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[§] Till 1995, it was “ISMS Newsletter” and 1996 onwards got upgraded as “ISMS Bulletin”. Since the year 2006, only electronic-version instead of print-version (hard copy) is officially being circulated.

[#] Initial three issues (1986-87) were coordinated by **Prof. BN Mukherjee**, ISI Calcutta.

Note: No Publications were made during the years 2002 to 2005 & 2007, 2009 and 2012.

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Editorial

We have received a number of encouraging advices and remarks from ISMS members and office bearers through e-mails in response to September-2013 issue of the bulletin. These messages were mostly focused on elevation of the existing levels of the bulletin and its publication periodicity with assurances and the hope for an “altogether-collective-effort” to be undertaken by each and every member of the Society and not just leaving the editor of the bulletin in isolation to do some miracles in favor. The technical notes, review articles as well original papers and other useful information as requested earlier have yet to start flowing from the members to the editor. We are planning to invite some technical notes or advices or professional experiences from our earlier Presidents, Editors, General-Secretaries, FSMS & other awardees and also from some selected outstanding members; turn-by-turn; in order to ensure at least some 15 to 20 pages of technical material to be published in each issue of the bulletin. Also, we plan to form a core-group of some three to five senior ISMS members to restart book reviews as well to write editorial. Also, during each six months’ period coinciding with the publication of the bulletin at least some 25-30 good seminars and workshops are being organized by our members at various institutions across the country, but such notices and feedback information are hardly shared. In future issues of the bulletin a few pages shall be dedicated to

these activities. Similar suggestions and advices are requested and invited from the members and esteem group of earlier office bearers of the Society.

It was strongly felt that certain decisions on the basis of the recommendations made during the year 2008 by the ISMS “Silver Jubilee Committee” and “Core Committee on Education, Training and Research” must be taken by ISMS EC and GB at the earliest. Many amendments to ISMS Constitution, Rules and By-laws have been waiting since long. The time has well ripened for regional strengthening of membership drive and academic activities apart from holding annual national conferencing once in a year. We may like to evolve some mechanism to recognize the Web-Coordinator of ISMS as an essential part of the office bearer’s group as well should make him an ex-officio member of the Executive Committee of ISMS.

Let us permit to have an earnest appeal to the members to jointly make sincere efforts to contribute by sharing our rich professional views through the forum of ISMS bulletin, which is currently just dedicated to a very restricted area of the society’s organizational and administrative events’ reporting.



Prof. Ajit Sahai



Presidential Address at ISMSSCON 2013

by **Prof. D. K. Subbakrishna**

Dr. P. Gunasekaran, VC of Thiruvalluvar university, Vellore, Dr. Sunil chandy, Director, CMC, Dr. Alfred Job Daniel, Principal, CMC, Distinguished Past-Presidents of the Society, Fellow Members of the Indian Society for Medical Statistics, Faculty of this premier institution, Invitees, Students and Friends.

As President of the Society, it is my privilege to stand before you to address this august audience. I am elated for being recognized by my own peers. I am thankful to all members of the ISMS for this gesture. The Society which was formed more than 30 years ago has crossed the adolescence stage and has entered into the phase of a responsible individual and is making good progress. For this stage to arrive, the efforts of a large number of individuals who have toiled had to be acknowledged.

I am also honored as the current conference is being conducted at the Mecca of Biostatistics in this country. This conference is being held for the third time in this famed college and hospital. The Department of Biostatistics at this great institution deemed it fit to celebrate its golden jubilee by hosting the society's

conference for the third time adds to the thrill and happiness. Prof. P.S.S. Sundar Rao who is sitting here should be an extremely happy and proud man for this achievement. The contribution of his other colleagues and the current staff is by no means less. I congratulate each one of them on this achievement. The department which started the M.Sc., programme in Biostatistics is the torch bearer of biostatistics education in this country. Even though currently several other centers like Banaras Hindu University, MAHE, Amrita Institute of Medical Sciences, ST. Thomas College, Pala and several others also run this programme, the contribution of the staff and students of this college in the development of the programmes at some of the other institutions is noteworthy.

Coming to the need for statistics education to medical and behavioral researchers, the need is even more today as most of the leading journals have introduced the necessity of statistical peer reviewing of research articles. Add to this, the evidence based approach and the judicial angle to the treatment modalities; it has become even more necessary to make

research studies authentic by using various principles of statistical methodology, appropriate analysis and interpretation. The University Grants Commission realizing the need for higher standards in research introduced mandatorily the subject of research methodology and statistical methods for all Ph.D. programmes in this country. However, though the Indian Society for Medical Statistics approached and requested the MCI to take such a step and introduce statistical methodology for all the PG programmes so that medical researchers are sensitized to the various concepts, the results have not been very fruitful. But, In the last few years, medical colleges and research institutions across the country have been conducting workshops, seminars on statistical methods for the benefit of their staff and researchers which, I am sure has brought in good results in the quality of research and publications. The Indian Society for Medical Statistics will continue to make its efforts in this direction to raise the quality of statistical and medical education and research.

How will a biostatistician/medical statistician contribute to the increased quality is a question that keeps haunting people who are working in the field. In the last couple of decades, increased use of computers and statistical software has no doubt brought in a sort of revolution. However, this is not without the concomitant problems, like users not knowing the assumptions required for a specific analysis use the software and wrongly interpret and draw conclusions. For this to end, it is our responsibility to educate and help the non statisticians to properly use the right

methods. Also keeping in view the objectives of the specific study, we will have to venture into advanced data analytical methods and extract more information from the gathered data so that the end results are published in good peered review journals which have high impact factors which in turn, will make the researchers use more advanced methods of analysis and interpretation.

Of late, newer methods designing and analysis seem to be getting popular, like the mixed method approach used by medical and behavioral researchers where both the quantitative as well as qualitative approaches are simultaneously used to draw conclusions. The advantages of such methods should be exploited. Causal modeling has been another area which requires good amount of knowledge of statistical methods; logic and substantive methodology are again not well explored. Usage of some of these topics should go a long way in interpreting the medical data. The statistical approaches to analyse gene expression data like micro array data analysis, the analysis of MRI generated data, methods to analyse incomplete/missing data, managing large data sets, risk factor identification etc. are some areas which are to be explored.

Fellow members, pardon me if I am touching the soft side of our professional careers. Most of us seem to be content using routine statistical methods available in popular statistical software for all analysis and are satisfied going through this mundane exercise. I plead upon you to go beyond this and explore newer methods for specific situations where routine analysis may not be enough to bring out

newer theories to light and become part of the contributors for the progress of Science

The organizers of this conference have put in stupendous efforts to bring out a statistical feast. The administration of CMC, Vellore in general and the Department of Biostatistics in particular need to be congratulated and thanked for hosting this conference. Dr. Jayaseelan & Dr. Antonisamy and their team have taken the dual task of hosting this conference as well as celebrating the golden jubilee of the

Department of Biostatistics. All of us should congratulate and give them a big hand for this magnificent effort.

