



## WHAT CAN RURAL SURGEONS LEARN FROM GERMANY?

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### INTRODUCTION

The author had the opportunity to visit the ARSI overseas member Dr. Elias Engelking in Germany. There is a small town in south-west Germany called Tuttlingen with a population of 34,000. It is difficult to believe that it is a pioneer and world leader in producing surgical instruments. As much as 50% of surgical instruments used all over the world are produced by some 600 firms (one man businesses to global market leaders) in the cluster there (1). The standards are so well organized that neither the courier nor the importer wastes any time checking the materials coming in from Tuttlingen.

Germany is a high-tech western country obsessed with high quality and full of industries long term planning. So what can rural surgeons learn from such a country? Superficially it might look as though there is nothing much, but a lot can be learnt from Germany. The author came across many further simple solutions. Here some examples:

### DOCUMENTATION

The company Aesculap AG that has been there for 145 years had catalogues and specifications right from 1900 (2). The long history shows how specifications were documented so that everyone can easily see them and follow the instructions.

What can the Rural Surgeon learn from this? Documentations can easily be carried out in the rural areas too. For instance, in the operating room the list of instruments that is necessary for each procedure and for the same procedures with different surgeons can be documented. Photographs of how the instruments are arranged are made so that anyone can do the arrangement. Check lists for various procedures and videos of procedures would help anyone new to follow the exact protocol. Similarly following protocols would improve the quality of work in rural areas.

### VERY LOW COST EARTH AIR - CONDITIONER

India has a problem with hot humid climate. Air conditioners are excellent but expensive to get and also expensive to run. It also heats up the surrounding areas [outside the room]. A system of PVC pipes inserted 3 meters {10 feet} below the ground could cool the room by 9 to 10 degrees centigrade and decrease humidity by 40%. All that is necessary for running it is a simple fan (3). This is possible because the temperature of the earth 3-4 meters below the surface is always constant with an average temperature of the year. This technique would be a great boon to the rural areas and hospitals.

## COLOUR CODING

Colour coding of various departments could help in easily sorting out things like instruments, equipment, sterilization, linen, etc. It is easy for everyone involved starting from the uneducated class 4 workers.

## LAPRO-LIFT

Lapro-lift instead of gas laparoscopy has many advantages like simplicity, use of sturdy equipment and doing away with electronic equipment that breaks often and need for carbon dioxide gas. The CO<sub>2</sub>-supply makes logistics difficult. (4)

## KEEPING THE WORK FORCE HAPPY

One of the ways that Germany keeps the high standards is by keeping its workers very content and interested in their work. They do this by the following

1. Pleasant working conditions
2. Listening to and implementing the advice from lower cadre workers and workers in all levels
3. Letting the workers do complete jobs so that they can be proud of being able to do all tasks and be proud of their product.

In rural areas advice from various categories of staff would go a long way in improving the quality of work and meeting the felt needs of the community. Further this is a strong motivator of the staff because they identify more with their own work and see that they can make a difference to the better.

## COSTS AND EFFICIENCY

Like in other European countries the reimbursement from insurance companies to the hospitals in Germany are fixed not allowing for great profits. Hence to be profitable the hospitals need to be very efficient. So a great effort goes into making hospitals more efficient. This is done by clearly defined standards saving unnecessary examinations and therapeutics and by joining up to buying-syndicates with other hospitals for pharmaceuticals resulting in lower drug-prices. Similarly if hospitals are made more efficient in rural areas they can be profitable despite the low paying capacity of the rural patients. We have many ARSI members in India demonstrating that in their daily practice.

## NEWS OF QUALITY SPREADS

Despite its location in a remote German town Aesculap AG was well known even 100 years ago and had branches in Paris, London and New York. This was at a time that surgical instruments were made locally according to the surgeon's needs. This was possible at a time communication

was difficult and travel was slow and tedious. It was possible only because of the high quality workmanship.

## TRAINING MATTERS

All the major companies and firms in Germany have continuous training programs. This helps in many ways. It helps to improve the quality and train many persons and also disseminate the knowledge. Organizing training programs for local and nearby general practitioners could help the rural hospitals in making their services known to the people around. The Association of Rural surgeons could organize specific training programs for the staff that could improve the quality of services offered.

## USE OF INTERNET AND OTHER FACILITIES

Ninety nine percent of patients who are treated at Endogyne at Braunschweig (5) come there after reading about the place in the internet. A recent survey that appeared in an Indian newspaper (6) showed that about 54% of the rural population had mobile phones while about 5% of the rural population had computer with 20% of the computers having internet connection. Similarly 54% of the rural population use banking services.

These factors could be considered while planning health care facilities for the rural areas especially for surgical patients. Some type of insurance programs or loans and payments in installments etc., could be worked out through the rural banks.

## THE WORK TOGETHER

Although many of the firms sort of compete with each other or in other words produce similar products in Tuttlingen they do not malign each other, talk honestly about the other person's products and work together in some aspects. The advertisement films about Tuttlingen talk about all the companies there. The combined advertising costs them much less.

## SUGGESTIONS

The Association of Rural surgeons of India {ARSI} can do the following to make the standards of rural surgery better and to have a win – win situation.

- A. Have accreditation program for rural hospitals and set standards for the hospitals so that the care offered, charges, etc., are uniform.
- B. Have joint advertising program to talk about the facilities and accreditation.
- C. Have training programs to upgrade facilities.
- D. Create a buying-syndicate for ARSI-Hospitals getting better drug and instrument prices on the international market

## REFERENCES:

1. <http://de.wikipedia.org/wiki/Tuttlingen>
2. <http://de.wikipedia.org/wiki/Aesculap-Werke>
3. [http://www.pfunzle.ch/index.php?page=college\\_passive\\_cooling\\_811](http://www.pfunzle.ch/index.php?page=college_passive_cooling_811)

4. <http://lift-laparoscopy.com/>
5. <http://endogyn.com/>
6. The Hindu, March 13, 2012

## IMAGES



AESCULAP HEADQUARTERS IN TUTTLINGEN



KARL STORZ TRAINING CENTER TUTTLINGEN



THE AUTHOR FOLLOWING A SURGERY IN AN OPERATING ROOM IN TUTTLINGEN



**SIMPLE BUT STURDY LIFT-LARAOSKOPY ELEVATOR**