THE OPERATIONALIZATION OF RUSSIAN HEALTH CARE SYSTEM REFORM

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**Project Information**

Sponsoring Institution: Virginia Commonwealth University

Principal Investigator: Grigory Ioffe

Council Contract Number: 815-16g

Date: May 17, 2000

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* The work leading to this report was supported in part by contract or grant funds provided by the National Council for Eurasian and East European Research, funds which were made available by the U.S. Department of State under Title VIII (The Soviet-East European Research and Training Act of 1983, as amended). The analysis and interpretations contained herein are those of the author.
Executive summary

The goal of this project is to understand the scope and impact of reforms currently taking place in the structure of Russia’s health care system at the regional level. The aim of this report, the first of four to be derived from this project, is to construct an operational definition of the term “health system reform” in order to facilitate measurement of its success. The report begins with an overview of the generic issues central to any discussion of the structure of health care delivery – what constitutes appropriate and effective health care system structure and reform? It continues by describing the basic features of the Soviet system of health care, which forms the context within which current Russian reform efforts are taking place. The third section briefly describes national and regional reform efforts and identifies appropriate, Russia-specific indicators to be used to assess progress in health care system reform at the regional level in Russia. These indicators will form the operationalization of the variable “health care system reform” in the three subsequent reports presented for this project. Finally, the report tests the validity of these operational indicators by applying them to a case study of the Samara region, widely agreed to be among the most progressive and successful in Russia in its health system reform efforts.
The goal of this project is to understand the scope and impact of reforms currently taking place in the structure of Russia’s health care system at the regional level. In particular, the aim is to explore the causes and consequences of regional differentiation in reform strategies and implementation. The regions offer a scientific laboratory for the study of changes in Russia’s health care system. Their varying approaches, all within the macro-level Russian context, permit a controlled assessment of the success and failure of different elements of reform, measured in terms of the achievement of better health outcomes for the population and more effective use of scarce health care resources.

This is the first of four reports on the results of this research. This first report constructs an operational definition of the term “health system reform” in order to facilitate measurement of its success. There are two core challenges in discussing, operationalizing, and assessing health care system reform in today’s Russia. The first will sound familiar to any American reader: there is not a consensus, within Russia or internationally, on what constitutes appropriate and effective health care system structure and reform. Nations throughout the world have chosen vastly different solutions to their health care structure problems, from the Canadian and British single-payer systems to the decentralized, privatized, market-oriented American insurance approach. This report will therefore begin with a brief overview of the generic issues central to any discussion of the structure of health care delivery.

The second challenge has to do with the particular context within which Russian health care sits. Russian reformers over the last decade, in health care as in the economy and society as a whole, are not creating new institutions on a blank slate. The Soviet system of health care not only provides a context within which post-Soviet reforms are taking place. It also constitutes a set of structures, attitudes, and norms whose legacy critically shapes the pathways available today. In other words, you can’t move forward without taking into account where you’ve been. The second section of this report will therefore outline the structure of the Soviet system of health care, detailing the structural deficiencies of that system, highlighting the dimensions along which reform was needed, and pointing out the ways in which that system constrains future channels of reform.
The report will then proceed with a brief overview of some of the reforms that have actually been
planned and implemented during the post-Soviet period, at both the national and regional levels. This
overview, informed by the previous contextual discussions, will permit the development of appropriate,
Russia-specific indicators to be used to assess progress in health care system reform at the regional level
in Russia. These indicators will form the operationalization of the variable “health care system reform” in
the three subsequent reports presented for this project. Finally, the report will test the validity of these
operational indicators by applying them to a case study of the Samara region, widely agreed to be among
the most progressive and successful in Russia in its health system reform efforts.

Health care systems and reform

Efforts to reform national health care systems have become so prevalent that Rudolf Klein has
labeled them a “worldwide epidemic”.¹ These efforts are politically contentious in virtually every
country where they occur, largely because there is substantial disagreement not merely over the means to
the end of “reform,” but also over the definition of “reform” itself – or, more precisely, over what
constitutes the “best” way to structure health care financing and delivery. The parameters of these very
complicated debates can be summarized through two different categorizations of types of health care
systems.

The first of these categories assesses health care systems in terms of their degree of
marketization.² The demand-side approach, also known as market-maximizing, assumes that health care
is like any other economic good about which consumers can make rational purchasing decisions. Armed
with perfect information, patients as “customers” decide whether to purchase health care at the point of
service or to buy insurance from a private third-party payer. They choose from an array of privately
owned providers of health services. Demand for and pricing of those services is therefore determined by

¹ Rudolf Klein, “Big Bang Health Care Reform – Does It Work?: The Case of Britain’s 1991 National Health
² See Bradley S. Marino and William Hsiao, “Foreign Models,” in David Calkins, et. al., eds., Health Care Policy
(Cambridge, MA: Blackwell Science, 1995), pp. 231-233; and Odin Anderson, The Health Care Services
the invisible hand, which ultimately results in a high-quality health “product” delivered to patients at the lowest possible cost. Internationally, the United States is the closest approximation to this model.