Thank You

Dr. D. K. Subbakrishna, FSMS
President ISMS,
Professor & Head,
Department of Biostatistics,
NIMHANS, Bangalore.



Message from General Secretary

Prof. Anil C Mathew

Dear Members

Taking over the charge of General Secretary of Indian Society for Medical Statistics has been an exciting and challenging assignment. Today not a single day goes without my coming across some ISMS activity and I am very happy that all office bearers and senior members are helping me to their maximum extent. I do regular phone calls to them and discuss various activities for improving the society. Website updating was the first task and more than 200 addresses were corrected in a very short period of time and

soon we will upload this information.

I shall update you further on our upcoming annual conference in the next bulletin. Please feel free in contacting me if you have anything that you want to share.

Sincerely,

Anil C Mathew, MSc (Biosts) CMC, PhD
General Secretary ISMS,
Professor of Biostatistics,
Department of Community Medicine,
PSGIMSR, Coimbatore.



Message from President-Elect
Fasten Your Seat Belts for Flying High
Prof. Abhaya Indrayan

First, I am indebted to our Editor, Dr Ajit Sahai, for asking (Inviting!) me to contribute to our Bulletin. He has spiritedly taken up the challenge to raise the level of the ISMS Bulletin by including several write-ups on issues and achievements of the Society. As per his suggestion, I take this opportunity to provide my perspective for future of the Society **for consideration** of the esteemed members of this august body.

I must thank my colleagues at the outset for proposing that I lead the Society during the two-year period from 1st of January 2015 to 31st of December 2016. I agreed as I was retired and this was a good time for me to pay back to the discipline that has given me in life beyond my wildest aspirations – not just in terms of material gains but also in terms of respect internationally.

This Society has always been dear to me and at the core of my professional activities. I was lucky to be in conversation with Dr RN Srivastava for discussing the need to raise this kind of group before this could take a shape. I was unlucky though to miss its first meeting in 1983, as I was on a Visiting Faculty assignment

at the Ohio State at that time. I had the opportunity to work with Dr Srivastava at MLN Medical College, Allahabad, in the years 1969 to 1971, where he was Reader and I was Lecturer at that time. It is entirely due to his encouragement and contribution that we could produce some benchmark Biostatistical papers on modeling in filariasis and multi-factorial analysis of blood pressure levels that were published in Indian Journal of Medical Research at the beginning of my career in early 70s. I was happy to be a secondary author of these papers but, thanks to his greatness, he insisted that I be the first author for these primarily statistical papers. That set the tone for my research endeavours rest of my life, and explains my emotional connect with the Society he founded.

Having paid my tributes to the Founder-President of ISMS, I must admit that a lot has happened during this expanse of 30 years since then. Extremely knowledgeable stalwarts have been heading this Society and they all have contributed in their unique ways. It is because of their enormous inputs that the Society is what it is today. I salute them. The

life-membership of the Society has grown to more than 800. It now confers 10 awards at the time of the annual conference each year. The conference has been organized in every corner of the country. My tributes to the organizers of the conferences who worked incessantly for making it a grand success each year. I look forward to a wider participation in the years to come. The list of these office bearers and the conference organizers is available at <http://isms-ind.org/PastAnnualConf.html>. This website is being very ably managed by the Department of Biostatistics of CMC, Vellore. This is the first such department in India and has been inspiration for many of us. Dr Anil Mathew, the General Secretary, has undertaken a massive exercise to update the list of members and their addresses on the website. The Treasurer, Dr Ajay Bansal, has applied for a PAN card for the Society. If granted, that will save nearly Rs 15,000/- annually; now being deducted as income tax on the interest earned on the deposits in the bank. This saving can be utilized for more interactive running of the Society.

A large number of medical colleges and Institutes of Medical Sciences are opening in every part of the country and the awareness of importance of biostatistics in medical research and practice is steeply increasing. Pharmaceutical industry may also be hiring as the policy for conducting trials within the country firms up. We must gear up to the groundswell in biostatistics personnel across the country. The Society is set to grow in next few years like never before. This upsurge can

be attributed primarily to the MCI regulations that require an equivalent of Lecturer in Biostatistics in each medical college. The Society may have to take more proactive steps than done so far to ensure that a Biostatistics Unit is setup in each medical college and a full department in all medical PG and research institutes. This needs to be expanded to include pharmacy, dentistry and nursing. This was never considered before but has great potential. I intend to peruse this with full vigour. We all can help in generating this thrust by doing what we are expected to do – produce high quality research that demonstrates that biostatistics is beyond analysis, and is essential to discover meaning of a mass of data. Let us rise to the occasion and publish papers and reports with high biostatistics content.

A related issue is qualifications required to fill up positions of biostatisticians in the industry and teaching/research institutions. Although the generic meaning of ‘bio’ includes disciplines such as agriculture and zoology, convention is strengthening to restrict this to health and medicine. To avoid this confusion, I started using the term ‘medical biostatistics’ long ago. This includes pharmacy, dentistry, and nursing, among others. Now that we have Master’s and doctoral courses in health statistics, biostatistics, medical statistics, and biometry, the Society may have to actively pursue so that these graduates get priority over those who have degree in statistics or mathematical statistics. Many may disagree, and that view too needs to be given due consideration. We should go by consensus. An

incident was recently brought to our notice where candidates with degree in biostatistics were excluded as the advertisement talked only about Master's in statistics. This Society can play a very effective role in spreading awareness so that this kind of aberrations does not occur.

The Society has been deliberating for long regarding starting something like an Indian journal of biostatistics. That indeed is a very desirable goal. Beside its financial viability, the feasibility has been questioned time and again because of likely shortage of quality papers. It may not be desirable to publish medical papers with some statistical analysis in this biostatistics journal as there are many medical journals for this purpose. In any case, many medical journals in India are also struggling because of lack of quality papers. My crude definition of a biostatistics paper is that it evidences crucial role of biostatistics methods in its results. For me, the best testimony of this is that the first author is a biostatistician. At least in some research endeavours, the biostatistician must lead. Funding agencies these days are liberal and they are looking for worthwhile projects. Biostatisticians across the country must seize the opportunity and conduct research at their own initiative. For primary data we can have medical colleagues as collaborators, otherwise a large amount of secondary data are available free on internet these days for anybody to indulge. Methodological developments also such as health indexes, scoring systems, nomograms, and mapping are not too difficult.

Any frequency less than quarterly of a journal is detested, and quarterly means at least 24 papers are published each year – 6 in each issue. For this we must have at least 50 submissions. Also, there must be willingness to submit it to an Indian journal that is yet to be indexed. Many of you would realize that this is a tall order. My review of PubMed indexed publications reveal that we are way behind at present in producing biostatistics papers. I hope we raise the bar in India and soon start producing at least 50 papers/articles per year with a biostatistician as the first author. Once that happens, the spectre of publishing an Indian journal of biostatistics would clearly emerge for the Society to take its cognizance. I call upon the members of this Society to do this quickly so that the journal becomes a reality. In the mean time, please send your original thoughts to the Editor of our Bulletin. I am sure the Editor will be happy to give it a sympathetic consideration.

