

Advancing nursing roles to improve disease prevention services in Samara, Russian Federation

Overview

Declining life expectancy and rising population health needs throughout the early 1990s in the Russian Federation placed added strain on the capacity of physicians to effectively manage the population's needs. In response, starting in the mid-1990s, Polyclinic 15 – responsible for the provision of care for 73 000 residents across 36 urban districts in Samara oblast, – led an initiative to expand health promotion and disease prevention services by advancing nursing roles. Under the initiative, nurses received training from Samara Medical University and the Samara Centre for Professional Qualification Education, with complementary practical trainings provided by physicians at Polyclinic 15. Additionally, between 1999 and 2004, a partnership with the American International Health Alliance provided opportunities for

a series of international exchanges to help develop new scopes of practice and guidelines for providers working at Polyclinic 15. To support changes in nursing roles, several adjustments to infrastructure were carried out at Polyclinic 15, including the introduction of electronic medical records and a new scheduling system. As a result of the initiative, nurses have a greater role in the delivery of care and now spilt their time between assisting physicians and independently receiving patients. Examples of services that nurses are now trained to conduct independently include home care visits, cancer screening exams and blood glucose tests. Additionally, comprehensive health screenings with risk-assessment questionnaires were introduced for all patients at Polyclinic 15. Patients with identified health risks, such as high blood pressure or tobacco use, are referred

to patient health education classes taught by nurses. These screenings have contributed to Polyclinic 15 observing increases in the early detection of health problems and reductions in emergency calls and hospitalizations. Health data is monitored by administrators of Polyclinic 15 to identify needs and areas for improvement, as well as to ensure quality standards are met. Furthermore, health providers' salaries are partly based on a composite score, reflecting both individual and group performance, helping to incentivize teamwork, efficiency and quality improvements. Polyclinic 15 has been recognized within the Russian Federation as an innovative best-practice model and continues to adapt to the changing health needs of its local population.

Problem definition

The Russian Federation has seen declines in population health with life expectancy falling to 65 years in 2000 – a number nine years below the WHO European Region average of 74 years that same year.¹ Health services in the Russian Federation were highly specialized and took a reactive rather than proactive treatment approach. The system's centralized structure maintained a hierarchical professional model,

placing the responsibility of providing services almost entirely on physicians and leaving nurses with a limited scope of practice. Together the effects of declining population health, increasing rates of risky behaviour including tobacco and alcohol use and growing population health needs, increasingly exposed shortcoming in the delivery of services by overburdened physicians working in polyclinics (Box 1).

Box 1

What problems did the initiative seek to address?

- Worsening health outcomes throughout the mid-1990s, evidenced by declining life expectancy.
- High prevalence of risky health behaviours in the population.
- Reactive rather than proactive orientation of services; limited

availability of health promotion and disease prevention services.

- Restricted scope of practice for nurses leaving physicians overburdened.

Health services delivery transformations

Timeline of transformations

In 1995, the regional government for Samara implemented a new model of health system financing and adopted policies to support strengthening of primary care. Within this context, Polyclinic 15 adopted an initiative to advance nursing roles to enable the expansion of health promotion and disease prevention services (Table 1). With recent national attention on health reform, many of the actions taken by Polyclinic 15 are being elevated to the national level through the launch of the Health Care Development Programme in 2012.

Description of transformations

Selecting services. Services at Polyclinic 15 have been expanded to include health promotion and disease prevention. Health risk screening assessments have been introduced for all patients and help to identify local population health needs, with services adapted accordingly. Patient health education programmes or “schools” on approximately 20 priority conditions - including cardiovascular disease, breast cancer and diabetes - have been created to provide health education to patients with identified health risks. “We analyse the risk factors and estimate what kind of disease is creating the biggest and the most relevant risk to our patients. We then focus on that disease and develop a school that tackles this problem.” Additionally, a new women’s wellness centre has expanded family planning services for women. The centre also runs breast cancer awareness and screening programmes, as well as

Table 1

What were the chronological milestones for the initiative?