Critics of this market-oriented approach contend that health markets are imperfect. Patients as consumers do not enjoy perfect information, nor do they always have time to seek an optimal level of information at the moment when health services are needed. This information asymmetry gives providers (physicians, clinics, hospitals) the opportunity to induce or suppress demand. Furthermore, the existence of third-party payers can render both the consumer and the provider unresponsive to the costs of health care, leading to overutilization of health resources (known as “moral hazard”). And private insurers are naturally tempted to limit their services only to healthy, low-risk populations, leaving more vulnerable consumers without access to insurance coverage (known as “adverse selection”). The supply-side, or market-minimizing, orientation removes flawed markets from the equation. It instead places responsibility for allocation of health resources and regulation of provision of health care with the government or some other public or quasi-public agency, which uses its authority to impose budget constraints, enforce comprehensive coverage, and encourage efficiency through various artificially constructed incentives to providers. Virtually all the industrialized countries of the world, aside from the United States, adhere to the supply-side philosophy.

Of course, no health care system falls completely within one or the other of these categories. Instead, they fall along a spectrum, with market minimization and maximization as the two extremes. The same is true of the second method of distinguishing health care systems, this one having to do with the mode of payment for services. Here three models exist: the Beveridge, or national health service, model, in which universal coverage is accomplished through tax-based financing of publicly-owned health institutions; the Bismarck, or social insurance, model, in which universal coverage is accomplished

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3 The challenge for governments, of course, is to compensate for market failure in ways that do not exacerbate the very problems they are trying to solve. See Investing in Health: World Development Report 1993 (Washington, D.C.: The World Bank, 1993), pp. 5-6, and 54-59.

through employer and/or individual contributions to quasi-public insurance funds, and the provision of health care can be both private and public; and the private insurance model, where health care institutions are usually privately owned, and coverage (not universal) is determined by employer and/or individual purchase of private health insurance. Again, the United States falls at the latter extreme, but even the American system includes (through Medicare and Medicaid) some elements of the other two models. Every health care system in the world incorporates some blend of these ideas.

How, then, to assess the “quality” of a health care system, or a health care system reform? One common thread that weaves through these and other possible categorizations of health structure and financing is a concern with three basic factors of health care delivery: cost, access or equity, and quality of medical care.5

Cost can refer both to the quantity of resources a society devotes to health care, and to the effectiveness and efficiency by which those resources are spent. In most developing countries, and certainly in the former Soviet Union, stress understandably has been placed on the drive to funnel more money into traditionally neglected and underfunded health care systems. In industrialized societies, the focus is more on cost containment, as a variety of factors – general inflation, sector-specific inflation, population growth, population aging, technological advances, and structural incentives such as the “moral hazard” mentioned above – combine to drive health care costs increasingly higher. This stress on better allocation of resources at hand includes a wide variety of policies such as the reduction of administrative costs, elimination of hospital overcapacity, price regulation, the encouragement of competitive markets, innovations in provider reimbursement such as capitation payments or payments according to diagnosis-related groups (DRGs), or global budgeting schemes (budget “caps”) at the national, regional, hospital, or individual provider level. To a varying degree, these cost-reduction schemes all result in implicit or explicit rationing of health care services, denying some treatments either to those without the ability to

pay in a market environment, or to those judged through some regulatory body or process not to be “sick enough” to merit a costly service in an environment of limited resources.

Access and equity refer both to geographic distribution of health care services (is there an appropriate health care provider physically accessible to each member of a population at the time services are required?) and to cost concerns (can each member of a population afford necessary health services at the time those services are required?). The former generally applies to areas of sparse population density or economic underdevelopment, where market forces alone may be insufficient to attract an appropriate critical mass of health care providers. Cost concerns tend to affect people with low incomes (who cannot afford out-of-pocket payments or insurance premiums), the unemployed or underemployed (who cannot benefit from employer-based health insurance), the underinsured (who can afford only limited insurance that may not cover certain catastrophic expenses, pre-existing conditions, or other classes of benefits, or who can only afford coverage that contains prohibitively high deductibles), or those enrolled in publicly financed health programs (who may be affected by provider flight from inadequate government-set reimbursement rates). Virtually all societies treat at least basic health care as a commodity that should be accessible to all their citizens, and therefore governments have devised a variety of mechanisms to overcome access and equity gaps. These include incentives to encourage physicians to locate in remote or economically depressed regions, programs to train more general-practice physicians who can offer a comprehensive package of basic care at a lower cost, the establishment of uncompensated care pools to supplement providers for treatment of the underinsured and uninsured, and general assistance programs in which part or all of the costs of health care to certain populations are borne by the state.

