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Soviet Civil Defense: Medical Planning for Postattack Recovery

A Research Paper

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Soviet Civil Defense: Medical Planning for Postattack Recovery

A Research Paper

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Soviet Civil Defense: Medical Planning for Postattack Recovery

Key Judgments
*Information available
as of 1 April 1984
was used in this report.*

Medical planning for the period following a nuclear attack is part of the Soviets' overall civil defense effort and includes various measures for the treatment of the leadership, essential work force, and general population. According to Soviet [] writings, it emphasizes the training and protection of medical personnel, stockpiling of medical reserves, mobilization of the Civil Defense Medical Service for wartime operations, and evacuation and relocation of urban medical facilities.

[] in the preattack period, medical and paramedical personnel would be mobilized by the Civil Defense Medical Service, and urban medical facilities would relocate or evacuate their patients. The Medical Service would then deploy to exurban areas to assist in the evacuation of the work force and general population. Medical assistance in the postattack period would consist of a two-stage evacuation of casualties from target areas—during the first stage, emergency treatment would be given by first aid detachments deployed close to the areas targeted, and during the second stage, more specialized treatment would be given in base hospitals located farther away.

Our analysis of [] reporting on Soviet medical planning and Soviet civil defense medical texts indicates that:

- Emergency relocation and evacuation plans exist for many medical facilities.
- Extensive measures have been taken to provide trained medical and paramedical personnel for the Civil Defense Medical Service.
- Measures have been taken to facilitate mobilization of personnel, transportation, and equipment for civil defense medical use during wartime.
- Large stockpiles of medical supplies for civil defense exist throughout the USSR.
- The USSR has 44 underground medical treatment and storage facilities, primarily in urban areas and designed to provide for limited treatment of patients and protection of some medical stockpiles.
- The Soviets routinely conduct civil defense training and exercises for medical personnel.
- Shelters, designed to protect medical personnel from the immediate effects of nuclear weapons, exist at many urban medical facilities.

The Soviets have invested heavily in planning, training, conducting limited exercises, and in providing personnel for the Civil Defense Medical Service. Nonetheless, they still face uncertainties about the ability of the Service to carry out its mission. We have seen no major integrated exercises that would demonstrate the effectiveness of the system. Moreover, the length of time medical stockpiles could last under conditions of nuclear war and the circumstances in which nuclear war might occur remain intractable issues.

In 1979 we estimated that Soviet wartime casualties would range from 35 million to 125 million depending upon civil defense preparations and other factors. (The figures will be updated in an interagency study to be completed later this year.) Although medical preparations for civil defense are extensive, the Civil Defense Medical Service could easily be overwhelmed by casualties if the Soviets had little time to prepare or decided not to implement civil defense measures before an attack.

The Soviet leadership probably believes that civil defense medical planning enhances the prospects for the USSR's postattack recovery, as it would reduce fatalities among all segments of the population. given adequate warning time.



Contents

	<i>Page</i>
Key Judgments	iii
Introduction	1
Peacetime Planning	1
Training	3
Exercises	4
Mobilization	4
Wartime Organization	4
Treatment and Evacuation of Casualties	4
Sanitary-Epidemiological Operations	7
Relocation and Evacuation of Medical Facilities	7
Personnel Allocation and Protection	9
Transportation	9
Medical Reserves	10
Underground Medical Facilities	10
Implications	12
Appendixes	
A. Medical Facilities With Emergency Plans	13
B. Reported Civil Defense Medical Storage Locations	17
C. Reported Underground Medical Facilities	21

Soviet Civil Defense: Medical Planning for Postattack Recovery

Introduction

In a nuclear war the number of surviving injured is likely to equal or exceed the number of those killed immediately. Tens of millions of casualties could require medical treatment in the postattack period. According to Soviet unclassified writings, the stated objective of the Soviet civil defense program is to provide sufficient medical resources for the protection of the population and treatment of the massive number of civilian casualties expected. Civil defense measures designed to "eliminate the medical consequences" of nuclear, biological, or chemical weapons are:

- Mobilization of civil defense medical personnel and facilities for treating mass casualties.
- Special civil defense training for all medical personnel.
- Provision of emergency medical supplies and transportation.
- Organization of sanitation and epidemic control teams to prevent the onset of infectious diseases.
- Medical evacuation of casualties from urban areas to relocated hospitals.
- Protection of medical personnel through sheltering.