The Society must try to expand and make in-roads to other disciplines. I have already mentioned about pharmacy, dentistry and nursing. Others could be AYUSH systems, physiotherapy and para-medical sciences. Biostatistics is practically non-existent in such disciplines. We need to demonstrate and convince how biostatistics is helpful in these disciplines for improving their scientific content. I will take up this as a challenge in the near future.

The Society has been lucky to receive huge donations recently. I expect that this will increase further in course of time. Some of us,

particularly those retired, are capable of making larger donations. I call upon our colleagues to be generous and help in enriching the Society they have built up over the years. This can be viewed as a payback to the discipline. The payback can occur in a variety of other ways also, such as setting up websites of type <http://www.MedicalBiostatistics.com> with free biostatistics material. This website has been visited by users from more than 120 countries. I wish a time will come when the Society will set up such a website itself to serve its members in particular and the biostatistics professionals in general. Another form of payback was an offer last year to transfer the publication of the book Basic Methods of Medical Research to the ISMS. The premise was that the Society makes money by selling it to the non-members at the regular price while giving it to the members at the cost price reflecting 50% discount. However, due to the constraints of storage and managing the remittances, the proposal could not be accepted.

To those biostatisticians who doubt their bright future, let me add that human variations and uncertainties are bound to propel this subject to its new high. Opportunities for research, writing books, national and international reports, etc., are making it a proverbial 'sexiest' profession.

You can see that a large number of activities are lined up for the next few years that could satiate your appetite. I know that some of you are yearning for flying high. Get set, and fasten your seat belts for a take off at a high trajectory. I promise sincere efforts but whether it remains a fantasy or turns into reality would depend on the cooperation of our esteemed members. I hope all will chip-in and do their bit. Your suggestions for further improvements are welcome.

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Announcement

Tentative dates of Thirty Second (32nd) Annual National Conference of Indian Society for Medical Statistics (ISMS) to be held at Jammu, are November, 1–3, 2014.

The detailed announcement shall follow after the finalization nod by ISMS Secretariat.

The address of the Organizing Secretary may be noted for further information and clarifications;

Professor J P Singh Joorel

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Preparing Biostatisticians as Effective Research Team Members and as Consultants

Key-note address delivered at ISMSCON-2013

by

Professor P S S Sundar Rao, DrPH

Esteemed Chair and members on the dais, distinguished guests, my colleagues, Students, Ladies and Gentlemen:

I deem it a great honour to deliver the Key note address at the 31st annual conference of the Indian Society of Medical Statistics, which has chosen to meet at Vellore, my alma mater, with an imposing Theme:

“Emerging Statistical Challenges in Clinical Trials, Genetic Epidemiology & Public Health”.

I have therefore chosen as the title of my keynote address what I felt was the greatest challenge facing Trainers of Biostatisticians to work in the medical/health environment, which is how they can be relevant, competent, and effective in promoting health and development in the world, especially in developing countries such as India.

In the short time available for my address, I would like to briefly present an epidemiological perspective to my talk, focusing on the Agent factors (the biostatistician) interacting with both the Host factors (the medical/health researchers), and

the Environmental factors (political, social, economic, demography, mortality and morbidity levels, drug industry, etc). In epidemiology, it is obvious that the agent cannot be effective unless the host and environmental factors are taken into account. So, before I focus on the Agent, on how to train and support the biostatistician to be capable of making revolutionary changes in the quantum and quality of medical research in India., I will highlight the challenges posed by the host and environment.

HOST (Medical Researchers):

There seems to be no boundaries for medical and public health research today, and medical researchers hail from several academic backgrounds and are engaged in a variety of research:

Apart from scientific journals, almost every newspaper and magazine contains medical research findings of popular interest such as in preventing heart disease, obesity, ideal diets, skin ointments, gastric problems, etc. Often these news items are sensational!

Was a statistician consulted or a member of the research team?

In just one issue of the recent Times of India newspaper, I found the following studies quoted:

- Mediterranean-style diet boosts fertility
- During sleep, the brain cleanses itself of toxic molecules, and sleep changes the cellular structure of the brain
- Blogging gives strength in lonely cancer struggle
- A third of all food wasted in a hungry world; in a year, India wastes more than 40% of what is produced worth Rs.58000 crores; quantity of wheat wasted in India is equal to Australia's annual production
- Genetic mutations that drive cancer identified
- Marmoset monkeys are very polite

Almost every day, dozens of such studies are reported, some of them astounding, some contradictory and many merely flash in a pan, true today and discarded as untrue tomorrow, but still discussed and debated. It is said that the magic of numbers brings a suspension of commonsense! The fact is that modern scientific medical research has become highly quantitative and statistical, and inevitably the non statistical researcher resorts to becomes self-education in certain aspects of statistical methods, and believes he is an expert.. Thus, they see no need to consult a biostatistician or they find the biostatistician quite ignorant of some of their basic medical terminology or

concepts. Many scientists resort to the Google or other internet sources to learn statistics or apply statistical methods for design and analyses. There is nothing wrong in such self-education, except that partial knowledge can often be dangerously misleading and disastrous, when applied to medical practice. Biostatistics has advanced tremendously over the past few decades, and many textbooks are outdated and even erroneous. Thus, However, the biostatistician's role would be present a more fundamental role in properly designing a study and making use of several powerful statistical analytical procedures that would vastly enhance the outputs of their research. JBS Haldane once stated that "an ounce of Algebra is worth a ton of verbal argument". In fact such inputs by the qualified biostatisticians will change the attitudes of other members of the Research Team and seek full collaboration of the biostatistician at every stage of their research It is sad that even today, a statistician is called only at the last stage, especially after their paper has been rejected by a Journal Editor or the thesis has not been approved.

I had a famous dictum in my office at CMC which states that,

"A Statistician should be considered more as an Obstetrician rather than as a Morbid anatomist".

Very few researchers consider inclusion of a statistician at the planning stage or inclusion as a vital team member from the inception. It is pathetic to observe that even now, a statistician is consulted to calculate the p-value, and it is even more pathetic that the statistician mechanically provides this information without

enquiring into the nature of the investigation

Why??? Ignorance? Lack of experience? Unavailability of a Biostatistician? Poorly educated biostatistician? A Biostatistician who has forgotten or has not been exposed to the strong foundations on which modern biostatistics rests??? We need answers!!

