Dedicated researcher brings cancer care to rural communities

By: Sharan Bhuller

We introduce Dr. Smita Asthana, whose article is published in this issue of AMOR and discuss her role in creating cancer prevention awareness in developing countries.

As an ardent cancer researcher, Dr. Smita Asthana has a vision to create wider awareness on cancer and its prevention, and aims to work on translational research to benefit the general public through the implementation of evidence-based research. “I have been associated with the National Institute of Cancer Prevention and Research (NICPR) and Institute of Cytology and Preventive Oncology (ICPO) since November 2004 and have progressed over a period of time from being a staff scientist to the current role of a senior scientist,” says Dr. Asthana, who is presently with NICPR’s Biostatistics and Epidemiology division.

“I have been working in various positions that deal with the design, execution, and evaluation of medical projects. Recently, we have concluded two major cervical cancer screening projects and conducted a screening of 10,000 women in rural areas,” she tells AMOR. One project, funded by the Indian Council of Medical Research, was carried out 100 km west of New Delhi in the rural town of Dadri “as part of an operational research to see the implementation of VIA (visual inspection with acetic acid) and VILI (visual inspection with Lugol’s iodine) screenings with the help of existing healthcare infrastructure,” she explains.

As a leading researcher in cervical cancer screening, she completed an Indo-US collaborative project on the clinical performance of a human papillomavirus (HPV) test, used as a strategy for screening cervical cancer in rural communities, with funding from the Bill and Melinda Gates Foundation via the international non-profit global health organization PATH. “The primary objective of the project was to observe the performance of careHPV, a new diagnostic kit, in a rural setup,” she says.

CareHPV is a highly sensitive DNA test, which detects 14 different types of the human papillomavirus that cause cervical cancer, providing results more rapidly than other DNA tests and is designed especially for use in clinics that lack reliable clean water or electricity. It is an incredibly cost-effective option for low-resource countries seeking to develop national cervical cancer screening and treatment programs according to PATH.

“Both projects were completed successfully and brought out research conclusions in the form of national and international publications,” Dr. Asthana says. In addition to the projects, she had also developed health education materials to create cervical cancer awareness among the women of rural Indian community, while providing training to auxiliary nurses and midwives for cervical cancer screening.

Dr. Asthana graduated with a degree in Bachelor of Medicine and Bachelor of Surgery from King George Medical College (KGMC), Lucknow, Uttar Pradesh, India, before pursuing her Doctor of Medicine (MD) in Community Medicine from Ganesh Shankar Vidyarthi Memorial (GSVM) Medical College, Kanpur, India. Throughout her career, she has published over 40 articles in national and international journals. As a result of her hard work and dedication toward the medical field, she has been awarded first prizes for oral presentation in international conferences such as Indian Cancer Congress (ICC 2014) and Asia Oceania Research Organisation on Genital Infections and Neoplasia (AOGIN 2012).

She is an active member of various scientific associations and societies such as the Indian Association for Cancer Research (IACR), Indian Society for Medical Statistics (ISMS), Indian Association of Preventive and Social Medicine (IAPSM), and International Epidemiological Association (IEA). In her effort to provide impactful messages via research publications, she is currently working on remodeling the cancer registry data, which includes a diversified field for incidence of childhood cancer, breast and cervical cancer, trends of major cancer, cancer burden in Northeast of India, among other things.

According to Dr. Asthana, her vision is the utilization of voluminous cancer registry data to produce comprehensive reports in the form of research communication to
give a clearer picture of different cancer burden in various Indian registries. “I have also proposed a project for establishing cancer registry at NICPR, which was approved by the Indian Council of Medical Research (ICMR) in principle, but we are currently still waiting for funding,” says the medical scientist.

Focusing on the area of cancer epidemiology and research methodology, Dr. Asthana has faced many challenges commonly encountered by any researcher with a vision to improve medical research. “Gradually, with time and experience, I have overcome these limitations and I now conduct research methodology workshops to help clinicians have a better orientation toward research,” she says. Dr. Asthana is the coordinator of research methodology workshops, which is a series of training courses that started in 2007. Training courses/workshops are being conducted on a regular basis — two to three times a year at ICPO — and on an invitation basis, she has held workshops at other institutions such as her previous visit to Universiti Teknologi PETRONAS in Malaysia to train 30 PhD students.

“The main aim or idea is to educate scientists/researchers and medical faculties about the basics of research methodology, which consist of descriptive statistics, statistical analysis, and clinical trial sampling, as well as research protocol development and scientific reporting/writing,” she elaborates. “The curriculum was formed and executed in such a way that new scientists gain an overall knowledge on how a research project should be planned, executed, and the results communicated,” she adds. The courses, according to her, are targeted for medical faculty members, medical post-graduate students, undergraduate students, and PhD students with a basic science background from various medical institutions.

As a researcher with almost 14 years of experience in medical research, her passion for research does not end there. Dr. Asthana has also ventured into various other new areas that are currently lacking presence in India and other low- and middle-income countries. One such area is palliative care, where she has undergone specialized training in palliative care from the Indian Association of Palliative Care. Additionally, Dr. Asthana is working on a global systematic review project that studies smokeless tobacco attributable risk for oral cancer. She further adds, “As an officer in the district technical support team and in collaboration with World Health Organization, I have devoted quite some time in serving the rural community for leprosy monitoring.”

When asked for her opinion about the future of cancer research, Dr. Asthana believes that targeted therapy is the future of cancer therapy, as it kills only cancer cells and not normal cells, which leads to lesser side effects. “However, the major concern is the cost of it,” she says, “and it doesn’t appear to be affordable in the near future.” Hence, “developing countries like India should focus on the prevention of cancer through the modification of risk factors and adopting healthy lifestyles,” she concludes.

Dr. Smita Asthana and colleagues publish their review entitled “Ovarian carcinoma: An overview of current status” in this issue of AMOR (page 261–270).