

Dr. Zeenat Mahal, M.B.B.S., M.S.

Director, Epidemiology Center, ITCA, Inc.

College of Medicine, U of A, Tucson, Arizona	M.S.	1997	Epidemiology
SB Medical College, University of Dhaka, Bangladesh	M.B.B.S.	1990	Med., Surg. & ObGyn.
Holy Cross College, Dhaka, Bangladesh	H.S.C.	1981	Science
Tejgaon Polytechnic Girls' High School, Bangladesh	S.S.C.	1979	Science

Academic Awards

1996-1997	Scholarship (Tuition and Registration), U of A, Arizona.
1994-1996	Tuition Scholarship, U of A, Arizona.
1982-1989	Full Board Scholarship in Medical College, Bangladesh.
1979-1981	Full Education Scholarship in Holy Cross College, Dhaka, Bangladesh.
1977-1979	Scholarship for outstanding results in High School, Dhaka, Bangladesh.

Work Experience

09/2002-Current	Director, Epidemiology Center (Epi Center), Inter Tribal Council of Arizona, Inc.
08/98-09/2002	Senior Community Epidemiologist, Epi Center, Inter Tribal Council of Arizona, Inc.
07/97-08/98	Epidemiologist, Epi Center, Inter Tribal Council of Arizona, Inc., Phoenix, AZ.
09/96-06/97	Graduate Researcher, University of Arizona, Tucson, AZ.
06/96-09/96	Intern at Community Prevention & Public Health, Pima County, Tucson, AZ.
07/94-06/96	Graduate Research Assistant, U of A, Tucson, AZ.

License and Board Certification

1990 - Current	Certificate of Full Registration as a Medical Practitioner; Bangladesh Medical and Dental Council, Dhaka, Bangladesh. <u>License no. (Bangladesh):</u> 18544. Can practice in: Australia, South-East Asia, Middle East, and Africa.
2004-2005	Hepatitis C certification.
1995-1996	Risk Management and Safety Certificate. Blood-borne Pathogen Training. University of Arizona, Tucson, Arizona.

Post-Grad. Training

Internship Train.	Sher-e-Bangla Medical College Hospital (SBMCH), University of Dhaka, Bangladesh in the areas of Internal Medicine, Obstetrics & Gynecology, General Surgery, Community Medicine and Family Planning, Orthopaedics, Pediatrics, Pediatric ICU, and in Pediatric Diarrhoeal Cell.
1989-1990	
MRT&SP	Diploma in Family Planning at Sher-e-Bangla Medical College Hospital, University of Dhaka, Bangladesh.
01/'90-02/'90	

Undergraduate Training:

Clinical Clerkship	Sher-e-Bangla Medical College Hospital, University of Dhaka, Bangladesh.
1984-1987	

<u>Laboratory Experience</u>	17 years of biomedical laboratory experience.
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Research Experience and Grants Management

PI/Project Dir	Tribal Motor Vehicle Crash Injury Prevention Project. Office of Public Health and Science, Office of Minority Health, DHHS. FY 2007-2012 for \$1 million.
PI/Program Dir	Maternal and Child Health. Indian Health Service. FY 2004-2007 for \$375,000.

PI	National Pediatric Height and Weight Study, 2002-2003. IHS, U.S. DHHS.
Co-PI	Southwest American Indian (Cancer) Collaborative Network, 2005-2010. NCI, NIH. PI: Dr. Kathryn Coe, Associate Professor, College of Public Health, University of Arizona. Funded by NCI, ~\$4.7 million; FY-2005-2010.
Co-Investigator	"High carotene fruits and vegetables as a source of vitamin A for Honduran women and breastfed infants". PI: Dr. Louise Canfield, Professor of Biochemistry, College of Medicine, University of Arizona. Funded by USAID; \$103,000 for FY1995-1996.
Co-Investigator	"Red palm oil as a source of vitamin A for Honduran lactating mothers and breastfed infants". PI: Dr. Louise Canfield, Professor of Biochemistry, College of Medicine, University of Arizona. Palm Oil Research Institute of Malaysia (PORIM); \$54,758 for FY 1995-1996.
Co-Investigator	"Evaluation of the effect of smoking on the development of Chronic Pulmonary and Cardiovascular Disease in Arizona". PI: Dr. Michael D. Lebowitz, Prof. and Chair of Epidemiology IDP, University of Arizona College of Medicine, Tucson, Arizona. FY 1999 and 2000. Funded by Tobacco Tax Revenue; RFP No. 1-200; 1996. Amount: \$335,496. Effort: 25% of time.
Co-Investigator	Surveillance System for Diabetes by using America Indian Behavioral Risk Factor Survey. Center for Native American Health, University of Arizona College of Medicine, Tucson, AZ. 1998-1999.