ENVIRONMENT

I shall now briefly discuss the second peg in the epidemiological triad. This refers to environmental influences that condition medical research and incidentally the use of statistical methods. Powerful political and economic considerations drive much of current medical and health research, and the scope of several donor-driven research can be often selfish or even commercial. The biostatistician who gets caught in this web of multiple forces will automatically get dragged into undesirable and inefficient study designs or inappropriate statistical analyses. Of course, there is a positive aspect of environmental forces that identifies relevant public health and clinical issues that need prioritization and must be carried out with a sense of urgency. This includes search for low cost effective care packages, use of indigenous and local technology and expertise, health systems that need to involve counter-expertise through community participatory approaches, and translation research utilizing existing knowledge, barefoot health professionals, inter- and trans-disciplinary researches, and networking through computers and cloud-processing. The dramatic development

over the past decade completely changes some of our research approaches and accelerates the benefits reaching the beneficiaries much faster. This must be taken advantage of. The fact that India with its rich heritage of five year plans and great industrial wealth is lagging behind in global human development index, and is failing to achieve even a few of the Millennium Development Goals, should wake us up to the urgent relevant research badly needed.

AGENT (The Biostatistician)

Given the above scenario, we must now concentrate on the third peg, and the most important peg for our deliberations this morning, Statistical methods or the science of Statistics is inherent in any research endeavour.

The use of statistical methods dates back to least to the 5th century BCE. The historian Thucydides in his *History of the Peloponnesian War* [describes how the Athenians calculated the height of the wall of Platea by counting the number of bricks in an unplastered section of the wall sufficiently near them to be able to count them. The count was repeated several times by a number of soldiers. The most frequent value (in modern terminology – the mode) so determined was taken to be the most likely value of the number of bricks. Multiplying this value by the height of the bricks used in the wall allowed the Athenians to determine the height of the ladders necessary to scale the walls.

In the Indian epic - the Mahabharata (Book 3: The Story of Nala) - King Rtuparna estimated the number of fruit and leaves (2095

fruit and 50,000,000 - five crores - leaves) on two great branches of a Vibhitaka tree by counting them on a single twig. This number was then multiplied by the number of twigs on the branches. This estimate was later checked and found to be very close to the actual number. With knowledge of this method Nala was subsequently able to regain his kingdom.

Modern statistics can be said to have started around 1749 although, over time, there have been many new concepts which include the design of experiments and approaches to statistical inference such as Bayesian inference, each of which can be considered to have their own sequence in the development of the ideas underlying modern statistics. Today statistics is widely employed in government, business, and all the sciences. Electronic computers have expedited statistical computation, and have allowed statisticians to develop "computer-intensive" methods.

In the 19th century, statistics increasingly used probability theory, whose initial results were found in the 17th and 18th centuries, particularly in the analysis of games of chance (gambling). Early probability theory and statistics was systematized and extended by Laplace; following Laplace, probability and statistics have been in continual development. In the 19th century, statistical reasoning and probability models were used by social scientists to advance the new sciences of experimental psychology and sociology, and by physical scientists in thermodynamics and statistical mechanics. The development of statistical reasoning was closely associated with the development of inductive logic and the

scientific method. The Norwegian Anders Nicolai Kiær introduced the concept of stratified sampling in 1895. Arthur Lyon Bowley introduced random sampling in 1906. Jerzy Neyman in 1934 showed that stratified random sampling was in general a better method of estimation than purposive (quota) sampling. The 5% level of significance appears to have been introduced by R.A. Fisher in 1925. Fisher stated that deviations exceeding twice the standard deviation are regarded as significant. Before this deviations exceeding three times the probable error were considered significant. For a symmetrical distribution the probable error is half the interquartile range. I mention all these names to show the rich heritage Biostatistician have.

Biostatistics is a relatively new field of statistics spearheaded by persons such as John Graunt and William Farr. John Graunt in his book *Natural and Political Observations Made upon the Bills of Mortality* estimated the population of London in 1662 from parish records. He knew that there were around 13,000 funerals per year in London and that three people died per eleven families per year. He estimated from the parish records that the average family size was 8 and calculated that the population of London was about 384,000. Laplace in 1802 estimated the population of France with a similar method. Other outstanding scientists who played a role in development of Biostatistics are Legendre (Method of Least squares), Gauss (Normal distribution), Karl Pearson, Francis Galton, Adolphe Quetelet, etc

In India, Prof. P C Mahalanobis and Prof C

R Rao, at the Indian Statistical Institute, Kolkata, made astounding statistical contributions to India five year plans and laid the foundations for a strong statistical leadership in our country. Since 1947, many statistical courses with emphasis on biometry and biology were initiated, but even after six decades, the training in biostatistics is still rather under-developed. It is true that ICMR had played a key role in promoting careers in biostatistics and encouraging young statisticians to take up biostatistics seriously. Premier institutions such as AIIMS, NIMHANS, St.Johns Bangalore and CMC Vellore have made great attempts to develop advanced levels of biostatistical training, but it seems that more is needed to significantly enhance the competence and confidence of the biostatisticians to serve effectively as team members and consultants, as well as take initiatives to elevate the standard of medical and public health research in India. More recently, the Public Health Foundation of India(PFI) has taken much initiative to organize courses in biostatistics and research methods, and building suitable workforce in public health research. Still much more is needed; and rather quickly.

Allow me to quote Ronald Aylmer Fisher (1890-1962), popularly accepted as the pioneer and father of modern biostatistics, who said:

The statistician cannot evade the responsibility for understanding the process he or she applies or recommends.

Today, ethics has become central to any research and the responsibility of every researcher, including the consulting

biostatistician. The ethical dimension is all pervasive and the core of any good research, undergirding the reliability and validity of the data collected, starting with informed consent of the respondent and active involvement in every stage of the stage. Unfortunately, this aspect is overlooked and ethical principles become a mere formality. When a statistician calculates the sample size or determines the p-value, does he consider the ethical aspects of his recommendation? Sadly, this point is totally missed in many biostatistics courses. I mention this first before I touch upon the technical and scientific aspects of training which are equally important.

Rational and Effective Therapy can only be done based on the correct diagnosis of the problem. With the challenges posed by the Host and Environment factors, we can now deal with training opportunities and challenges to be met in training the Biostatisticians.

Several models are available from US,UK and Australia schools of public health on how their divisions of Biostatistics function in training. I had the privilege of being trained first for my Masters in Biostatistics at the School of Public Health in Berkeley, California, USA during 1962 to 1964 and then was trained for my Doctoral program in Biostatistics at the Columbia University School of Public Health at New York, USA, where John Fertig was the Biostatistics Division Head from 1940 to 1975 ! He is perhaps best known as the statistician for the crucial research done by Dr. William Silverman that demonstrated the role of oxygen administration in the development of retrolental fibroplasia (RLF), a

major cause of blindness in premature newborns. Fertig reorganized the department to *develop* new theoretical results and applied statistical methods that can help address problems in public health and biomedicine; *collaborate* with scientists in academia, government, and the private sector in designing informative experiments and analyzing their statistical data to appropriately weigh the evidence and obtain valid findings; and *educate* the next generation of biostatisticians through innovative and relevant curriculum, hands-on experience, and exposure to the latest in research findings and methods. Dr. Joe Fleiss who followed him built the department further.

