

A report on the reformation of the Kazakhstan health services with the development of ambulatory surgery

M.K. Kulzhanov *, E.B. Tazhiev, N.A. Almagambetova

Kazakhstan School of Public Health, Central Municipal Hospital, 19 Utepov Str., 480060 Almaty, Kazakhstan

Accepted 15 August 1999

Keywords: Reformation; Kazakhstan health services; Ambulatory surgery

Kazakhstan is a Central Asian republic which became independent in 1991. It is the ninth biggest country in the world with a territory of 2.7 million km² and a population of 15.7 million (1997). The country is ethnically diverse with a higher proportion of Russians than other Central Asian Republics Kazaks (55%), Russians (25%), Ukrainians (4%), Germans (3%), Uzbeks (2%) and others (11%).

Kazakhstan has faced a difficult transition period. There has been a deterioration in the population's health indicators. The birth rate has dropped from 24.9 births per 1000 in 1985 to 14.7 in 1997. Average life expectancy fell during the 1990s to 58.9 years for males and to 70.6 years for females (1996). The infant mortality rate is 27.9 per 1000 live births and the maternal mortality is 57.4 deaths per 100 000 live births (1995).

The current situation in Kazakhstan's healthcare services is the result of the macroeconomic problems of a developing, newly independent country. Until 1996 the healthcare system in Kazakhstan was based on the post-Soviet model of Semashko; insignificant changes took place and the return process was curtailed by legislative and social-economic factors.

For years healthcare development was based on quantitative indicators (number of hospital beds, visits, medical staff) which did not create the conditions necessary for the introduction of new medical technology and an improvement in the quality of medical care. There was no economic motivation for medical staff to provide a better service.

From 1992 to 1997 reforms based on the introduction of pilot projects in experimental regions were

gradually introduced. The Ministry of Health developed the strategy for this process which consisted of the legislative of a basis for reform and the introduction of changes in the organization, management, economics and finance of healthcare.

The introduction of a change in economic approach and a shift in emphasis from hospital inpatient care ambulatory care, stimulated changes in hospital structure and a reduction in the number of hospital beds. Departments of nursing care, ambulatory surgery and day care were introduced.

A few private clinics were opened, but they have little effect on the state healthcare system.

Between 1990 and 1998 the number of hospitals was reduced from 1800 to 960 and the number of hospital beds from 136 to 85 beds per 10 000 population. The number of rural hospitals decreased from 1045 to 365 and the number of day care hospitals increased from 280 to 400.

As a result of these changes the average bed occupancy increased while the average hospital length of stay was decreased. Further changes that need to be looked at to promote an improvement in the quality of health services and an optimisation of hospital structure are the introduction of competition between hospitals and reforms in training programmes for physicians and nurses especially in rural areas. The role of nurses also needs to be reviewed and possibly increased.

The incidence of diseases requiring surgical intervention is high in Kazakhstan — 163.9 per 1000 population. The majority of surgical patients are treated in hospitals and are admitted as emergency cases only 30–50% of patients undergo elective surgery.

Ambulatory surgery is not well developed and the medical personnel and in ambulatory surgery units is

* Corresponding author. Tel.: +7-498101; fax: +7-491766.

interior to main inpatient hospitals. As a result hospital beds are overused and medical care costs are higher than they need to be. Research on hospital care including suitable controls was conducted in Almaty Central Municipal Hospital. The programme looked at ambulatory surgery and had the following aims:

1. To develop and introduce the new principles and technology necessary for ambulatory surgery.
2. To introduce the principles of surgical treatment at home and day care hospitals.
3. To develop the technology of anaesthetic and surgical monitoring and continuous surgical care.
4. To undertake an integrated evaluation of the quality and cost effectiveness of surgical treatment within the programme.

Our results showed that the cost of emergency surgery provided for patients enrolled in our programme of monitoring and continuous surgical care was 1.3 times higher than planned surgery (\$US 144 vs. 111). The most important part of our programme was the increase in capacity and volume of ambulatory surgery.

The introduction of new monitoring technology, continuous surgical care and day-care hospitals (including surgical home care), resulted in reduction in the number

of patients receiving emergency surgery and an increase in the number of patients for undergoing elective surgery. The development of day-care hospitals and home surgical care allowed a reduction in the number of hospital beds and a more cost effective use of the remaining beds.

For instance, the average length of treatment (including out-patient treatment) was reduced by 17.5% due to the more intensive use of day-care hospital beds and from 13.9 to 5.9 days due to the introduction of surgical home care.

To evaluate the quality of ambulatory surgery, an evaluation programme was developed to monitor the quantity and accuracy diagnostic procedures and to compare the continuity of care provided by ambulatory and regular hospital treatment.

Our results showed that 88.1% of patients in our research group received complete care compared to 32.7% in our control group.

In conclusion, we would emphasise that an extension of a programme of ambulatory surgery, suitably monitored, together with the introduction of day-care hospitals has benefits in social economic and medical terms compared to traditional inpatient hospitalisation.