
COMMUNITY SERVICE AWARD

Marilyn A. Roubidoux, M.D.

Professor, Department of Radiology



During the past 10 years, Dr. Marilyn Roubidoux has worked with the Northern Plains Indian Health Service on breast cancer screening. She has provided culturally relevant methods of educating Native American women about breast disease and has followed those educational efforts with a practical method of improving their access to screening and diagnostic mammography. The impact of her work is nothing less than extraordinary.

To teach the principles of breast cancer detection as well as the benefits and limitations of mammography in a way that is culturally relevant to Native American women, Dr. Roubidoux developed an interactive computer-based learning module based on popular television game shows. She developed four interactive games and made them available free on the Internet or via compact disk. More than 1,100 of the CDs have been distributed to health care providers and individual patients. As one colleague says, "These are educational tools on breast health care that are culturally appropriate and relevant, require audience participation and increase knowledge through a comfortable learning encounter."

Dr. Roubidoux gave a special populations network in Hawaii permission to modify one of the games to be culturally relevant to Native Hawaiians and others in Hawaii. The Imi'hale Native Hawaiian Cancer Awareness Research & Training Network uses the game to educate their patient population. In addition, community outreach staff from the five Native Hawaiian health care systems have had access to the game; the health systems provide services to an average of 25,000 Native Hawaiians annually.

These teaching modules also have been used in Mayo Clinic's Native American WEB Program, which trains nurses and community health representatives to provide breast and cervical cancer screening to American Indian and Alaska Native women.

Finally, Dr. Roubidoux coordinated the Indian Health Service Mobile Digital Mammography Project. After a considerable amount of background work, Dr. Roubidoux organized the remote transmission of screening mammograms from Indian Health Service sites at reservations in the Northern Plains to the University of Michigan. This remote transmission and real-time interpretation of digital mammography is groundbreaking work that has required an enormous amount of technological coordination between a mobile van housing a mammography unit and a technologist. Images are remotely transmitted via satellite to a land station in New York and then overland to the University of Michigan where images are read. Real-time interpretations are then transmitted back to the mobile van, and health care providers can obtain results in real time. Patients who frequently travel many miles to the remote clinics can have a screening mammography, results and additional views obtained at a same-day visit with interpretation utilizing the expertise of the University of Michigan Breast Imaging Section. While relatively simple in concept, the Telemammography project required a tremendous amount of work to make it operational. What Dr. Roubidoux began as a pilot trial in 2006 is now a full-fledged clinical operation funded by the Indian Health Service. The IHS screens up to three dozen patients a day in this manner.

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Given Dr. Roubidoux's commitment to breast cancer screening – and the programs she has developed and sustained in this area – it is no surprise that she often uses vacation time to travel to reservation clinics in South Dakota to read mammograms at no cost to the IHS.

Currently, she is helping the U-M School of Public Health and the Great Lakes Inter-Tribal Council to determine rates of racial misclassification of cancer cases among Michigan Tribes.

Among her many honors and awards, Dr. Roubidoux received the Department of Veterans Affairs Service Award in 2000; the bronze medal for her scientific exhibit, Breast Cancer Detective, from the American Roentgen Ray Society; and the Moccasin Award from the Aberdeen Area Indian Health Service in 2003.

The Consumers' Research Council Guide to America's Top Radiologists lists Dr. Roubidoux. She also is listed as one of the Best Doctors in America 2007.

She is a scientific reviewer for *Cancer* and the *American Journal of Roentgenology*, has made 148 scientific presentations at national professional meetings and published 71 articles in peer-reviewed journals.

Dr. Roubidoux receives research support from the National Institutes of Health; the American Indian and Alaska Native Leadership Initiative on Cancer; the U.S. Army Medical Research and Material Command; the Susan G. Komen Foundation; the U.S. Department of Defense; and the University of Michigan, among others.

Dr. Roubidoux received her medical degree from University of Utah School of Medicine in Salt Lake City in 1984. She did her residency work in radiology at the University of California Irvine Medical Center and the Duke University Medical Center and was an abdominal imaging fellow at Duke. She is an enrolled member of the Ioway Tribe of Kansas.

She joined the University of Michigan in 1991 as assistant professor of radiology, became associate professor in 1998 and professor in 2005.

Dr. Roubidoux is a fellow of the Society of Breast Imaging.

Dr. Roubidoux likes to hike and downhill ski, perform on the piano, play with her grandchildren and travel with her husband.

Dr. Roubidoux wishes to thank all who helped her: the Breast Imaging Radiologists headed by Mark Helvie, the Spirit of Eagles Network, her husband and mentor Reed Dunnick, her three daughters who preceded medical school and residency and enabled her career, and the many other family members who gave encouragement and advice.