Quality concerns can focus on the structure of the health care setting (the physical plant of clinics and hospitals, staffing, available technologies), the process of providing and receiving medical care (what medical procedures are performed and how well, how decisions regarding treatment are made and who makes them, and the tenor of personal interactions between patients and providers), and outcomes (patient health and satisfaction). Quality can also be assessed according to the appropriateness of care: are there errors of omission (withholding or neglecting care that is necessary) or commission (providing care that is
not necessary)? The former can result from physician error or a patient’s inability to pay, and its dangers seem self-evident. The latter can stem from physician misjudgment as well, but also from fear of malpractice or from financial incentives to providers, and its consequences are just as potentially severe in terms of physical risk to the patient. Errors of commission also carry economic costs, as scarce health resources are misdirected or wasted. Quality control measures can include the relatively straightforward evaluation of indicators for structure (building construction codes, levels of equipment and their testing and maintenance, licensing and accreditation of staff) and outcomes (mortality reports, recovery rates). Assessing the quality of health care processes is more controversial, as it involves judgments regarding treatment decisions made by physicians who may resist external monitoring or control. These assessments, and concomitant methods to improve quality (which may or may not involve ramifications for physician or hospital reimbursement), can include the construction of clinical practice guidelines, precertification or pre-approval (concurrent review) or retrospective review of medical procedures performed, and profiling of physicians to assess the appropriateness of patterns of care at the level of the individual practice. Quality issues can also be left to the marketplace, with the competitive incentives embedded in free consumer choice of provider presumably constituting all that is needed to promote the highest possible quality of care.

The dilemma, of course, is that the goals of improving quality, maintaining equitable access, and containing costs (or encouraging efficiency) are sometimes contradictory. Cost-cutting measures can result in lowered quality or inequities in access. Providing universal access to high-quality care is usually increasingly expensive. Furthermore, as indicated above, it is difficult to reach a consensus within even the most politically stable society on the relative priority of these three factors. This latter debate is generally located within the ideological struggle between the supply-siders and demand-siders outlined above. Effective health care reform will, at minimum, recognize the inherent set of trade-offs involved in any given policy, and will construct incentives to consumers, payers, and providers to try to minimize the degree of contradiction. Effective policy will also recognize and avoid the potential for unintended
consequences as participants in the health care system pursue their own self-interest within the given incentive framework.

**The Soviet health care system**

The Soviet Union pursued an aggressively supply-side, Beveridge-type model of health care structure and financing. To put it bluntly, the Soviet system stressed the goal of universal access to the extreme detriment of quality concerns, and with almost complete neglect for cost concerns both in terms of total resource allocations and in terms of efficiency of resource expenditure. Health care delivery was heavily vertically integrated, with a structure that mirrored the top-down, geographical hierarchy used by the Soviet government and Communist Party. Health administration was centered in Moscow, with fifteen subordinate Union Republic health ministries further subdivided at the oblast level. Oblasts were carved into rayons (districts), with populations ranging from several thousand in rural areas to hundreds of thousands in larger cities. Primary health care was organized around the division of rayons into *uchastoks* (microdistricts), of which there were four types: adult, pediatric, obstetric/gynecological, and industrial/workplace. Each *uchastok* represented a catchment area for a single physician or polyclinic, with between one and a few thousand individuals captured by each area. Ambulatory *uchastok* polyclinics offered a full range of basic diagnostic and treatment services. Persons employed at enterprises with workplace clinics could choose whether to see the physicians there or the ones assigned to their neighborhoods. Beyond this, there was no freedom of choice.

Rural health care was similarly structured, with some differences because of the vast territories covered and frequently sparse population densities involved. Primary care was delivered by a *feldsher*, roughly the equivalent of a nurse practitioner or physician’s assistant, at a *feldsher*-midwife post. Most villages and collective farms had these posts, which provided first aid and basic medical services, with perhaps a few inpatient beds, under the nominal supervision of a physician from the relevant rural

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ushastok hospital. Depending on the local geography, the feldsher-midwife posts served from several hundred to several thousand people.

If it were determined that a patient was too ill to be treated on an outpatient basis, the uchastok physician would make a referral up to the next level of treatment, usually an uchastok hospital or central rayon hospital. These local hospitals offered a basic menu of inpatient services, but patients requiring more specialized care would have to be transferred to an oblast-level facility. Finally, for the most complex treatments requiring care unavailable at the oblast hospitals, patients might be referred to a Republic-level center in Moscow or one of the other capitals.

In theory, this tight vertical structure was intended to facilitate the coordination of planning and care. In other words, while access to medical care was universal – each and every Soviet citizen was assigned to a provider of primary health care, and could be referred up the chain for secondary and tertiary care – the choice of health care providers was virtually nonexistent. Your job or your residential address predetermined the location of your medical care and the people who would provide it. Indeed, even this degree of choice was frequently openly deplored by Soviet commentators, and workers strongly preferred the residential to the workplace physician because of the latter’s association with management and labor discipline.