Faculty/Teaching Activities

Adjunct Professor 2004-2006	WP Carrey School of Health Management and Policy, Epidemiology, Arizona State University, AZ.
Guest Lecturer 2000-Current	Course #682: Maternal and Child Health. Masters of Public Health. University of Arizona College of Public Health, Tucson, AZ.
Guest Lecturer 2000-2004	Current Issues in Indian Health Policy. Masters of Public Health. University of Arizona College of Public Health, Tucson AZ.
Field Instructor 2002	George Warren Brown School of Social Work, Washington University.
Course Director & Trainer 08/1998-Current	Epi Course #1: Basic Training in Epidemiology for Tribal Health Departments. Epi Course #2: Data Management and Computer Application in Tribal Health Dept. Epi Course #3: Program Evaluation for Tribal Health Departments: Telling Your Story.

Students Mentored

2007 (Preceptor)	Raysenia James, Grad. Intern, Masters of Public Health, University of Arizona College of Public Health.
2006 (Supervisor)	Raysenia James, Grad. Student, Masters of Public Health, University of Arizona College of Public Health.
2002 (Preceptor)	Gleebah Enos, Grad. Intern of Masters of Social Science, Washington University.
1998	Georgia Tsingine, Grad. Student, Masters of Public Health, University of Arizona College of Public Health.

Other Activities/Honors

Co-Chair 2005-2010	Data and Evaluation Core, Southwest American Indian (Cancer) Collaborative Network, 2005-2010. National Cancer Institute, National Institutes of Health (NIH). (Co-Chair: Dr. Charlton Wilson, Associate Director of Centers of Excellence, PIMC, IHS) (Regional)
Chair 1998-Current	Diabetes Surveillance Committee, Arizona Diabetes Program. (AZ State)
Member 2006-Current	Arizona Diabetes Coalition Leadership Council. (AZ State)

Member 2005-Current	Cancer Disparities Committee, American Cancer Society. (AZ State)
Member 2005-Current	Arizona Comprehensive Cancer Control Research Committee. (AZ State)
Member 2005-Current	Data Access Work Group. A group of Tribal Epi Centers. (National)
Member 2006-Current	Epidemiology Work Group Of Governor's Office, Arizona. (AZ State)
Member 2004-Current	CSTE Tribal Epidemiology Workgroup. (National)
Comm. Member 2007	"Research for Native Health: Strengthening Partnerships, Promoting Trust, and Increasing Communication Conference." HHS Regions VI, VIII, IX, Office of Public Health & Science, Office Of Human Research Protections and Others. August 22-23, 2007. Denver, CO. (National)
Intel AISEF Judge 2005-Current	Annual Arizona-American Indian Science and Engineering Fair. Arizona State University. Arizona (State)
Board Member 2005	Prevention of Cardiovascular Disease and Diabetes among AI/AN Conference 2004-Planning Committee. (National)
Grand Award Judge (Medicine & Micro) May, 2005	2005 Intel International Science and Engineering Fair (Intel ISEF) (World's largest high school science competition –1400 students gathered from 41 countries) (International)
Co-Chair 2004	Arizona-American Indian Health Conference.
Member 2002-Current	American Indian Research Center for Health Science & Technical Adv. Board. (AZ State)
Board Member 03/99-10/99	Diabetes in American Indian Communities. A national conference for American Indians. October 27-29, 1999. Pyramid Crown Plaza Hotel. Albuquerque, NM.
Board Member 1998-1999	Technical Subcommittee of "Turning Point: Collaboration for a New Century in Public Health", Arizona. Funded by Robert Wood-Johnson Foundation.
Member 1999	Indian Health Care Improvement Act – Epidemiology Section. Phoenix Area IHS.
Volunteer	"Native Pride: A Celebration of Traditions". Native American Recognition Days Awards Banquet.