1995	New economic model of health financing adopted in Samara; polyclinics become main budget holders, giving them greater responsibility over the organization and delivery of health services.
1996	Conception for Development of Health Care in Samara 1996–2000 passed by the regional government; developing primary care to the principles of family medicine established as a key goal.
1996–1997	Polyclinics across Samara begin the reorganization process to strengthen primary care and expand provision of preventive health services; Polyclinic 15 emerges as a model example of reform.
1998	Electronic medical records introduced within Polyclinic 15.
1999–2004	Partnership between Polyclinic 15 and the American International Health Alliance supports the expansion of nursing expertise and scope of practice.
2006	National Priority Project – Health launched with the aim of strengthening primary care and modernizing health facilities across the Russian Federation; Polyclinic 15 receives resources under the Project.
2012	Health Care Development Programme sets national standards for preventive services; Programme aligns with standards already established by Polyclinic 15.
Present	Continued support for strengthening of the role of nurses and expanding services delivery within Polyclinic 15.

targeted health programmes for menopausal and postmenopausal women. A special branch for pediatric care has also been established.

Designing care. To support advanced nursing roles, standardized guidelines and protocols for services delivered by nurses have been created based on algorithms published by the Russian Association of Nurses. Evidence-based care guidelines have also been updated for priority conditions such as asthma, hypertension and diabetes in partnership with Samara Medical University. Risk assessment questionnaires have been developed

to identify patients with health risks and advise them to attend the relevant health schools.

Organizing providers. Polyclinic 15 serves a population of 73 000 people across 36 urban districts. It employs approximately 600 medical workers, of which 190 are physicians and 240 middle medical workers, such as nurses. Under the initiative, task shifting from physicians to nurses has been a main focus and new job descriptions for these providers were developed to support changes. Examples of new nursing responsibilities include conducting home care visits, cancer screening exams, blood

glucose tests and patient education programmes. Providers' schedules have been adjusted to allow nurses to perform these new functions. Nurses now spend the first two hours of each five-hour nursing shift assisting physicians, however for the remaining time, nurses work independently receiving their own patients and teaching in patient schools. Nurses and physicians are co-located in the same office facilitating collaboration and teamwork as needed. Introduction of electronic medical records has enabled information sharing between all health providers in Polyclinic 15 and a new electronic scheduling system has improved time efficiency by enabling providers to "forecast what is required from them for a certain day".

Managing services. Polyclinic 15 is responsible for financing patient care within their catchment area, giving them responsibility over the organization and delivery of health services. The budget for Polyclinic 15 is assigned based on weighted capitation payments. Necessary investments for the initiative, such as upgrading technology to implement electronic medical records, were financed from the regular budget. However, Polyclinic 15 also benefited from an infusion of resources in 2006 from the National Priority Project – Health.

Improving performance. All health providers at Polyclinic 15 received ad hoc trainings on general practice through the initiative. Nurses were trained for their new roles through three-month physician-led courses in the workplace. A series of additional trainings, workshops and international knowledge exchanges were also provided through a partnership with American International Health Alliance. To sustain knowledge improvements, the Samara Centre for Professional Qualification Education has taken on a key role in developing training programmes and Polyclinic 15

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Guaranteed basic package of services; limited health promotion or disease prevention services.	Expanded services package includes health promotion, screening and disease prevention; new women's wellness centre offers improved family planning and female health services.
Designing care	
Absence of guidelines or protocols to guide delivery of care by nurses.	Evidenced-based guidelines created to assist nurses to fulfil expanded roles; risk assessment questionnaires developed to help identify and categorize patients' health risks.
Organizing providers	
Nurses work as physician assistants without an independent role; physicians overburdened and have limited time to spend with each patient; paper medical records held by physicians.	Shift of responsibilities from physicians to nurses; nurses divide their time between assisting physicians and receiving patients independently; electronic medical records enable information sharing between nurses and physicians.
Managing services	
Outdated infrastructure restricts effective services delivery.	Technological investments made to introduce electronic medical records and a new scheduling system; medical resources updated with government and international funding.
Improving performance	
Nurses lack necessary skills to take on more advanced roles; paper medical records inhibit timely performance assessment.	Nurses participate in a series of additional on-the-job and ad hoc trainings to develop necessary skills for independent practice; new performance indices introduced to track provider performance using new electronic systems; performance indices monitored closely and adapted as necessary to respond to changing needs.

providers now receive accredited continuing education every five years. “No matter how hard workers of our polyclinic try to educate other workers, we will not provide as good an education as the one provided by the Centre because they are qualified and sanctioned to do that.”