In Berkeley I was fortunate to be trained by Dr. Jacob Yerushalmy (popularly known as Yak), who ensured that I got fully engaged not only in the relevant biostatistical courses, but epidemiology, genetics, sociology, health education and computers under Dr. Jerzy Neyman.

I have tried to inculcate some of my experiences and models of training when the new department of Biostatistics was created in 1964 after my return from US. The Diploma in Health Statistics, the M.Sc and PhD in Biostatistics, with the unique interactive, participatory training strategies are some examples. Dr. Jeyaseelan has further expanded the scope of biostatistics training to include clinical epidemiology, and organize short-term workshops.

Today we find many biostatistics courses advertised in India, some of them introductory and others of advanced levels. The durations of these courses vary from a few days to a few

months. Many of them are good as a short term measure, but a proper graduate or postgraduate program is yet to materialize which would not only provide the necessary mathematical foundation, but enlarge the scope of statistical methods in medicine and public health. To fit all the essential requirements within a time frame of 2-3 years, requires much thought and great cooperation from all the students and faculty, not only from biostatistics department, but selected clinical units, social science and psychology departments. The strategy for learning while doing must be instituted, so that the student virtually becomes an apprentice, assisting the consultant biostatistician. This practice has been found to be very useful in the CMC training programmes.

Essentially, there would be some core courses in Statistical Inference, Epidemiology, Social Research, Computers and computing software. Other practically oriented courses will deal with specific statistical methods such as Multivariable analyses, Nonparametric and distribution-free statistical methods, Psychometry and Qualitative research, Clinical Biostatistics, Design, Administration, Analyses and Reporting of Clinical Trials, Computer searches for literature reviews, Sampling theory and practice including estimation of minimum sample sizes. Emphasis will be on critiquing good journal articles, interacting with researchers and learning how to be a good consultant. Students should have ample hands-on experience in using popular statistical software such as SPSS, SAS, STATA, R, and other readily available packages.

In conclusion, let us recall once again that

Biostatistics is an applied science and Biostatisticians must play critical roles in designing studies and not merely in analyzing data from research problems. They must help formulate the scientific questions to be answered, determine the appropriate sampling techniques, coordinate data collection procedures, and carry out statistical analyses to answer those scientific questions. Gone are the days when a Biostatistician is a passive member of the team or merely a technician. A Biostatistician is a highly trained professional and must behave like a professional, contributing to the body of knowledge. They must develop statistical techniques. Active areas of research include Bayesian methods, high-speed computing and simulation, survival analysis, analysis of geographical patterns of disease, longitudinal data analysis, and methods for analyzing data from epidemiologic studies and clinical trials.

Research problems are as diverse as the study of factors affecting heart and lung disease, testing new drugs to combat AIDS,

assessing indoor air quality in schools, working with various cancer studies, evaluating dental health and dental procedures, evaluating psychiatric symptoms and drug and alcohol use, transplanting organs and bone marrow, and studying inner ear infection.

With proper training, Biostatisticians with advanced degrees can look forward to excellent career opportunities in government, industry, and academia. Recent graduates have found positions with employers as diverse as pharmaceutical companies, university research groups, hospitals, and health-related industries.

I hope the Universities and Training organizations will take these suggestions as guidelines and contribute to more fruitful biostatisticians.

My best wishes to all. Thanks you for your patient listening!!

Dr. P S S Sundar Rao, DrPH, FSMS
Ex-President ISMS,
(*First-Lead*) Professor & Head,
Department of Biostatistics,
CMC, Vellore.
sundarraopss@rocketmail.com

Appeal 1

Esteemed members of the Society and the Office bearers are requested to send Original Articles; Technical Reports, Review Articles; ISMS Academic News items such as Workshops / Seminars Conducted in recent past or planned to be organized during 2014–15.

Also the personal academic achievements by the members, membership activity and messages including useful information to be shared with other members may be please forwarded to the official e-Mail address of ISMS bulletin at the earliest to enable us to include the same in the next issue of the bulletin.

e-Mail: ismsbulletin2013@gmail.com

Minutes of the General Body Meeting held at Scudder Auditorium, CMC, Vellore on 25 October 2013 at 6.45 P.M.

Prof. D.K. Subbakrishna, President of ISMS chaired the meeting. Also present on the dais were Dr. R. J. Yadav, General Secretary; Mr. Sharad Mathur, Treasurer; Prof. Ajit Sahai, Editor and Prof. T.Krishnan – Past President.

Members Present: 50 members attended the meeting.

The Chairman welcomed the members present and thanked the CMC, Vellore for hosting the conference.

1. The minutes of the GB meeting held at Ludhiana on October 7th 2012 were approved.
2. Report of the General Secretary - The General Secretary presented to the EC his report conveying that the membership has increased in the current year by an addition of 28 more life members. The nominations for the various positions were invited and the Nominations Committee has finalised the names of candidates for the various positions. The venue for the next conference has to be finalised and one request has been received from University of Jammu. One more request through email to an EC member has also been received from Government Medical College, Tamaka, Himachal Pradesh. The Secretary

also conveyed that Dr. Anil Kumar of Jalma, Agra had indicated his willingness to host the next conference. Dr. N.K. Tyagi had also sent a proposal in the year 2012 itself for hosting the 2014 conference at Belgaum.

3. Report of the Treasurer: The report of the Treasurer was presented by Mr. Sharad Mathur and he mentioned that no money has been withdrawn from the corpus in the last year and the Society has managed to complete all transactions with the help of the amount which was lying in the SB account.
4. Report of the Editor: The Editor Prof. Ajit Sahai said that he managed with a lot of difficulty to bring out one issue of ISMS bulletin which was quite comprehensive. He requested all members to send technical reports so that it can also be included. He also suggested that the postal and email addresses of members are incomplete and hence needs updating. Prof. Sundar Rao suggested that Prof. Sahai and Prof. Antonisamy can jointly work on this and this activity could be coordinated by Prof. B.L. Verma and a comprehensive list of all members with postal and email addresses

be prepared in next three months which can be used for all purposes.

5. The Chairman then presented the composition of the re-constituted Committees of FSMS Awards and Nominations.

(a) There has been one vacancy in the FSMS Committee which according to the constitution has to have 10 members. The Chairman suggested that this committee shall have a 10th member with voting rights. The President of the society being the coordinator suggested the name of Prof. T. Krishnan for the position which was approved by the EC.

(b) Nominations Committee: The current Nominations Committee has completed two terms and some of the members have desired to opt out. The Chairman then reconstituted the committee with Prof. Arvind Pandey as Chairman with Prof. B.L. Verma and Prof. Ajit Sahai as members.

(c) The Awards Committee also completed its term and is due for re-constitution. The new Awards Committee will be Prof. K.R. Sundaram - Chairman, Prof. B. Antonisamy, Dr. L. Satyanarayana, Prof. R.M. Pandey & Prof. C.M. Pandey.