In line with the rest of the Soviet economy, the allocation of Soviet health resources was controlled through government-set five-year and annual plans. These plans set total health care expenditures and determined priorities between investment and current expenditures, and also between spending on research and development, education and training, capital construction, the medical equipment and pharmaceutical industries, public health services (health education, epidemiological surveillance and monitoring, etc.), and medical care delivery. Because expenditures were allocated

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9 See Diane Rowland and Alexandre V. Telyukov, “Soviet Health Care from Two Perspectives,” Health Affairs, Fall 1991, pp. 77-81.
primarily in terms of materials and planning conducted in material balances, rather than in terms of ruble costs (except for salaries, which were paid out in rubles), it is difficult accurately to estimate such statistics as the percentage of gross national product spent on health care. Most sources place this figure, however, at around three to four percent of GNP during most of the late Soviet period, quite small in comparison to health care expenditures in Western countries.\textsuperscript{10} Both Soviet and Western commentators came to refer to Soviet health spending as operating under a “residual principle”: health and other social concerns got whatever (if anything) was left over, after higher priority concerns such as the military and heavy industry programs had their fill.

Health care was legally free of charge at the point of service to all Soviet citizens, with the exception of medications prescribed on an outpatient basis, and even those were covered for children, pensioners, pregnant women, invalids, war veterans, and several other categories of “privileged” persons. The state budget, therefore, in theory bore the expense for virtually all medical care delivered within Soviet borders. Hospitals and clinics were rewarded with resources based on their success in meeting annual, quarterly, and monthly plan targets. For clinics, these targets centered around the numbers of patient visits to each individual clinic. The more patients seen, the larger the clinic budget, and the larger the bonus awarded to the clinic’s physicians and other workers. Hospital targets focused on the numbers of beds actually occupied by patients, or bed-days.

The perverse incentives presented by this system of rewards and reimbursements are obvious. Polyclinic physicians became little more than indifferent dispatchers of patients to higher levels of hospital care. Clinic doctors were rewarded simply for pushing patients through the system, not for offering them any kind of treatment at all, let alone effective, high-quality care. As a result, Soviet polyclinic physicians actually gave medical care to fewer than half of the patients who crossed their doorsteps, referring the remainder to inpatient facilities for diagnosis and treatment. Hospitals, of course, were happy to play this game, since they were anxious to place as many patients as possible in their beds.

Once hospital physicians admitted these patients, there was no incentive to discharge them, but rather the opposite – to keep them as long as possible. As a result, the average length of hospital stay approached twenty days during the Soviet period, one of the longest in the world. Patients suffered from long waits for hospital-based tests and surgical procedures, and remained in hospital sometimes for weeks waiting for tests to be performed. Of course, in the Soviet context, patients often preferred this routine, since an illness was more comfortably suffered even in the shabbiest Soviet hospital than in an average communal apartment. But a system of planning according to gross throughput, according to sheer quantitative indicators, with no consideration for efficiency and quality, led to extensive waste of already scarce resources and sometimes astonishingly low quality of care – a pattern endemic not only in the Soviet health care system, but throughout the Soviet economy. In a 1987 speech, then-Minister of Health Yevgeniy Chazov confirmed this analysis with what was considered shocking candor: “We have strived to achieve the planned number of hospital beds, not caring whether they conform to the requirements of medical technology or even sanitary standards.”

Physicians might have been willing or able at least to attempt to overcome these dynamics had their personal salaries varied, within overall hospital or clinic budgets, depending on their individual performances. Physicians’ wages, however, were set according to government-determined scales, based solely on their level of training and years in service. In other words, regardless of how hard a physician worked, and regardless of the outcome of the treatment she offered to her patients (most polyclinic physicians were women), a Soviet physician would receive the same monthly wage. And that wage level reinforced the low priority assigned to health care by the Soviet authorities: in stark contrast to Western norms, a Soviet physician’s average salary was roughly seventy-five percent of the national average (120 as compared to 160 rubles monthly, as of 1983).

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Perhaps as a result of these paltry wage levels, Soviet patients frequently found themselves at the mercy of demands for payment for their supposedly “free” health care. The evidence here is strictly anecdotal, but its sheer volume as well as consistency paints a grim picture. Patients had to make sometimes substantial payments to doctors and nurses in order to receive basic attention, administration of medications, appropriate therapies and surgeries, or even dressing or bedpan changes. The practice was so widespread that Izvestiya published in late 1987 a “price list”: 500 rubles for a standard operation or delivery of a baby; 300 rubles for a 20-day hospital stay; 40 rubles for an abortion carried out at a physician’s home.\textsuperscript{13} One study in the late 1980s estimated that this “shadow” economy amounted to almost one-seventh of the total national budget for health care.\textsuperscript{14} The much-heralded universal free access to medical care in the Soviet Union was therefore an illusion. Those without the resources to offer the appropriate bribes were seldom left completely untreated, but their care was clearly of a standard considerably lower than that enjoyed by those with the capacity to offer additional monetary incentives to physicians, nurses, and treatment facilities.