Conference Proceedings

2007	"Research for Native Health: Strengthening Partnerships, Promoting Trust, and Increasing Communication Conference." HHS Regions VI, VIII, IX, Office of Public Health & Science, Office Of Human Research Protections and Others. August 22-23, 2007. Denver, CO. (National) – <u>Speaker & Moderator</u>
2007	"Research Methods and Small Populations". June 2007. 19 th Annual IHS Research Conference (National) – <u>Invited Speaker</u> .
2007	Science and Engineering Career Panel. Spring 2007. University of Arizona BRAVO! Program - <u>Panelist</u> .
2006	"2006 Congress of Epidemiology" (International) - <u>Chair</u> of a 90-min session.
2006	"Increasing STD Awareness Among Tribal Communities", Tempe, Arizona (Regional) - <u>Opening Remarks</u> at a Pre-conference Training Session & <u>Plenary Speaker-Day1</u> .
2006	"Tribal Health Steering Committee Meeting" (Regional), Tempe, Arizona - <u>Plenary Speaker Day1</u> .
2005	"Arizona American Indian HIV Prevention Summit", Phoenix, Arizona - <u>Keynote Speaker</u> .
2005	Prevention of Cardiovascular Disease and Diabetes among AI/AN Conference - <u>Moderator</u> .
2001	"Turning Point Initiative" Mini Symposium on data sharing (Statewide) - Panelist.
1999	"The Emerging Role of Tribal Governments in Public Health" (Statewide) – <u>Moderator</u> of a panel of attorneys.

Courtesy Consultations/Technical Assistance

- Health Canada to establish a regional "Center of Excellence in Epidemiology for First Nations", 2006-Ongoing. (As requested)
- Saskatoon Tribal Council, Saskatchewan, CA, 2007
- Other non-American Indian entities. (As requested)

Computer Software

Data Management	MS-Access
Statistical/Analytical	STATA (Win. 7.0), Epi Info (Win), SAS (Ver. 8.2)
Spreadsheet	MS-Excel
Presentation	MS-Power Point, Freelance Graphics (Previous), Harvard Graphics (Previous)
Word Processor	MS-Word, Word Perfect (Previous), Corel WordPerfect (Previous)
Email Platform	Outlook (current), SIREN (current)

