groups is so necessary. Your body needs all of these nutrients, not just a few. Some nutrients need to be replenished every day from food, while others can be stored in the body for future use.

The Energy Providing Nutrients

Of the six classes of nutrients, only 3 provide energy: carbohydrates, fats and proteins. Energy is the body's most basic need. Energy is used when you breathe, when the heart pumps blood, and when you sit, stand and walk. The more vigorous the activity, the more energy is required.

The energy contained in a carbohydrate, fat or protein is measured in kilocalories, commonly shortened to "calories" in the United States. The calorie is a measure of energy available to the body. When you eat something, the number of calories it contains is the number of energy units it provides to the body for its needs. The calorie is also a measure of energy your body uses in everyday life or exercise.

Where the Numbers Come From

A bomb calorimeter is a special instrument used to measure calories in food. The food is first dried to remove water and then placed in a special container that rests in water. When the food is burned, heat is transferred to the water. The amount the burning food heats the water is the measure of calories. One calorie is the energy needed to raise the temperature of 1 gram of water 1 degree centigrade.

The energy values of the 3 calorie-providing nutrients are as follows:

- 1 gram of carbohydrate = 4 calories
- 1 gram of protein = 4 calories
- 1 gram of fat = 9 calories

Calories may also be added to food intake by consuming alcoholic beverages. Alcohol is not a nutrient because it cannot be used in the body to promote growth, maintenance, or repair. It is a toxin that is broken down as an energy (calorie) source and can be converted to fat.

1 gram of alcohol = 9 calories

Nearly all foods supply energy or calories. However, some provide more calories than others. No single food or kind of food is "fattening" by itself. When the energy provided in food is not used - whatever food it is - the excess is stored in the body in the form of fat. Storage of too many excess calories results in being overweight. The Arizona Nutrition Network has a [portion guide](#) to help.

CMEs & Grant Opportunities

[Upcoming Opportunities](#)

A lot of Web searching has been done for you! We identified grant opportunities, as well as Continuing Medical Education (CME) prospects and listed the class name, dates, what type of class (webinar, seminar, online, etc.), and other information so that you can see what is available to you at a glance. Links will take you right to the course descriptions and the registration site.

- [CMEs](#)
- [Grant Opportunities](#)

Upcoming Events

[April 2013](#)

[National Certified Medical Coder Boot Camp - April 22-24](#)

[Arizona Public Health Association \(AzPHA\) 2013 Spring Conference - April 24](#)

[17th Annual Conference: Strategies to Develop Patient-Centered Homes, Curriculum and Research to Improve the Health of Hispanics - April 25](#)

[4th Annual Disability Empowerment Center \(DEC\) Health & Wellness Fair - April 26-27](#)

May 2013

National Rural Health Association (NRHA) 36th Annual Rural Health Conference - May 7-10

2013 USPHS Scientific and Training Symposium - May 21-23

June & July 2013

Winslow Indian Health Care Center 2013 Wellness Conference  - June 25-26

NRHA Rural Quality and Clinical Conference - July 17-19

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