Soviet medical manuals on civil defense estimate that the total loss of life in urban areas could reach 50 to 60 percent without sheltering. We have no reliable information, however, on what the Soviets estimate the total number of civilian casualties could be in a nuclear war. In 1979 we simulated the effects on the Soviet population of a hypothetical retaliatory attack by US forces under different alert conditions.¹ The primary purpose of the simulation, which we are updating, was to assess the effectiveness of Soviet civil defense in reducing the magnitude of Soviet casualties in a nuclear war. For the purpose of analysis, we

¹ For a complete description of the analysis and methodology involved in this simulation.

assumed three different levels of civil defense preparation: little to none, sheltering only, and full sheltering and evacuation of urban centers. The population was neither specifically targeted nor avoided. Our assessment indicated that estimated Soviet casualties from prompt nuclear weapons effects and fallout would range from about 35 million (including 14 million fatalities) to 125 million (with 105 million fatalities) depending on the level of civil defense implementation and stage of US alert. Casualties from long-term and secondary effects were not included (see table 1).

The Soviets' recovery from a nuclear war is heavily dependent upon their ability to provide postattack medical support to all sectors of the population. Our analysis of the available information indicates that the Soviets have invested heavily in planning, training, conducting limited exercises, and in providing personnel for the Civil Defense Medical Services.

This paper discusses Soviet plans for mobilizing, protecting, and deploying medical resources for civil defense and assesses their potential effectiveness. It includes recent information on the scope of emergency planning for individual medical facilities, the role of military commissariats in medical resource allocation, protection of medical personnel, medical storage locations, and underground medical facilities. Although all-source information was utilized in the preparation of this paper, the primary sources were emigre reports and unclassified Soviet civil defense medical textbooks.

Peacetime Planning

Soviet civilian medical resources are controlled in peacetime by both the Ministry of Health and the Ministry of Medical Industry. The Ministry of Health manages treatment facilities—hospitals, polyclinics,

Table 1
Estimate of Soviet Casualties and Fatalities
From a Hypothetical US Retaliatory Attack

Million persons

Civil Defense Preparations	US Forces on Generated Alert		US Forces on Day-to-Day Alert	
	Casualties *	Fatalities	Casualties *	Fatalities
Little or none	125	105	115	75
Shelters and best protective structures occupied	115	85	95	55
Full sheltering; evacuation of 90 percent of 300 cities	45	30	35	14

* Casualty totals include fatalities.

and small dispensaries—through departments of health at different administrative levels. It also supervises the extensive network of sanitary and epidemiological stations located throughout the USSR. The Ministry of Medical Industry is responsible for the manufacture of pharmaceuticals and medical equipment and supervises medical stockpiles (see figure 4).

The Civil Defense Medical Service is one of several services under the Defense Ministry's Main Directorate of Civil Defense. In peacetime the Medical Service consists primarily of staff personnel responsible for coordinating the civil defense efforts of the Ministries of Health and of Medical Industry. At all administrative levels of the Ministry of Health and probably the Ministry of Medical Industry are Second Departments responsible for integrating plans for conversion to wartime operations, formulating doctrine, and conducting civil defense medical exercises. Soviet medical facilities also have a Second Department headed by a physician responsible for planning and coordinating civil defense training and mobilization. Upon mobilization, the medical assets of the Ministry of Health would become part of the Civil Defense Medical Service.

Because medical personnel and resources are limited, both the armed forces and the Civil Defense Medical Service compete for many of the same resources. The Soviets, therefore, face the problem of balancing the

medical manpower, training, and transportation requirements of the military with those of the Civil Defense Medical Service. We believe they are attempting to resolve this problem by combining military commissariats and civil defense staffs

Military commissariats are administrative organizations subordinate to the administration of the military district within which they are located. Their activities include supervising preinduction military training and indoctrination, issuing callups for military service and reserve training, maintaining records on reservists, and issuing deferments. They also are responsible for registering national economic resources suitable for military needs, conducting partial or general mobilization, and allocating civilian transportation for military purposes during mobilization.

military commissariats also play a role in the civil defense training, classification, and assignment of medical personnel and in the allocation of civilian transportation for civil defense needs. In 1978 the civil defense staffs of the Baltic republics, for example, were placed under the control of military commissariats. If such subordinations are the norm, they may be intended to balance the mobilization requirements of the armed forces with

those of civil defense, including eliminating the possibility of conflicting assignments of medical resources that might occur with separate civil defense and commissariat staffs