6. The Chairman then presented the report of the Nominations Committee and gave the details. The Nominations Committee has received two nominations and has recommended the name of Dr. Anil Mathew for General Secretary. Similarly,

two nominations were received for the position of Treasurer and the name of Dr. Ajay Kumar Bansal has been recommended by the Nominations Committee. For one position of EC member, two valid nominations had been received, both from NIMS. The present General Secretary and Treasurer are also from NIMS and will continue to be members of the EC for next three years as ex-officio members. Hence, the Nominations Committee recommended that Dr. L. Satyanarayana be considered as a special case for membership of EC as he also was a contender for the General Secretary position.

7. The GB after discussions approved all the above nominations. The Awards Committee report was presented by the Chairman and the FSMS Awardees for the year 2013 are Dr. S.S. Ganguli - Oman and Dr R.K. Soni, Ludhiana. Dr. B.G. Prasad Award has been won by Dr. R. Srinivasan, Chennai.

8. Smt. Ramrati Lalima Sahai Award - This year nominations had been called for this award and one nomination received. However, the members of the committee felt that this award should be given to senior members (even if not nominated) who have been office bearers of the Society and served it creditably and hence for the year 2013, the name of Prof. V.G. Kaliaperumal has been recommended. The GB approved the same.

9. Prof. K R Sundaram award - During the Ludhiana conference a subcommittee had

been constituted by the than President with Dr. Anil Mathew an, Dr. D K Subbakrishna and the president Prof. T. Krishnan as Chairman. The committee had submitted its report and after approval from Prof. Sundaram's family the same was circulated to all EC members and their concurrence obtained for the implementation of the award from the year 2013. For this an extra amount of Rs 20,000 was also given by the family. The award was open this year and one application was received. The award committee felt that because of certain lacunae in the proposal the award could not be given. The GB deliberated on this and suggested that the same committee modify / simplify the rules. Prof. Sundaram was also requested to talk to his family about this and give their suggestions. The committee is expected to submit its report shortly and the same after approval of the EC will be implemented next year. The chairman suggested that as there were no awards for 2013 it can be given to 2 youngsters next year; this was approved by the GB.

10. Prof. Rakesh Shukla award: Regarding the money donated by Prof. Rakesh Shukla in his mother's name, the president had written to Prof. Shukla as decided by the Ludhiana GB meeting and Prof. Shukla had replied that the money should be utilized for giving travel grant for young women statisticians to attend an ISMS conference for a period of 5 years and after that he may replenish the grant. The EC and GB suggested that instead of spending the

corpus it will be better to put it in a FD and use the interest. Also, instead of putting tags as to be used for women scientists it should be given to young statisticians. Prof. Rakesh Shukla immediately approved and said that he wants the Society utilize the money.

11. Prof. A. Indrayan award: Prof. Indrayan travel grant donated by Prof. A. Indrayan has been utilized this year by giving travel grant of Rs 5000/ each to two senior members of the Society to facilitate their travel.
12. 2014 Conference The discussion on the next venue took place at length with members expressing apprehension about the University of Jammu's capacity to hold the conference. The GB authorized the Chairman to take a final decision after speaking to the Head of the Department of Statistics, Jammu University. The chairman informed the house that he had already spoken to the Faculty of Statistics Department and they had conveyed that the Indian Science Congress with 10,000 delegates will be meeting in the Jammu university in January 2014 and the infrastructure available has been appreciated by NAAC which has given a high ranking and they will be too happy and privileged to host ISMS 2014 conference. Dr. Soni of Ludhiana and Dr. CM Pandey of Lucknow also said they have visited the Campus and there may not be any major problem. The GB suggested that Dr. Soni and Dr. Yadav coordinate with the faculty of Statistics Department of

Jammu University in this regard.

13. Biostatistics Curriculum: Dr. NK Tyagi raised the issue of Biostatistics Curriculum and a dialogue with MCI. A subcommittee with Dr. N K Tyagi, Dr. R K Soni and Dr C M Pandey was constituted to look into this matter.
14. Thanking Outgoing Office-Bearers: The meeting ended expressing deep appreciation for the work carried out by Prof. V.G. Kaliaperumal, Prof. K.R. Sundaram, Prof. P.P. Talwar, Prof. K. Thennarasu, and Dr. P. Venkatesan. The GB also placed on record the excellent guidance provided by the previous president Prof. T. Krishnan and thanked him. The work carried out by Dr. R.J.

Yadav, General Secretary and Mr. Sharad Mathur, Treasurer was also appreciated.

The Chairman thanked all members for participating in the discussions and giving suggestions for the proper function of the ISMS. The Chairman also thanked the administration of CMC, Vellore and the Department of Biostatistics for hosting the 31st annual conference.

(D.K. Subbakrishna)
President

(R.J. Yadav)
General Secretary



ISMS Executive Committee (EC) Meeting on 23.10.2013



ISMS General Body (GB) Meeting on 25.10.2013



Good News from Treasurer-ISMS

Dr. A K Bansal

Dear Colleagues,

I am glad to inform that I have succeeded in getting PAN for the Society. This may save ISMS from paying income tax to the tune of Rs 10,000/- to 12,000/- per annum on the interest of the deposits of the Society. Whatever the tax is being deducted by the bank every year, we should be able to get it refunded by filing the

income tax return for the Society from next year onwards. The expenditure I incurred on obtaining this PAN card was just Rs 500/-.

Dr. A K Bansal, PhD

Treasurer-ISMS

UCMS, Delhi.

drakbansal2011@gmail.com



Report on 31st Annual National Conference of
Indian Society for Medical Statistics (ISMS) and Golden
Jubilee Celebrations at CMC, Vellore
(October 23-26, 2013)

The Department of Biostatistics celebrated the Golden Jubilee year and hosted 31st Annual Conference of ISMS during October 23-26, 2013. The department of Biostatistics was formally established in 1964 with the untiring efforts and leadership of Dr. PSS Sundar Rao. The Biostatistics department was created primarily to teach and provide statistical consultation for the medical faculty and other components of the health sciences departments. The department has become a prominent place in the emerging field of biostatistics, adopting rigorous academic standards and producing landmark papers, carrying out research studies and training programs.

On October 23, 2013, the golden jubilee celebration started with a pre-conference workshop on “*Data analysis, Visualization and Communication with Microsoft Excel & Tableau Software*” in collaboration with Dr. Elena N Naumova and Mr. Alexander Liss, faculties from University of Tufts, Boston, USA. The workshop was attended by physicians and statisticians from various institutes across the country.

31st Annual Conference of the Indian Society for Medical Statistics (ISMS) was held third time in CMC, during October 24-26, 2013 at Scudder Auditorium, CMC, Bagayam, Vellore. The inauguration was held on October 24, 2013 with the chief guest Dr. P. Gunasekaran, Vice Chancellor, Thiruvalluvar University, Vellore. He emphasized the emerging statistical challenges before the scientific community is to convert the raw data into knowledge in which statisticians have a key role to play.

