2. Innovation in product and production process
3. Increase in product quality and standards
4. Commercialization of technological knowledge
5. Development of pre-competitive collaboration
6. Entrepreneurship and investment
7. Acceleration of direct foreign investment for R & D, innovation and design
8. Increase in employment of R&D and design personnel and skilled labor.

D-36
QUALITY COST SYSTEMS IN HEALTH ENTERPRISES

N. Zafer Cantürk
Kocaeli University Hospital / Innovation Society for Quality in Health (SAKID), Kocaeli

Recently, a competition environment has been tried to provide better quality health care services in the health care sector. Hence, patients have a chance to choose one of the many hospital operations to get health care, while hospital operators are in the race to make more patients prefer themselves. Hospital operations are also struggling to provide better quality and less costly health care services. The inability to determine the fees for the services offered in hospitals has led hospital administrators to control costs. It is important to control the costs in hospital enterprises. In addition to high costs due to the nature of health care services, the failure of the related institutions to collect the services provided, the medications used, the medical supplies and some of the examinations due to the incomplete arrangement of the ill-conceived bills or the erroneous results in the loss of revenue in the hospital enterprises. Managers must plan income and expenditure by creating work programs and budgets based on all the quality and cost-related aspects of their businesses for the foreseeable future. Hospital administrators with the control of the costs of health services provided in hospital enterprises; reducing costs, increasing the quality of service offered, using the inputs and outputs effectively and efficiently, and determining the performance of employees. In a theoretical world where the quality is perfect and the defective product is not available, the existence of the costs of impropriety will not be mentioned. However, it requires the existence of a quality costing system because these actual costs must be calculated, analyzed and interpreted. Factors that increase costs and decrease productivity in hospital enterprises in researches:
- Having the work to be done outside in the hospital with less cost,
- Unnecessary surgical interventions,
- The lack of use of some advanced facilities and labor-intensive technological commitment,
- Determination of hospital sizes, regardless of regional demand,
- Physicians tend to have more laboratory tests.

Costs can be reduced while upgrading quality. It is considered important to take the following activities or measures in order to achieve this.
- Managers should describe their attitudes towards quality improvement to employees, raise awareness of employees, take their ideas and reward high performance ideas.
- Workplace peace should be established.
- Effective and effective human resource management.
- Establishment of a savings culture at the institution / organization.
- To privatize the services evaluated in the support services such as meals, security and cleaning, if necessary, from the outside through procurement.
- Cost analysis.
- Effective cost of investment calculation (far from populist approach, real and proactive planning).
- To plan and supply drugs, medical and non-medical supplies and fixtures that increase service costs, especially in the healthcare sector, according to the patient portfolio served, and not to make more stock than necessary to maintain uninterrupted flow.
- Preventing waste (time - material management).
- Sufficient automation system.

Each hospital should establish, monitor and implement a system that will follow quality costs in line with its own work standards. The classification, accounting, reporting and analysis of quality cost data to be performed by the quality management unit and the accounting unit will be helpful in the strategic decisions of the top management of the enterprise.

D-37
ON SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT

Doğan Yücel
S. B. Ankara Training and Research Hospital, Department of Medical Biochemistry, Ankara

Everything is connected in nature and in society. In general, financial (economic) relations and infrastructure determine the superstructure institutions such as science, culture, law, education, politics. Scientific and technological development and technological knowledge production should also be evaluated in this framework. Turkey's industrial revolution could not have been the most important factors determining the current level of development. Turkey is located in the 20 largest economies in the world today. The number of scientific publications in Turkey are also compatible with this sort: 1996-2016 in terms of number of publications between Turkey, reference is made post # 20 453 565. However, when the number of citations per publication (9.1) and the index H (339) are compared, Another important problem is the number of citations made to the self: 23.5% of the total citations are self-attributions. Turning specifically to the basis of the number of publications in the field of medicine that can be cited Turkey it has declined in the last 7-10 years. When examining the 2017 data for innovation, only one of the production areas (kitchen products) such as aviation and defense, automotive, biotechnology, cosmetics, food and beverages and tobacco, household goods, information technology, medical devices, oil and gas, pharmaceuticals, semiconductors, telecommunication, it seems that a company has entered the top 10 companies. According to OECD data, the resources allocated to R & D in Turkey's gross domestic product as 0.882’s% (0.32% in 1990, 0.64% in 2000), while the number of researchers per 1000 employees 3.57. This data is also far below the average for OECD countries, Turkey ranks 33 of 38 OECD countries. Turkey, along with the establishment of the Republic in the 1930s and has given importance to scientific and technological developments in after 1960 were passed to the planned development; TÜBİTAK in 1963, TÜSSIDE in 1971, TÜBİTAK-MAM in 1972 was established. The extent of R & D has given the importance of state power, though it is not the place it deserves in Turkey. What should be done? A holistic view is necessary. R & D should be further developed, basic science should be encouraged, female scientists should be promoted in R & D. R & D activities should be encouraged.