

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Expert Evaluation of The Effectiveness of Hospital - Replacing Technologies (HRT) In the Republic of Kazakhstan.

Aiman K Ozhikenova^{1*}, Kassymbek A Ozhikenov², Ainash E Oshibayeva¹,
Saule K Berkimbayeva³, Aikin A Kurmankozhaeva³, and Saltanat Tashimbai³.

¹Department of Biostatistics and Evidence-Based Medicine, Kazakh National University named after al-Farabi, Almaty, Kazakhstan.

²Department of Robotics and Engineering Tools of Automation, K. Satpaev Kazakh National Research Technical University, Almaty, Kazakhstan.

³Kazakh Leading academy of architecture and civil engineering, Almaty, Kazakhstan.

ABSTRACT

The research gave the scientifically grounded definition of the potential opportunities of hospital-replacement technologies in the improvement of the level of medical care. The research provides the expert evaluation of the end-to-end performance of hospital-replacement technologies. Experts believe that DH is an effective form of medical care 52.86±4.2%, and the population's need in HRC is high 62.86±4.1%. Consistency of experts' opinions in the issues between the need in HRC and provision of DH beds in polyclinics is high, where $W=0.66$ ($p=0.0002$). The experts identified high level of demand for DH beds on therapeutic 81.43±3.3%; neurological 61.43±4.1%; cardiac profile 60.0±4.1%. The research results let assess the quality of medical care in day hospitals and identify methods for improving. Respondents' satisfaction is more connected with the results of treatment itself. Improvement of the quality of hospital-replacing medical care contributes to higher demand for DH by among the population and influences respondents' satisfaction.

Keywords: hospital-replacing medical care (HRC), hospitalization replacement technologies (HRT), day hospital (DH), primary health-care (PHC), efficiency, medical care, expert evaluation

**Corresponding author*

INTRODUCTION

In modern conditions of funding focus on broad use of hospital-replacing technologies (HRT) in hospitals and outpatient organizations is cost-effective[1-6].

Since the establishment of market relations in healthcare, the issue of the quality of medical care is becoming increasingly relevant [7-10].

Aims of investigation: To assess the quality and efficiency of the provided hospital-replacing medical care according to experts on the basis of an expert evaluation.

The object of investigation –day hospital.

MATERIALS AND METHODOLOGY OF INVESTIGATION

Cross-sectional, full study was carried out among 140medical experts in the field of healthcare in Kazakhstan. Inclusion criterion was medical experts in the field of healthcare.

Formation of the group of potential experts was conducted using a method of «snow ball». The respondents are experts – highly qualified specialists in the field of healthcare. The investigation material was based on analytical tables of sociological survey.

RESULTS OF INVESTIGATION AND DISCUSSION

The experts highly rated the demand of day hospital (DH) by population 70.0±3.9%,day hospitalbed support of population in polyclinics both average 54.3±4.2%, and low 32.9±4.0 %.Experts believe that day hospital is an effective form of delivering medical care 52.86±4.2%, and noted that the need of the population in hospital-replacing medical care is high 62.86±4.1% (table 1).

Consistency of experts' opinions in the issues between the need in hospital-replacing medical care and day hospital bed support of population in polyclinics is high, where $W=0.66$ ($p=0.0002$).

Table 1 Cross-table of the demand and needs of the population in hospital-replacing medical care

The day hospital is in demand by the population	The need of the population for hospital-replacing medical care				
	No answer <i>P% ± m%</i>	High <i>P% ± m%</i>	Average <i>P% ± m%</i>	Low <i>P% ± m%</i>	Total <i>P% ± m%</i>
Disagree	0,0	0,0	0,0	0,0	0,0
Hard to say	0,0	2,9±1,4	0,0	0,0	2,9±1,4
Partially agree	0,0	7,1±2,2	18,6±3,3	1,4±1,0	27,1±3,8
I completely agree	1,4±1,0	52,9±4,2	14,3±3,0	1,4±1,0	70,0±3,9
Total	1,4±1,0	62,86±4,1	32,86±4,0	2,9±1,4	100,0
Pearson's correlation coefficient $r = -0,30981$ Level of statistical significance $p = 0,0002$					

84.29%±3.1% (n=118) experts believe it necessary to review the formulary list of medicines and standards of medical care 85.71±3.0% (n=120) (clinical protocols of treatment of patients) in polyclinic conditions.