Even this higher level of quality was dismal compared to that in the Western world. The dearth of allocated resources and lack of incentives to spend those resources efficiently and effectively – or worse, incentives to waste resources – led to conditions in most Soviet hospitals and polyclinics that Western consumers would find intolerable. The infamous 1987 Chazov speech revealed some startling details: only 15% of the cost of a new Soviet hospital in the late 1980s was earmarked for technical equipment, as opposed to mere brick and mortar; the push to achieve numerical targets had led many local authorities to adapt boarding houses and hostels into hospitals, despite substandard and inappropriate construction and equipment levels; most striking, “in only 35% of the rural district hospitals of the country is there a supply of hot water, and in 27% there is no sewerage system, and in 17% no running

water at all.” An October 1998 sample survey of 11,000 Soviet facilities painted an even bleaker picture, with 49% of total hospitals in use without hot water and 24% without sewage facilities.

As of 1989, there were only fifty computerized tomographic (CT) scanners – standard equipment in most American hospitals – in the entire USSR, and because of limited capabilities and technical problems, most of those were only in service five to six hours per day. The majority of facilities still use glass syringes and reusable needles, with sterilization procedures far below Western norms. In one region, several nurses in one local pediatric hospital were arrested for stealing medicines (mostly antibiotics), replacing the stolen liquid with distilled water, and selling the medicines on the black market. This went on for two years before the nurses were apprehended – and, amazingly, the pediatricians never noticed that the substances they were prescribing to their patients were having no therapeutic effect.

The litany of alarming incidents and deficiencies could continue for pages, but can be summed in one crucial statistic: in a 1988 opinion poll, more than half of Soviet citizens expressed dissatisfaction with the limited accessibility and poor quality of available health services.

Late Soviet and post-Soviet reforms

Attempts to reform the Soviet health care system date back to the 1960s. At that time, the Health Ministry began to pay lip service to the need for more efficient use of hospital beds, reduction in average duration of hospital stay, and increase in the use of outpatient diagnostic and treatment protocols – in other words, to improve quality and reduce costs. In June of 1968, a major Health Ministry initiative proposed to train more polyclinic physicians in “primary specialization and practical training,”

16 Goskomstat SSSR, Express-informatsiya, No. 175, June 1, 1989.
presumably an attempt to remake the indifferent dispatcher mentioned above into something resembling a Western-style general practitioner who could handle more cases effectively on an outpatient basis.\textsuperscript{22} Because of the exigencies of the Soviet economic planning process, however, the stress remained on extensive rather than intensive growth: from 1970-1985, the number of doctors was increased by 75%, middle medical personnel (\textit{feldshers}, nurses, orderlies) by 49%, and hospital beds by 35%. These upward trends in the quantities of inputs and outputs were not matched by similar gains in the quality of service provided.\textsuperscript{23}

Meaningful reform effort, going beyond proclamations alone, did not become possible until the more market-oriented environment of the late Soviet period. In the New Economic Mechanism (NEM) of 1987, three pilot regions – the city of Leningrad (now St. Petersburg), and the Kubyshev (now Samara) and Kemerovo oblasts – instituted a system not unlike American-style Health Maintenance Organizations. The NEM scrapped the old mode of provider reimbursement, and instead made simple capitation payments to polyclinics. The clinics acted as exclusive fundholders, making autonomous decisions about whether to treat patients themselves or to refer them to an inpatient setting for specialist treatment. If a referral were made, the clinic would pay the hospital for all services rendered. Clearly this system was intended to cut back on unnecessary and expensive inpatient care and to discourage indifferent hand-off behavior among clinic physicians. Preliminary results indicated that the NEM was working – average lengths of stay began to demonstrate a statistically significant decline in Kubyshev and Kemerovo – but that it may also have unleashed some unintended consequences, as some necessary inpatient care was withheld. In any event, the economic and budgetary downturns of the late 1980s truncated the experiment before meaningful conclusions could be drawn. Inflation rapidly outpaced government budget-set capitation payments, such that hospital reimbursement requests quickly began to bankrupt the clinics.

Even before the Soviet Union’s final demise, policy makers in Russia were convinced that another approach was necessary. In mid-1991, the Russian Federation passed legislation creating a system of nationwide compulsory medical insurance that was intended to completely restructure the process of financing and delivering medical care to the Russian people. First and foremost, the insurance system, which aggressively followed a European-style social insurance model, was intended to channel an independent, off-budget source of money into the health care system. This was (and is) accomplished through a 3.6% tax on the wage fund on behalf of citizens who work, and a capitation payment made at the municipal level for everybody else, paid into one of 89 new quasi-governmental Territorial Medical Insurance Funds. These Funds then channel money into one of an array of competing private insurance companies, who contract with and reimburse clinics and hospitals on behalf of consumers. Providers are presumably to pursue quality enhancements in order to attract business from insurance companies and patients, who are supposed to exercise free choice of clinic and hospital under this system. And insurance companies will fall under similar market-based incentives as they try to attract business from employers and individuals.