The Principal, Dr. Alfred job Daniel in his address explained the department’s role in bringing up medical research and training in the institution and country. Dr. Sunil Chandy, the director outlined the significance of the department’s contribution over the past 50 years in providing bio-statistical teaching, training and consultancy services for the whole institution. As a token of love and gratitude Dr. P.S.S. Sundar Rao and Dr. J. Richard were felicitated by CMC and ISMS dignitaries.

The president of the ISMS, Dr. D. K. Subbakrishna, delivered the presidential

address and presented the society awards. A key note address “*Preparing Biostatisticians as effective research team members and as consultants*” was delivered by Dr. P.S.S. Sundar Rao. Dr. L. Jeyaseelan, Organizing Chairperson, welcomed the participants on behalf of the department and Dr. B. Antonisamy, the Organizing Secretary proposed vote of thanks.

The theme of the conference was “*Emerging Statistical Challenges in Clinical Trials, Genetic Epidemiology and Public Health*” and the plenary, symposium and invited speakers – Dr. Elena N Naumova, Mr. Alexander Liss, Dr. Karan P Singh, Dr. Rakesh Shukla (USA), Dr. Partha P. Majumder (NIBMG, Kalyani), Dr. Vishwanath Iyer (Novartis), Dr. Ashutosh Gupta (GSK) and Dr. Shashidhar J Savanur (Theorem Clinical) and others from academic and industry. A cultural programme was performed by Aaradhana

Troupe, Chennai on 24th October 2013.

The participants presented various papers on Clinical Trials and Meta-Analysis, Longitudinal data analysis and time series, Bayesian methods in medical research, Statistical methods in non-communicable diseases, Statistical methods in medicine and public health, Survey Methods, Applied Regression Models and Advanced Multivariate Techniques. The conference was ended on 26th October 2013 with the valedictory function, all the past and present staff and students of the department of Biostatistics gathered and made a memorable event. Dr. K.G. Selvaraj proposed the vote of thanks.

Dr. B Antonisamy, PhD, FSMS
Organising Secretary-ISMSCON 2013
Professor & Head,
Department of Biostatistics, CMC, Vellore,
b.antonisamy@gmail.com

Appeal 2

Esteemed members of the Society and the Office bearers are requested to send their recommendations / nominations and interests to help construct Editorial Advisory Board (International and National Members); Editorial Board (including Medical Faculty) and the Council of Regional Editors (Northern; North-Eastern; Eastern; Western; Central and Southern Regions). The anticipated eligibility requirements/requests are highlighted on the very first page-“ISMS Bulletin Editors”.

Members may please forward the suggestions to the official e-Mail address of ISMS bulletin.

e-Mail: ismsbulletin2013@gmail.com

















Appeal 3

The recommendations of the ISMS “Silver Jubilee Committee” and “Core Committee on Education, Training and Research” were published in September 2013 Bulletin in accordance with the decisions taken after detailed discussions held during the Conferences at Chennai and Ludhiana (EC & GB). As requested earlier the esteemed members of the Society and the Office bearers are once again requested to forward their valuable comments to the President of ISMS with Copies to Chairmen and Member Secretaries of the respective Committees.

Members may please also forward a copy to the official e-Mail address of ISMS bulletin.

e-Mail: ismsbulletin2013@gmail.com

Executive Council

President (2013-14)



Dr. D K Subbkrishna,
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President Elect (2013-14)



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General Secretary (2014-16)



Dr. Anil C Mathew,
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Treasurer (2014-16)



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Editor (2013-17)



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Member (2013-14)



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Member (2014-16)



Dr. R J Yadav,
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Member (2014-16)



Mr. Sharad Mathur,
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Member (2013-15)



Dr. R M Pandey,
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Member (2013-15)



Dr. Dilip C Nath,
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Member (2013-15)



Dr. N K Tyagi,
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Member (2014-16)



Dr. L Satyanarayana,
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Awards Committee (2014-16)

Chairman



Dr. K R Sundaram,
AIMS, Ernakulam
krsundaram@aims.amrita.edu

Member



Dr. R M Pandey,
AIIMS, New Delhi
rmpandey@yahoo.com

Member



Dr. B Antonisamy,
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Member



Dr. C M Pandey,
SGPGIMS, Lucknow
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Member



Dr. L Satyanarayana,
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*Donor for the latest
'Young Statisticians Award'*



Prof. Rakesh Shukla,
Uni-Cincinnati, Ohio, USA,
shuklar@ucmail.uc.edu

Nomination Committee (2014-16)

Chairman



Dr. Arvind Pandey,
NIMS, New Delhi
arvindp55@hotmail.com

Member



Dr. B L Verma,
MLBMC, Jhansi
blverma49@gmail.com

Member



Dr. Ajit Sahai,
JIPMER, Puducherry
ajit.sahai@gmail.com

Fellows of the Society

The conformation on the year of fellowship awards is solicited from the members of the Society

Sl. No.	Fellowship	Sl. No.	Fellowship
1	Prof. C. R. Rao (1985)	25	Prof. S. Krishnamurthy (2001)
2	Prof. P.V. Sukhatme (1985)	26	Prof. S. N. Dwivedi (2003)
3	Prof. J. S. Rustogi (1986)	27	Prof. R. N. Mishra (2003)
4	Prof. Rameshwar Sharma (1986)	28	Prof. Ajit Sahai (2004)
5	Prof. P.S.S. Sundar Rao (1987)	29	Prof. D. K. Subbakrishna (2004)
6	Dr. S. Radhakrishna (1987)	30	Prof. R. M. Pandey (2005)
7	Prof. K.B. Pathak (1988)	31	Dr. P. Venkatessan (2005)
8	Prof. R. N. Srivastava (1989)	32	Dr. N. S. Murthy (2006)
9	Prof. G.P. Patil (1990)	33	Dr. Anil Kumar (2006)
10	Prof. S. Biswas (1990)	34	Prof. L. Jeyaseelan (2007)
11	Prof. B.G. Prasad (????)	35	Dr. R. J. Yadav (2007)
12	Prof. K. Srinivasan (????)	36	Prof. T. Krishnan (2008)
13	Dr. Padam Singh (????)	37	Prof. B. Antonisamy (2008)
14	Prof. K. Ramachandran (1993)	38	Prof. V. K. Srivastava (2009)
15	Prof. C. M. Suchindran (1993)	39	Prof. C. M. Pandey (2009)
16	Dr. Sushila Nayar (1994)	40	Prof. G.D. Shukla (2010)
17	Prof. P.P. Talwar (1994)	41	Prof. Deoki Nandan (2010)
18	Prof. V. G. Kaliaperumal (1995)	42	Prof. D. C. Nath (2010)
19	Prof. J. Richard (1996)	43	Prof. Rakesh Shukla (2011)
20	Prof. K.R. Sundaram (1996)	44	Dr. L. Sathiyararyana (2011)
21	Prof. A. Indrayan (1997)	45	Prof. N.K. Tyagi (2012)
22	Dr. K. Visweswara Rao (1997)	46	Dr. Abha Rani Aggarwal (2012)
23	Prof. Arvind Pandey (1998)	47	Prof. S.S. Ganguli (2013)
24	Prof. B. L. Verma (1999)	48	Prof. R.K. Soni (2013)