Publications/Reports

1. Canfield, LM, Taren, DL, Kaminsky, RG, **Mahal, Z.** Short-term β -Carotene Supplementation of Lactating Mothers Consuming Diets Low in Vitamin A. J. Nutr. Biochem. 1999;10:532-538.
2. Veazie, MA; Tsingine, G; **Mahal, Z.** An Assessment of Existing data Sources, Part II, Volume I: Local Data Sources for the Tribal Community, Results and Discussion. Public health Surveillance for American Indian Communities in Arizona. Published. January 12, 1999.
3. Peterson DE, Tsingine G, **Mahal Z**, Wilson C. Screening for Diabetes Mellitus in Indian Health Service Facilities in Arizona, 1996-1998.
4. Veazie, MA; Tsingine, G; **Mahal, Z.** An Assessment of Existing data Sources, Part I, Volume I: Local Data Sources for the Tribal Community, Results and Discussion. Public health Surveillance for American Indian Communities in Arizona. Published. January 12, 1999.
5. **Mahal, Z.** 1997. Effect of β -carotene supplementation in Honduran lactating mothers on serum β -carotene and retinol levels of their breastfed infants. Thesis. Abstract Published in UPI, May 1997.
6. **Mahal, Z.** Multiple Causes of Death: Results from the Tucson Epidemiologic Study. Published. December 16, 1996.
7. Canfield, LM; Giuliano, AR; Neilson, EM; **Mahal, Z**; Yap, HH; Blashil, BM; Cui, HA; Graver, EJ. 1995. Single dose of β -carotene supplementation of normal lactating women: Effects on carotenoids, retinol and vitamin E.
8. Canfield, LM; deKaminsky, R; Taren, D; **Mahal, Z**; Neilson, EM. 1997. Maternal β -carotene supplementation: A strategy for improving the vitamin A status of the mother-infant dyad.
9. **Mahal, Z.** Prevalence of Diabetes among American Indians in Phoenix Area Indian Health Service: RPMS data, 1996. Published. February 1998. (Abstract)
10. **Mahal, Z**; Halgerson, SD. Ideas for Assessing the Completeness of Data in the IHS RPMS. February 1998. (Internal Research Protocol).
11. **Mahal, Z**; Caffee, S; Doan, C. The effect of vitamin A deficiency in the transmission of HIV in pregnancy from mother to baby. December, 1995.
12. Petersen, EA; **Mahal, Z**; Grayson, J., Lu, S. 1994. Antimicrobial sensitivity tests against Vancomycin resistant Enterococci (in vitro). (Internal report)

Major Abstracts Published and/or Presented

- **Mahal, Z.** Tribal Epidemiology Centers: A New Avenue to Enhance and Monitor Health in American Indian and Alaska Native Communities. (**Abstract and Chair**). A 90 minute-Tribal Epi Symposium. Congress of Epidemiology. (International). June 24-26, 2006. Seattle, Washington.
- **Mahal, Z.** Empowering Tribes to Address Public Health Challenges in the Southwestern United States. International Network of Indigenous Health Knowledge and Development (INIHKD). (International). (**Abstract and Presentation**). Vancouver, Canada. October 1-4, 2005.
- Stanley, E., **Mahal, Z.** Preparing Community Profiles: A Step Toward Improving Health of the Tribes in the Southwest. Rural Community Health Matters. Arizona Rural Health Conference (Annual). Prescott,