The Central Military Medical Directorate of the Ministry of Defense's Rear Services controls active duty and reserve medical personnel distinct from those allocated to the Civil Defense Medical Services by the military commissariats. Unclassified Soviet civil defense medical texts discuss the use of military medical resources for civil defense purposes in the postattack period. Although the primary mission of the military medical service is to support the military, we believe that some of its personnel and medical stocks may be available for civil defense. Military civil defense regiments also have limited medical treatment capabilities and could treat some civilian casualties in wartime. The Civil Defense Medical Service probably coordinates the use of military medical resources with the Central Military Medical Directorate during wartime

Training. Almost all Soviet medical personnel receive extensive military and civil defense instruction at medical training institutes. A four-year combined military and civil defense training program at the State Medical Institute of Alma Ata is typical. Civil defense training at the Institute is mandatory for both males and females, and the courses include combined instruction in basic military subjects and civil defense topics. Among the civil defense topics taught are the treatment of nuclear, biological, and chemical casualties and the use of protective clothing. In some cases traditional military instruction is emphasized for men, while training for women concentrates on civil defense topics

Civil defense medical training also is given at other specialized institutes. One source participated in an extensive mandatory training program for nurses at the Vilnius Pedagogical Institute. The program featured two semesters of civil defense training and three semesters of medical training. Upon graduation, students were assigned to the military reserves as nurses by the military commissariat. A similar program also exists at the University of Uzhgorod. In addition, military commissariats generally supervise first aid,

civil defense, and premilitary training of Soviet youths in the Voluntary Society for the Cooperation of the Army, Air Force, and Navy (DOSAAF).

Postgraduate civil defense training of medical personnel is usually provided for by military commissariats and civil defense staffs. For example, some medical personnel are assigned to a course for resident physicians taught at the Balashikha civil defense school in Moscow Oblast. The course is taught twice a year and lasts about six weeks. [redacted] report that between 40 and 50 physicians graduate from the course each year. They probably are then assigned to military civil defense units. In some areas, military commissariats recall medical personnel to active duty every five years to receive two weeks of civil defense training. The training normally is conducted at the commissariat headquarters by full-time personnel from the commissariat's medical section [redacted]

Civil defense medical training also is given at urban medical facilities. According to [redacted] the amount of civil-defense-related medical training given at Soviet medical facilities varies; however, the reported norm is between 50 and 60 hours a year. The training is planned by the hospital civil defense chief and usually consists of classroom instruction on the organization of the Civil Defense Medical Service and general topics dealing with treatment of injuries associated with nuclear, biological, and chemical warfare. In addition, medical training for civil defense paramedical personnel in factories, schools, institutes, and similar enterprises usually is given by hospital civil defense instructors and Red Cross/Red Crescent Society volunteers.

The general population also receives civil defense medical training at workplaces, schools, and during military service. This training usually includes basic first aid, such as treatment for burns, artificial respiration, splinting of broken bones, and treatment for shock. Training for the general population also includes preventive measures to reduce casualties after

a nuclear exchange—for example, how to use protective masks and radiological and chemical measuring devices, decontamination, and general instruction on the effects of nuclear weapons.

Exercises. Training through exercises appears to be uneven. [] report that many medical facilities do in fact hold semiannual or annual exercises for paramedical teams. They are usually supervised by personnel from military commissariats and civil defense staffs. [] participated in a 30-day mobilization exercise called by the Odessa military commissariat. The exercise included setting up a Civil Defense Medical Service first aid detachment (OPM) and instruction on general civil defense topics. In 1976 [] attended a civil defense medical exercise with about 1,000 participants in Tokmak in the Kirghiz SSR.

[] have reported, however, that many medical facilities do not engage in field training exercises. For example, the All-Union Oncology Research Center of the Academy of Medical Science in Moscow—which, as [] reports, plans to relocate to a state farm in Pyshlitsy—never has participated in civil defense exercises or practiced relocation. Lack of field training at medical facilities could result in severe problems with carrying out relocation plans in wartime. Although we have evidence that small-scale civil defense medical exercises are widespread throughout the USSR, we have no information that the Soviets have conducted a comprehensive integrated medical exercise to test the entire civil defense medical network. Not having run such exercises, the Soviets cannot be certain about the ability of the system to accomplish its mission in wartime.