A rigorous performance assessment system for providers at Polyclinic 15 has been implemented to drive efficiency, with specific performance indices for nurses also developed. Polyclinic 15 monitors and analyses performance indices to identify possible areas for improvement. Performance indices are adapted based on identified priority needs and bonus indices are in place to motivate additional work. Furthermore, Polyclinic 15 partners with other polyclinics for auditing purposes, with audits described as helping keep Polyclinic 15 “in shape”.

We are constantly analysing the general condition of our patients and then make decisions on how to tackle certain risks and problems. After that we monitor the work done and see whether our work was fruitful or not. We try to identify on what step or on what level we made a mistake, if we did. Indices tend to be responsive to what we find as the most relevant problems currently. If, for example, influenza is the most important problem, we consider indices in the work of the nurse related to influenza. That is how the problems and risks are resolved. As soon as one problem is resolved, we repeat monitoring and identify a different problem which is more acute.

Engaging and empowering people, families and communities
Polyclinic 15 established a website where people can learn about the services provided and access general health information. A patient satisfaction survey has also been added to the website allowing feedback to be collected from patients. A key area of activity for the initiative has been the creation

of patient schools where nurses teach health promotion, disease prevention and chronic disease management classes for patients. Schools typically run for five days per topic with 10 to 20 patients per session; relatives may also be invited to participate.

Health system enabling factors

Samara has demonstrated a strong regional commitment to strengthening the health system in recent decades, with Polyclinic 15 standing out as a model example within this supportive context (Table 3). Recently, the national government proposed a series of health system reforms, helping to standardize and formalize the activities of Polyclinic 15 at the national level and providing supplementary resources to the initiative.

The National Priority Project – Health, launched by the Russian government in 2006, encouraged local experimentation with provider incentive mechanisms. Providers received a basic salary increase, as part of the project, but additional financial incentives linked to provider performance were also introduced. The administration for Polyclinic 15 uses a composite score of performance indices to track providers’ performance. The system works transparently and providers receive salaries in accordance with their performance each month. Some indices within the composite score can be altered as population needs change, giving Polyclinic 15’s administration influence over health providers’ priorities. Additionally, the launch of the national Health Care Development Programme in 2012 established national standards for preventive services, reinforcing those already implemented by Polyclinic 15.

Table 3

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	<ul style="list-style-type: none"> National-level reforms, notably the National Priority Project – Health and the Health Care Development Programme, introduced new standards for health services delivery.
Incentives	<ul style="list-style-type: none"> Health providers’ salaries are linked to a composite performance score; indices included in the score change to reflect current health priorities.
Competencies	<ul style="list-style-type: none"> Samara Medical University supported competency strengthening to advance nursing roles at Polyclinic 15.
Information	<ul style="list-style-type: none"> Information collected on patients’ health status and risk level used to inform the prioritization and creation of services at Polyclinic 15. Performance indices closely monitored and evaluated by Polyclinic 15 administration.
Innovation	<ul style="list-style-type: none"> New performance indices developed; multiple indices combine to assign providers a composite performance score.

The advancement of nursing roles in Polyclinic 15 has been supported by Samara Medical University and the Samara Centre for Professional Qualification Education through educational support and guidance on new training programmes for nurses. Samara Medical University also offers both diploma and Master's level nursing programmes, enabling senior nurses from Polyclinic 15 to strengthen professional competencies through completing higher education.

Outcomes

Polyclinic 15 has been recognized as a successful innovator in primary care.² A number of improvements relating to patient outcomes, efficiency and process indicators have been observed as a result of the initiative, notably improved access to providers, improved screening rates with earlier detection of screened conditions and increased patient participation in health education (Box 2). Patients have generally been responsive to receiving care from nurses instead of physicians and now indicate that being seen by the nurse is reassuring because it is a "sign their condition is not as bad".

Box 2

What were the main outcomes of the initiative?

- Time-efficiency gains derived from the new scheduling system and task sharing with nurses have improved access to providers for patients; physicians report having more time to spend with high-risk patients.
- The number of patients receiving health risk assessments from nurses almost tripled from 2267 in 2007 to 6675 in 2012.
- Improved screening has increased detection of diseases in less advanced stages; disease complications

and need for hospitalization have reportedly declined as a result.