Annual National Conferences of ISMS (1983–2013)

Year	Host Institution	President	General Secretary	Treasurer	Organising Secretary
1983	M L B Medical College, Jhansi	Prof. R.N. Srivastava	Prof. B. L. Verma	Prof. G. D. Shukla	Prof. B. L. Verma
1984	K G Medical College, Lucknow	Prof. R.N. Srivastava	Prof. B. L. Verma	Prof. G. D. Shukla	Dr. Vidya Bhusan
1985	I S I, Kolkata	Prof. R.N. Srivastava	Prof. B. L. Verma	Prof. G. D. Shukla	Prof. T. Krishnan
1986	NIMHANS, Bangalore	Prof. R.N. Srivastava	Prof. B. L. Verma	Prof. G. D. Shukla	Prof. V. G. Kaliaperumal
1987	Govt. Medical College, Srinagar	Prof. R.N. Srivastava	Prof. B. L. Verma	Prof. G. D. Shukla	Dr. M. L. Zulshi
1988	N I N, ICMR Hyderabad	Prof. R.N. Srivastava	Prof. B. L. Verma	Prof. G. D. Shukla	Dr. K. Visweswara Rao
1989	Institute of Medical Science, BHU Varanasi	Prof. P. V. Sukhatme	Dr. Padma Singh	Dr. I.M.S. Lamba	Prof. I.C. Tiwari
1990	C M C, Vellore	Prof. P. S. S. Sunder Rao	Dr. Padma Singh	Dr. I.M.S. Lamba	Prof. J. Richard
1991	IRMS, ICMR & AIIMS, New Delhi	Dr. S. Radhakrishna	Dr. Padma Singh	Dr. I.M.S. Lamba	Dr. Padma Singh
1992	I I P S, Mumbai	Prof. K. B Pathak	Dr. Padma Singh	Dr. I.M.S. Lamba	Dr. C. P Prakasam
1993	Andhra University, Visakhapatnam	Prof. Rameshwar Sharma	Prof. K. R. Sundaram	Prof. S. N. Diwedi	Prof. K.V. Suryanarayana
1994	MGIMS, Sevagram Wardha, Maharashtra	Prof. K. Srinivasan	Prof. K. R. Sundaram	Prof. S. N. Diwedi	Prof. N. K. Tyagi
1995	IRMS (ICMR), Chennai	Prof. P. S. S. Sunder Rao	Prof. K. R. Sundaram	Prof. S. N. Diwedi	Dr. M. Kachirayana
1996	AFMC, Pune	Prof. P. S. S. Sunder Rao	Dr. M. Kachirayana	Mr. R. Jayabal	Prof. S.S. Ganguly
1997	S M S Medical College, Jaipur	Prof. P. P. Talwar	Dr. M. Kachirayana	Mr. R. Jayabal	Prof. M.P. Songara
1998	C M C, Vellore	Prof. P. P. Talwar	Dr. M. Kachirayana	Mr. R. Jayabal	Prof. L. Jeyaseelan
1999	NIMHANS, Bangalore	Prof. V. G. Kaliaperumal	Dr. I. M. S. Lamba	Dr. R. J. Yadav	Prof. D. K. Subbakrishna
2000	C J I L, JALMA, Agra	Prof V. G. Kaliaperumal	Dr. I. M. S. Lamba	Dr. R. J. Yadav	Dr. Anil Kumar
2001	SGPGIMS, Lucknow	Dr. Padma Singh	Dr. I. M. S. Lamba	Dr. R. J. Yadav	Prof. C. M. Pandey
2002	IRMS, New Delhi	Dr. Padma Singh	Prof. C. M. Pandey	Dr. Uttam Singh	Prof. Arvind Pandey

Year	Host Institution	President	General Secretary	Treasurer	Organising Secretary
2003	DMRC, Jodhpur	Prof. K. R. Sundaram	Prof. C. M. Pandey	Dr. Uttam Singh	Dr. R. C. Sharma
2004	JIPMER, Pondicherry	Prof. K. R. Sundaram	Prof. C. M. Pandey	Dr. Uttam Singh	Prof. Ajit Sahai
2005	J N Medical College, Belgaum	Prof. Babu L Verma	Dr. P. Venkatesan	Dr. V. S. Yadav	Prof. Shivaprasad Goudar
2006	P S G IMSR, Coimbatore	Prof. Babu L Verma	Dr. P. Venkatesan	Dr. V. S. Yadav	Prof. Anil C Mathew
2007	Manipal University, Manipal	Prof. Ajit Sahai	Dr. P. Venkatesan	Dr. V. S. Yadav	Prof. N. Sreekumaran Nair
2008	C S U Lucknow/Nainital	Prof. Ajit Sahai	Dr. P. Venkatesan	Dr. V. Selvaraj	Prof. V. K. Srivastava
2009	BHU, Varanasi	Prof. Arvind Pandey	Dr. P. Venkatesan	Dr. V. Selvaraj	Prof. R. N. Mishra
2010	NIMS/NIHFW, New Delhi	Prof. Arvind Pandey	Dr. P. Venkatesan	Dr. V. Selvaraj	Dr. R. J. Yadav
2011	NIRT, TRC Chennai	Prof. T. Krishnan	Dr. R.J. Yadav	Mr. Sharad K Mathur	Dr. P. Venkatesan
2012	DMCH, Ludhiana	Prof. T. Krishnan	Dr. R.J. Yadav	Mr. Sharad K Mathur	Prof. R.K. Soni
2013	CMC, Vellore	Prof. D.K. Subbakrishna	Dr. R.J. Yadav	Mr. Sharad K Mathur	Prof. B. Antonisamy

Appeal 4

Esteemed members of the Society and the Office bearers are requested to send year-wise details, if available, of the Awardees and also the information with regard to the correct year of institution of the Awards, modifying the probable years listed here under;

- Prof. B.G. Prasad Award (1985)?
- Smt. Suraj Kali Jain Award (1986)?
- Prof. P.V. Sukhatme Award (1993)?
- Prof. S.K. Bhattacharya Oration Award (1996)?
- Dr. R.N. Srivastava Award (1993)?
- Prof. P.P. Talwar Shield (1999)?
- Smt. Ramrati Lalimaa Sahai award (2008)?
- Prof. Indrayan Travel Grant (2011)?
- Prof. Sundaram award (2013)?
- Prof. Rakesh Shukla award (2014)?

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