Mobilization. Urban medical facilities, according to [] are part of an elaborate mobilization-alert notification system maintained by the local civil defense staffs and operated in conjunction with military commissariats. In Riga, for example, doctors on duty in local hospitals are required to telephone the Riga civil defense staff once an alarm in the hospital duty office sounds. The duty doctor then alerts the hospital civil defense chief and the rest of the hospital staff. When alerted, the hospital civil defense chief

coordinates hospital mobilization with the civil defense staffs, military commissariats, and those facilities, institutes, and schools, which may augment the mobilized hospital with paramedical personnel. We believe that mobilization of Soviet medical facilities is initiated by the military commissariats and, like other civil defense activities, is governed by changes in Soviet armed forces readiness levels.

Wartime Organization

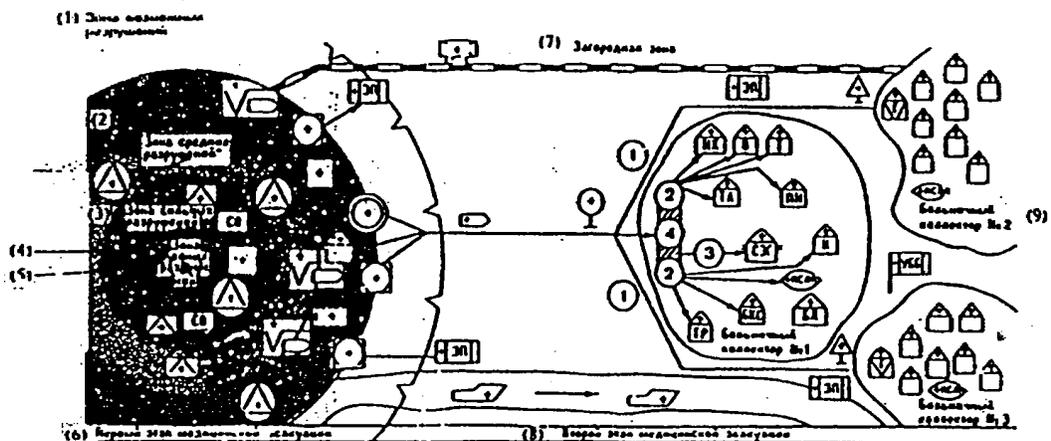
Soviet unclassified literature devotes much attention to the wartime organization of the Civil Defense Medical Service. We think that the Medical Service would exercise operational control in wartime over the medical assets of the Ministry of Health, the Ministry of Medical Industry, DOSAAF, and the Red Cross/Red Crescent Societies. We believe it also probably would coordinate the allocation of medical resources with the Central Military Medical Directorate during wartime.

The wartime structure of the Civil Defense Medical Service would be based on the organization and personnel of the Public Health Departments and medical facilities at each administrative level under a system of dual subordination. During wartime the director of the local Public Health Department would become the head of the Civil Defense Medical Service for the area concerned and a member of the local civil defense staff.

Treatment and Evacuation of Casualties. The Civil Defense Medical Service has developed an elaborate plan for medical operations in the event of a nuclear attack [] and unclassified [] literature disclose that the plan is based on two stages of treatment and evacuation. During the first stage, first aid and emergency treatment would be given in or near zones of destruction; during the second stage, evacuation to specialized hospitals in a hospital-base area outside the target zone would take place (see figure 1).

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Figure 1
USSR: Concept of Medical Treatment in the Period Following
Nuclear Attack*



- (1) Zone of possible destruction
- (2) Zone of light destruction
- (3) Zone of average destruction
- (4) Zone of severe destruction
- (5) Zone of total destruction
- (6) First-stage medical evacuation
- (7) Exurban zone
- (8) Second-stage medical evacuation
- (9) No. 2 hospital collection point
- ☺ Hygiene team
- ☺ Detachment of hygiene teams
- ☺ Rescue detachment (RD)
- ☺ Medical platoon
- ☺ Intact city hospital
- ☺ Intact city polyclinic
- ☺ Medical first-aid detachment
- ☺ Medical company

- ☺ Evacuation receiving center (ERC)
- ☺ Ambulance water transport
- ☺ Ambulance motor transport
- ☺ Motor transport casualty loading point
- ☺ Auxiliary distribution post
- ☺ Ambulance train
- ☺ Lead hospital (LH)
- ☺ Specialized hospital (neurosurgery)
- ☺ Medical distribution point (MDP)
- ☺ Hospital-base administration (HBA)
- ☺ Assembly point for the slightly wounded
- ☺ Casualties sent from MDP to hospital collection points
- ☺ Transportable casualties sent from SEH (screening-evacuation hospital) (EH) screening to specialized hospitals
- ☺ Casualties needing immediate specialized assistance, nontransportable casualties
- ☺ Screening-evacuation hospital screening area