While well-intentioned in principle, the mandatory insurance scheme has suffered from flawed implementation and from the curse of unintended consequences. First, both employers and municipalities have shirked their obligations to finance the system, leaving it woefully underfunded virtually everywhere in the country. Second, Russia’s eleven time zones have constituted a daunting challenge to its fledgling insurance market. Insurance companies have proven unable or unwilling to conduct business in areas where population density is so low that turning a profit is virtually impossible. The insurance Funds are therefore left to act as sole insurer in these regions, eliminating the competitive efficiencies of an insurance market. Third, the Soviet habit of rigid geographic distribution of responsibilities persists. In many regions (including the city of Moscow) where a number of ostensibly competing insurers exist, those companies have simply divided the “spoils” geographically, assigning customers and participating

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hospitals and clinics according to neighborhood location. Any inkling of competition, therefore, disappears. This dynamic also prevails with health care providers, who continue to serve strictly defined catchment areas. Virtually everywhere, new rules theoretically permit patients to select a new physician, but most Russians have remained reluctant to change doctors or clinics, even when they are dissatisfied with their current situation. The prevailing sentiment is that all doctors are more or less the same, and that choosing someone new carries with it unnecessary risk – better to stay with “the devil you know.”

Finally, and perhaps most importantly, physicians have little motivation to pursue new business, since their compensation is still rigidly determined by the state. Wages for doctors, nurses, and other personnel continue to be set according to a government-determined scale that takes into account only years of service and level of training. Quality of effort or results, however those might be measured, are not reflected in a doctor’s pay. Why, then, would a doctor want to compete for additional business, when the only reward would be an increased workload? This is the ultimate flaw of the insurance system: it does not specify mechanisms for provider compensation, and therefore the worst perversions of the old Soviet system persist. In an era of increasingly scarce budgetary and insurance resources, there remain no incentives for quality enhancement or cost control. If clinics are still paid according to numbers of patient visits, hospitals still according to numbers of occupied bed-days, and physicians according to set salary scales, then the stress remains on quantity over quality, and on resources rather than results.

**Indicators for health system reform**

Russia now finds itself, albeit within the context of its Soviet legacy, facing many of the same issues that confront other countries attempting effective health care system reform: how to reduce costs and spend resources most effectively, while improving quality of care and maintaining an appropriate level of access? Given the imperatives flowing from the previous discussion, the following set of indicators can be derived to measure Russian progress:
Cost

- Are employers contributing the full 3.6% payroll tax into the compulsory medical insurance system?
- Are municipal governments contributing their full, legally mandated per-capita insurance contributions on behalf of non-workers?
- Have provider reimbursement mechanisms been adopted that will control wasteful spending and utilization and therefore eliminate the moral hazard problem (capitation payments, utilization reviews, DRGs, etc.)?
- Are there structural reforms taking place to reduce the stress on expensive inpatient care, such as home care, day hospitals, or outpatient diagnostics and surgeries?
- Has the concept of general practice or family physicians been introduced?
- Is there some attempt to match the available resources on hand with the amount of medical care provided, through prospective or global budgeting schemes at some level (oblast, rayon, hospital)?
- Are patients encouraged to self-limit unnecessary utilization through some form of co-payment mechanism? (This mechanism would also, in theory, encourage better health habits such as cessation of smoking and alcohol abuse, improved diets and levels of exercise, self-care of minor illnesses, and self-management of chronic diseases, if there were some legal cost to the patient to access the health care system.)
- Has excess capacity been eliminated, with appropriate sharing of specialized health care facilities across rayon and oblast borders?

Quality

- Have patients been granted freedom of choice of physicians and hospitals?
- Has private practice been encouraged in order to provide patients with options? In particular, are private practice physicians permitted to participate in the compulsory medical insurance system?
- Are private practice physicians permitted to lease unused space in state-owned health care institutions?
- Do employers and insured persons have freedom of choice of insurance companies?
- Do physicians’ and other health care professionals’ salaries vary depending on some measurement of quality of care (outcomes, patient preferences, etc.)?
- Has some sort of quality review been instituted, perhaps along the lines of Western clinical practice guidelines, which would eliminate harmful or ineffective interventions and encourage cost-effective interventions of demonstrated health benefit?
**Access**

- Is compulsory medical insurance available to the entire population?
- Does the compulsory medical insurance program guarantee an acceptably comprehensive array of basic medical services?
- Are insurance companies monitored to limit adverse selection?
- Are demands for illegal side payments to health care providers strictly policed and forbidden?
- Are subsidies for pharmaceuticals, medical equipment, and the like, provided for at-risk populations?
- Has care been taken to ensure that health care facilities will remain available to geographically remote areas with low population densities?

**Samara: a case study of successful reform**

If the indicators listed above are appropriate and valid for the Russian context, then they should generally apply to a region that is universally heralded by Russian observers as successful in its health system reform efforts. Samara, an oblast of 3.3 million people and the largest industrial center in the Volga region, is used here as that test case.

Samara was one of the three regions that participated in the New Economic Mechanism of the late 1980s. As a result of its efforts then, average length of hospital stay was reduced by seven percent; emergency ambulance calls were reduced by 12 percent; the number of hospitalizations defined as “unnecessary” was reduced by 13 percent; and the number of inpatient hospital beds was reduced by 5,500. Samara fell victim to the inflationary dynamics described earlier, but bounced back rapidly in the early 1990s because of strong and consistent political attention to the health sector.