Arizona. July 2005

- Hartsfield, T., **Mahal, Z.** Tribal Dental Clinical and Prevention Support Center in the Southwest. (**Abstract and Presentation**). American Public Health Association. (National). November 6-10, 2004.
- Leach, R., Lane, T., **Mahal, Z.**, Montiel, A. Assessment of Physical Activity Programs for American Indian Children in Arizona. American Public Health Association. (National). November 2004
- **Mahal, Z.**, Corcoran, A.J., Petersen, N.J. Empowering Tribes in the Southwest Region: Addressing Epidemiologic and Public Health Challenges in the 21st Century. (**Abstract and Presentation**). American Public Health Association. (National). November 2002.
- Sloan, O., Leach, R., Corbett, E., **Mahal, Z.** Motor Vehicle Crashes on American Indian Reservations in Arizona: The Road to Saving Lives. American Public Health Association. (National). November 5-9, 2005.
- **Mahal, Z.**, Jossefides-Tomkins, M., Corcoran, A.J., Sell, K.I., Petersen, N.J., Cobb, N., Broussard, B., Charles-Azure, J. Approaches in Designing a National Pediatric Height and Weight Study in the American Indian and Alaska Native Population. (**Abstract and Presentation**). 14th Annual Indian Health Service Research Conference, Albuquerque, NM. April 29-May 1, 2002.
- Broussard, B., Charles-Azure, J., **Mahal, Z.**, Cobb, N. Obesity in American Indian and Alaska Native Children. (**Abstract**). 14th Annual Indian Health Service Research Conference, Albuquerque, NM. April 29-May 1, 2002.
- **Mahal, Z.**, Parra, S., Norris, C., Sell, K., Kunz, S., Friedman, J., Goldberg, H., Kittredge, J., Cobb, N. A Community Health Assessment in O'odham in Mexico (OIM) Using the 'Face-to-Face' Interview Method. (**Abstract and Presentation**). 13th Annual Indian Health Service Research Conference, Albuquerque, NM. April 29-26, 2001.
- Aseret, T.L., Novak, C., Lumpmouth, G., **Mahal, Z.**, Sell, K.I. Implementing a Culturally-Appropriate Youth Tobacco Survey (YTS) for American Indian Tribes. (**Abstract**). 13th Annual Indian Health Service Research Conference, Albuquerque, NM. April 24-26, 2001.
- Aseret, T.L., Novak, C., Kontz, W., **Mahal, Z.**, Sell, K.I. Creating a Culturally Appropriate Youth Tobacco Survey (YTS) for American Indian Tribes. (**Abstract**). 12th Indian Health Service Research Conference, Albuquerque, NM. April 24-26, 2000.
- **Mahal, Z.**, Tsingine, G., Sell, K.I., Veazie, M. Public Health Surveillance for American Indian Communities in Arizona: An Assessment of Existing Data Sources, 1998. (**Abstract and Presentation**). 12th Indian Health Service Research Conference, Albuquerque, NM. April 24-26, 2000.
- **Mahal, Z.**, Sell, K.I., Lewis, J.R. Multi-agency Collaboration is the 'Key' To the Success in Crafting the Future Health in American Indian Communities. (**Abstract and Presentation**). Presented at the Crafting the Future of American Indian & Alaskan Native Health into the Next Millennium Conference. National Indian Health Board. December 9-11, 1999. San Diego, California.
- Novak, C., **Mahal, Z.** The Inter Tribal Council of Arizona as Mediator in Data Collection and Evaluation. (**Abstract**). Presented at the Crafting the Future of American Indian & Alaskan Native Health into the Next Millennium Conference. National Indian Health Board. December 9-11, 1999. San Diego, California.
- Peterson, D.E., Tsingine, G., **Mahal, Z.**, Wilson, C. Screening for Diabetes Mellitus in Indian Health Service Facilities in Arizona, 1996-1998. (**Abstract**). 11th Annual Indian Health Service Research Conference, April 27-29, 1999, Albq., NM.
- **Mahal, Z.** Prevalence of Diabetes among American Indians in Phoenix Area Indian Health Service: RPMS data, 1996. (**Abstract and Presentation**). Phoenix, Arizona. February 1998.
- **Mahal, Z.** Empowering Tribal Communities (**Abstract and Presentation**). Community Development and ITCA Epi Center's project update "Border Health: Information for Action." Casa Grande, Arizona. September 18, 1998.
- Diabetes and associated complications in Arizona: 1998 Status Report. Diabetes Surveillance Committee. Diabetes Control Council. (**Presentation**). June 19, 1999. Casa Grande, Arizona.
- Need for a comprehensive report on "Diabetes and its Complications in Arizona". Diabetes Surveillance Committee. Diabetes Control Council. 1998. Casa Grande, Arizona. (**Presentation**)
- "Introduction to Epidemiology". (**Presentation**). Epidemiology Working Group Training. June 12, 1997. DuBois Center, NAU, Flagstaff.

Work Acknowledged in:

1. Obesity and American Indians/Alaska Natives. U.S. Department of Health and Human Services. Office of the Assistant Secretary for Planning and Evaluation. <http://aspe.hhs.gov/hsp/07/AI-AN-obesity>. April 2007.
2. Kinetics of the Response of Milk and Serum β -Carotene to daily β -Carotene Supplementation in Healthy, Lactating Women. *Am. J. of Clin. Nutr.* 1998;67:276-83.
3. β -Carotene in Breast Milk and Serum is Increased After a Single β -Carotene Dose. *Am. J. of Clin. Nutr.* 1997;66:52-61.

Professional Affiliations:

Member (1997-2005)	American Public Health Association (APHA).
Member (Since 2001)	Council of State and Territorial Epidemiologists (CSTE).
Member (2003)	Arizona Public Health Association (AzPHA).