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In the *first stage*, first aid detachments (OPMs) would deploy to exurban areas after mobilization to constitute medical treatment facilities. An OPM comprises physicians, nurses, and paramedical personnel who would sort casualties and provide emergency lifesaving services, including decontamination of those exposed to radiation and limited hospitalization for the seriously injured. Casualties would be tagged according to the extent of the injuries, treated, and then, if their injuries required more specialized treatment, evacuated to base hospitals. An OPM is designed to handle about 300 casualties a day. OPMs would be deployed in uncontaminated areas as close as possible to target areas; they are heavily dependent upon radiological reconnaissance to avoid areas that are severely contaminated or in the path of fallout.

Soviet civil defense plans call for urban hospitals to provide cadres for OPMs, each with approximately 150 personnel, of which 25 would be doctors. Large hospitals would provide cadres sufficient for two OPMs, while smaller hospitals and polyclinics would provide cadres for one. Soviet planning also calls for the OPM to be augmented by teams of paramedical personnel from factories, institutes, and similar enterprises. In Kiev alone, we have reporting on 40 designated OPMs, each requiring augmentation by 125 paramedics.

The OPMs are to deploy and direct the operation of the medical teams, each consisting of approximately 24 paramedics who are students, workers, and members of the Red Cross/Red Crescent Societies. These teams would deploy to severely damaged areas where they would receive casualties from civil defense rescue detachments and give first aid; then they would transport the seriously injured to the OPM, which would give more extensive medical care. For example, according to [] the All-Union Scientific Research Institute for the Transport of Natural Gas in Kiev had two medical teams, each with four five-member squads. Upon mobilization one team would report to the Leninskaya Regional Hospital in Kiev; the other would aid evacuees and victims in or near potential zones of destruction.

In the *second stage*, specialized medical care would be given to casualties who had received emergency care from OPMs. This care would be given in hospital

bases formed from the more specialized hospitals and medical research and training institutes, which would have relocated to exurban areas. These bases, with specialized surgical sections for treating severe injuries, would be directly subordinate to oblast or kray civil defense medical services. Soviet unclassified sources assert that these bases could be as far as 10 to 12 hours' travel time from OPMs.

A hospital base would include six to eight hospital-collection points. Each hospital-collection point would include a main hospital, casualty-collection points, and hospitals that specialize in various categories of injury. Collection points that are nearest the target areas also would have a special sorting and evacuation hospital. Less critically injured patients, who could be discharged or transferred to their homes, probably would be released upon order of the Civil Defense Medical Service, freeing as many beds as possible.

Casualties would be received and sorted at the sorting and evacuation hospital, medical distribution points, and evacuee reception points along access routes to the base area. After sorting according to injury and verification of the information on medical tags prepared at the OPM, casualties would be distributed among the hospital-collection points. The Soviets would attempt to colocate hospital-collection points so patients could be evenly distributed among main hospitals.

At the main hospital, the seriously wounded—that is, those with multiple injuries including radiation exposure—and those with contagious diseases would be hospitalized and treated. The main hospital is essentially a general hospital with additional assets for nuclear decontamination and shock treatment. Patients requiring treatment not available at the main hospital would be assigned to one of the specialized treatment hospitals, which are the principal therapeutic institutions of the collection point.

Although the OPMs probably could give rudimentary first aid to large numbers of casualties, we believe that the Soviets face significant uncertainties about

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the provision of more specialized medical care in the postattack period. Delays in transporting casualties from the OPMs to hospital bases could result in many fatalities. Moreover, the collection points at hospital bases could be overwhelmed with casualties during the medical evacuation. Shortages of trained personnel, medical supplies, or equipment in hastily established hospital bases could cause additional problems.

Sanitary-Epidemiological Operations. Sanitary-epidemiological units (*sanepids*) also would play a key role in Soviet civil defense medical operations. *Sanepids* are administered in peacetime by the Ministry of Public Health. Their peacetime responsibilities are inoculating and vaccinating the general public; insect and rodent control; water, dairy, and meat monitoring; and industrial and community hygiene. They usually are equipped with mobile laboratory and inspection equipment and are normally headed by a physician.