Correlation analysis shows that day hospital efficiency has a direct statistically significant connection with DH development in different levels of health organizations providing hospital-replacing medical care ($p<0.0001$). Improvement of the treatment quality in day hospital under polyclinics can have a positive effect on increasing the population's need in hospital-replacing medical care71.43%, on reduction of urgent hospitalization 62.86%, on reduction of house-calls 57.14% ($p<0.0001$).

High demand for hospital-replacing medical care among population 62.86% and low DH bed support of population may determine priority areas to optimize the activities of medical organizations on hospital-replacing medical care delivery and quality control.

CONCLUSIONS

Improving quality of HRC contributes to higher demand for DH among population and influences the respondents' satisfaction.

Currently, the priority of expensive inpatient care to the population is preserved, but the trend of development and rational use of HRT have favorable results.

Any medical service can find its market segment only if it is carried out at a quite high level.

The research demonstrates the expediency of conducting regular evaluation of the patients' satisfaction with hospital-replacing medical care.

ACKNOWLEDGEMENTS

The authors would like to thank all the study participants.

All authors have seen and approved the final version.

The authors had full access to all data in the study and had final responsibility to submit for publication.

Conflicts of interest: None declared.

Role of the funding source: The funder of the study had no role in study design, data collection data analysis, data interpretation or writing of the report.

REFERENCES

- [1] Katsaga A, Kulzhanov M, Karanikolos M, Rechel B. Kazakhstan: Health system review. *Health Systems in Transition*, 2012; 14(4):2-4.
- [2] The 169 commandments. *The economist (new York)* March 28, 2015.
- [3] Zultsetseg, Davaajarga, Narantuya, and Boldbaatar, "2015 Health Indicators," Center for Health Development, 2015.
- [4] Akanov A., Kurakbaev K.K. *Health Organisation in Kazakhstan Astana-Almaty*: 2006: 232.
- [5] AK Ozhikenova, KK Kurakbayev, KA Ozhikenov, Evaluation of economic efficiency and organization of medical aid to rural population in Kazakhstan. *Eur J Public Health* 2016; 26(1): 337. <https://doi.org/10.1093/eurpub/ckw174.013>
- [6] Aiman K Ozhikenova, Kuralbay K Kurakbayev, Kassymbek A. Ozhikenov, Development Dynamics Of Hospitalization Replacement Technologies In The Frames Of Unified National Health System, *Res J Pharm Biol Chem Sci*, 2017; 8(1):112-119. [https://www.rjpbcs.com/pdf/2017_8\(2\)/\[16\].pdf](https://www.rjpbcs.com/pdf/2017_8(2)/[16].pdf)
- [7] R Laxminarayan, A Mills, J Breman, A Measham, G Alleyne, M Claeson, et al., et al. Public health advancement of global health: key messages from the Disease Control Priorities Project. *Lancet* 2006; 367: 1193-208.
- [8] Schäfer W, Kroneman M, Boerma W, van den Berg M, Westert G, Devillé W and van Ginneken E. The Netherlands: Health system review. *Health Systems in Transition*, 2010; 12(1):1-229.
- [9] Jacobs P., Rapoport J. *The Economics of Health and Medical Care*. Sudbury, Massachusetts: Jones and Bartlett Publishers, 2004:438.
- [10] Murrey CJL, Lopez AD, Wibulpolprasert S. Monitoring global health: time for new solutions. *BMJ* 2004; 329: 1096-100.