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On July 9, 1996, the Samara oblast legislature passed the “Conception for Development of Health Care in Samara for the years 1996-2000.” This document highlights the following directions for health system reform:26

- Modernization of the compulsory medical insurance system;
- Priority development of ambulatory care, along with training of general practice physicians;
- Rationalization of the treatment base, encouraging physicians and patients to seek specialized care only when necessary;
- Development of various forms of property in health care, including private medical practice;
- Modernization of the administration of health care, including quality control measures;
- Increased effectiveness of use of resources on hand.

This “Conception,” in principle, demonstrates Samara’s commitment to many of the ideas inherent in the indicators derived earlier. What is remarkable is the degree to which the region has actually implemented what is contained in the “Conception” document.

First of all, Samara’s political leaders have attempted to attract additional resources for the region’s health care needs. Beginning in the mid-1990s, regional officials began lobbying Moscow for changes in federal legislation that would increase available funds for the health sector: increasing the compulsory medical insurance payroll tax to 3.7%; transferring responsibility for insuring pensioners to the Pension Fund, and for the unemployed to the Unemployment Fund; and exempting medical institutions from payment of regular taxes to Russia’s federal budget.27 None of these proposals has yet been adopted, but they demonstrate the degree of political activity and priority assigned to health care by regional officials.

Most striking is the level of focus on the compulsory medical insurance program in Samara. The region was one of the first to begin to implement the program in December of 1993. As of August 1997, 3.01 million of the region’s 3.3 million residents were insured; since then, 100% coverage has been

27 Samarin, p. 4.
reached. During the first two fiscal quarters of 1999, for the first time, 100% of insurance taxes was collected, largely because of diligent efforts by the regional insurance Fund to make collections from enterprises and, more importantly, a 1998 decision by the oblast Duma to wrest responsibility for payments on behalf of non-workers from the municipalities, and to make those payments a protected line item in the oblast budget.

It is impossible to overstate the uniqueness of this situation. Literally every other one of Russia’s 89 regions struggles with late or underpayment by the municipalities, leaving their health insurance Funds underfinanced and, therefore, their universal coverage promises impossible to fulfill. Samara, because of a bold political statement by its oblast-level officials, is able to offer its citizens not only the federally-mandated package of basic compulsory insurance benefits, but also coverage of ambulance calls, treatment for diseases labeled as “socially significant” (mental health illnesses, sexually transmitted and some other infectious diseases, and others), and most pharmaceuticals. While most regions fail to offer even the legally mandated basic package of care because of financial shortfalls, Samara has voluntarily added benefits to the list.

Samara’s success also stems from its efforts to spend each health care ruble efficiently and effectively. The region, as of August 1995, returned to the New Economic Mechanism of financing hospitals and clinics. Clinics now receive capitation payments, currently 40 rubles per month per person in a clinic’s catchment area, weighted for age and gender. The clinics are then solely responsible for decisions about referring patients for inpatient care, and for paying for that care. If the capitation-derived clinic budgets cover all inpatient costs each month or quarter, then the clinics are free to keep any extra cash on hand. If hospital expenses exceed those budgets, then the clinics are forced to make up the shortfall. In a low-inflation environment, the previous problems with this system have not recurred, and clinic physicians are unanimous in stressing the effectiveness of the new incentive structure in curbing

unnecessary hospital admissions. The results are unmistakable: in Soviet times, the region spent 80% of its health treatment resources on inpatient care; in mid-1997, that figure stood at 54%.

Of course, this dynamic raises concerns about restricted access to necessary inpatient care. Are patients denied hospital admissions by polyclinic physicians solely on financial grounds? Most physicians, of course, deny that this is taking place, but one doctor at Samara City Polyclinic Number Two admitted that she has frequently tried to convince patients to pay for referred diagnostic tests or inpatient care themselves.

Virtually all clinics have recently adopted the “day hospital” form of organization, where patients needing only intravenous medication or other interventions requiring just a few hours per day of care come to the polyclinic (rather than being admitted to a hospital), receive their treatment, and then go home for the night. That same physician at the Samara city polyclinic said that, after two months in service, her facility’s day hospital (literally just a small room with six beds in individual cubicles, each equipped only with IV stands) now services fifty percent of the patients that formerly would have been referred for inpatient care. Outpatient surgical practices are also being developed, with Samara oblast health administration director Rudolf Galkin trumpeting the recently opened Samara Surgical Day Hospital, whose ten beds served more than 1,300 patients on an outpatient basis last year.