- Participation in health education schools increased from approximately 1000 patients in 2006 to 11 000 in 2014; schools help empower patients to improve their health and self-manage care.

Change management

Key actors

Leadership by the administration of Polyclinic 15 enabled the development of the initiative and carried it forward with support from multiple actors (Box 3). "The administration motivated us to start working on this initiative." Providers across departments at Polyclinic 15, including both nurses and physicians, provided input on the development of activities and worked together as a team to implement changes. Development of new guidelines, care standards and training programmes for nurses was supported by various partners including the Association of Nurses, Samara Medical University and the Centre for Professional Qualification Education. Additional resources and technical support for activities came through an international partnership with the American International Health Alliance. Active promotion of the initiative by its leaders was successful in later gaining recognition, funding and support from the Samara Ministry of Health. Today, providers at Polyclinic 15 work closely as a team in adapted roles to deliver care to patients. The administration of Polyclinic 15 continues to support the advancement of nursing roles to further improvements in care.

Box 3

Who were the key actors and what were their defining roles?

- **Administration for Polyclinic 15.** Led development of initiative; provided in-house trainings for nurses; promoted initiative and advocated for external funding to support activities; developed new performance indices and adjusted financing mechanisms to incentivize performance improvements; performs ongoing monitoring of health outcomes and performance data.
- **Samara Ministry of Health.** Provided funding for the initiative; revered Polyclinic 15 as a best-practice model.
- **Association of Nurses.** Provided funding for educational opportunities for providers at Polyclinic 15; assisted in the development of new nursing guidelines and standards for Polyclinic 15.
- **American International Health Alliance.** Hosted Russian nurses in knowledge exchange programmes; provided training and educational materials for Russian nurses.

Initiating change

Expansion of nursing roles was identified by the administration of Polyclinic 15 as a means to achieve greater efficiency and expand the provision of services within current system constraints. Despite an absence of similar initiatives nationally, strong support from Polyclinic 15 administration allowed the initiative to develop in a "vacuum". As Polyclinic 15 had full control over its health budget and organization of health services, external support for the initiative was largely unnecessary for initiating change. Nevertheless, external support and funding was later sought by leaders through extensive

promotion of the initiative, enabling its further advancements.

Implementation

Clear standards and expectations were put in place to ensure a common understanding of each professional's new responsibilities, with both physicians and nurses at Polyclinic 15 providing input during the development of these. All health providers at Polyclinic 15 received training as part of the initiative, a factor considered important for successfully overcoming traditional professional hierarchies. Furthermore, having physicians lead practical in-house trainings for nurses gave physicians ownership over changes and enabled them to observe nurses' skills develop, increasing their confidence in the abilities nurses. Nurses responded positively to their roles and responsibilities and reportedly "enjoy observing patients in the same way as doctors". Nurses also appear

to be motivated by statistics which show improved health outcomes for their patients and feel "proud of the work they do". Polyclinic 15's administration closely monitors performance on an ongoing basis and initiates adjustments as needed, relying heavily on data to inform changes and priority areas.

Moving forward

The administration of Polyclinic

15 continues to support the advancement of nursing roles and hopes to further develop nurses' understanding of performance indices to help motivate additional services delivery improvements. Polyclinic 15 recognizes the importance of sharing their experiences and contributing to the development of nursing recommendations at the national level.

Highlights

- High levels of autonomy supported the development of innovative practices.
- Changes to professional scope of practice helped overcome capacity barriers.
- International partnerships supported transfer of knowledge and advancement of new practices.
- Continuous training, backed by supportive legislation, helped to institutionalize new practices.
- Patient education was offered to help empower patients to adopt healthy lifestyles and increase self-management of care.

1 World Health Organization. (2015). *European Health for All Database*. Retrieved from <http://data.euro.who.int/hfad>
2 American International Health Alliance. (2009). *Samara and Stavropol, Russia / Iowa*. Retrieved from http://www.aiha.com/_content/3_What%20We%20Do/Archives/HealthcarePartnerships/SamaraStavropollowa.asp