Samara has also been aggressive in its training of general practitioners. Organized in groups of three physicians – a family doctor, an OB/GYN, and a pediatrician – these general practice offices are intended to offer families a “one-stop shopping” form of health care delivery. A department of family practice was opened in 1994 at the regional medical university, and right now, one-third of Russia’s 1,500 general practitioners are located in Samara. These new forms of practice will offer patients continuity

29 Author’s interviews with polyclinic physicians in Samara, March 2000.
31 Author’s interview, Samara, March 2000.
33 Author’s interview with Rudolf Galkin, head of Samara health administration, March 2000; “AKT proverki organizatsii raboty TFOMS Samarskoy Oblasti po vypolneniyu Zakona RF ‘O meditsinskom strakhovaniy grazhdan v RF,’” City of Samara, May 17, 1996.
34 Galkin, March 15, 2000, p. 6.
and presumably higher quality of care, greater freedom of choice among physicians, and most importantly to Samara’s health administrators, provide sufficiently comprehensive services to avoid unnecessary referrals to expensive inpatient facilities.

Samara also permits private practice physicians to be reimbursed by compulsory medical insurance, and encourages state physicians to offer paid services within regular polyclinics and hospitals. Therefore, while the region’s population still does not enjoy freedom of choice of state physician, clinic, hospital, or insurance company within the compulsory insurance mechanism – all of these are still assigned according to strict, geographically-based catchment areas – privatization has permitted the limited introduction of competition. Due to high start-up costs, there is still a relatively small number of physicians in private practice. But many state clinics and hospitals now offer private, fee-based services alongside of those covered by the state, and patients can choose to make these legal additional payments either for treatments not covered by compulsory insurance, or for higher-quality or more comfortable provision of state-mandated services.

One clinic physician explains that this mechanism has now, for the first time, provided physicians with an incentive to work harder and offer higher standards of care, despite the fact that their state salaries are still mandated according to rigid salary scales. They compete for the opportunity to provide these paid services, and they keep a portion of the proceeds earned from the business they attract. Visits to some of Samara’s clinics that offer paid services, and therefore enjoy this additional income, and those that do not, offer a striking comparison. The former contain at least some modern, Western equipment, and are undergoing significant capital repair, with evident new construction and remodeling. The latter continue to exhibit the shoddy construction and technical standards that were a hallmark of meager Soviet health care quality.

Of course, these paid services raise important questions of access. As time goes on, will Samara’s citizens be faced with a two-tiered system of health care, one for those with the resources to pay

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35 Interview with Head Doctor Alexander Kutsepalov, MedSanChast #14, City of Samara, March 2000.
36 Author’s observations, March 2000.
for higher-quality, private services, and the other constantly growing poorer and poorer due to neglect? Conversations with “ordinary” Samarans reveal that this problem has already developed, with even the old Soviet-era demands for payments by physicians for supposedly “free” service continuing.37 Despite full financing of the compulsory insurance budget, therefore, access to health care by marginal populations remains problematic due to demands for illegal bribes and side payments.

**Conclusion**

Despite questions about equity of access, Samara apparently has progressed farther than most or all other regions of Russia in its health care system reform, and the indicators derived earlier seem effectively to capture that progress (see Table 1). This research project will, therefore, proceed using these indicators to operationalize health care system reform progress in all of Russia’s regions, with the goal of statistically assessing the impact of health care system reform on health outcomes nationwide.

37 Numerous conversations by the author with citizens of Samara, March 2000.
Table 1: Health Care System Reform Progress in Samara

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>SAMARA SUCCESS?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost</strong></td>
<td></td>
</tr>
<tr>
<td>Employers contributing full insurance tax</td>
<td>Yes</td>
</tr>
<tr>
<td>Municipalities contributing full insurance tax</td>
<td>Yes</td>
</tr>
<tr>
<td>Effective provider reimbursement mechanisms</td>
<td>Yes, capitation and DRGs</td>
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<tr>
<td>Structural reform to reduce inpatient care</td>
<td>Yes, day hospitals</td>
</tr>
<tr>
<td>General practice physicians</td>
<td>Yes</td>
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<tr>
<td>Prospective/global budgeting</td>
<td>No</td>
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<tr>
<td>Co-payment mechanisms</td>
<td>No</td>
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<tr>
<td>Elimination of excess capacity</td>
<td>Unknown</td>
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<tr>
<td><strong>Quality</strong></td>
<td></td>
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<tr>
<td>Freedom of patient choice of providers</td>
<td>No</td>
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<tr>
<td>Private practice</td>
<td>Yes</td>
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<tr>
<td>Private use of public health facilities</td>
<td>Yes</td>
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<tr>
<td>Freedom of choice of insurance companies</td>
<td>No</td>
</tr>
<tr>
<td>Providers’ salaries vary with outcomes, quality</td>
<td>Yes, but only for paid services</td>
</tr>
<tr>
<td>Quality review/clinical practice guidelines</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td></td>
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<tr>
<td>Universal compulsory insurance coverage</td>
<td>Yes</td>
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<tr>
<td>Insurance coverage of basic services</td>
<td>Yes</td>
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<tr>
<td>Control over adverse selection</td>
<td>Yes</td>
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<tr>
<td>Control over illegal side payments</td>
<td>No</td>
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<tr>
<td>Subsidies for at-risk populations</td>
<td>Yes</td>
</tr>
<tr>
<td>Geographic coverage of health facilities</td>
<td>Unknown</td>
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