↳ In wartime, *sanepids* would:

- Support OPMs and base hospitals in exurban areas and provide preventive health care.
- Be responsible for mass immunizations of the populace to curb infectious diseases that could result from radiation-induced suppression of the body's immune system.
- Ensure that massive amounts of uncontaminated water would be available for OPM and hospital base operations.
- Supervise the disposal of corpses and of large amounts of human waste to prevent the spread of infectious diseases

Sanepids from large urban areas would specialize. For example, in Kiev the Shevchenko Rayon *sanepid*—↳ reports—is to be the headquarters for rayon epidemic control. Another *sanepid* would be responsible for waste control, while a third would manage the disposal of corpses. ↳ reports that Kiev *sanepids* maintain current deployment plans and sufficient equipment to carry out their assigned wartime missions.

The Soviets face significant uncertainties about the ability of these teams to carry out their assigned

wartime tasks. For example, during the Sverdlovsk anthrax epidemic of 1979, *sanepids* ultimately were able to control the spread of disease, but the level of effort was quite large for the size of the outbreak—according to ↳

↳ That *sanepids* would have such large resources available to them in the postattack period is unlikely. Similarly, *sanepids* have been only partially successful in controlling epidemics in Afghanistan. In the aftermath of large-scale nuclear exchanges, *sanepids* might be of limited effectiveness in coping with the outbreak of infectious diseases.

Relocation and Evacuation of Medical Facilities.

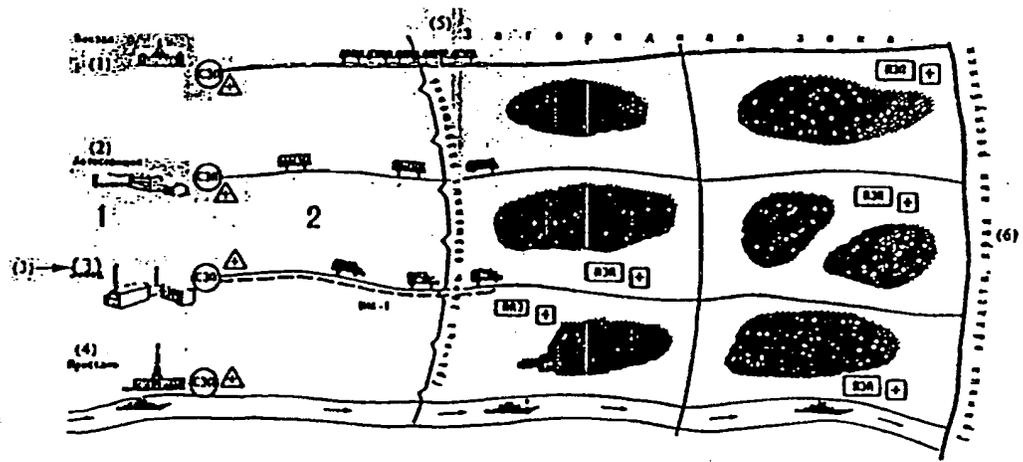
↳ report that 113 Soviet medical facilities located in 26 cities plan to evacuate or relocate to exurban areas in wartime. Of these, 37 plan to evacuate while 76 plan to relocate. It is likely, however—because of the premium on trained medical personnel during a nuclear war—that all urban medical facilities would provide cadres for first aid detachments and hospital bases rather than merely evacuate personnel together with the patients. The presence of emergency relocation and evacuation plans at these medical facilities indicates that the Soviets are actively preparing for treatment and evacuation of casualties and *sanepid* operations in wartime.

Soviet medical facilities appear to be accorded a relatively high priority in evacuation and relocation operations. Unclassified Soviet civil defense medical manuals assert that relocated medical facilities would assist in the dispersal or relocation of the essential work force and the evacuation of the general population. Given adequate warning time, we believe that civil defense medical facilities probably would relocate after the leadership had relocated to exurban command posts, but before the dispersal, evacuation, or relocation of the other segments of the population (see figure 2 and appendix A).

A major problem for the Soviets is providing sufficient building space in which relocated medical facilities could operate. ↳ reports that some schools, such as the Lopukhin Special School outside

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Figure 2:
USSR: Medical Aid to the Population During Dispersion and
Evacuation*



- (1) Train terminal
 - (2) Motor-transport center
 - (3) Plant
 - (4) Docks
 - (5) Exurban zone
 - (6) Oblast, kray, or republic boundary
 - △ First-aid station
 - ⊕ Physician immediate aid station
 - Foot route No 1
 - Evacuation assembly point
 - EM ⊕ Intermediate evacuation point
- Evacuation receiving points
- 1. City
 - 2. Zone of possible destruction
 - 3. Regions for locating dispersed workers and employees
 - 4. Places for locating evacuated people

*This illustration is from an unclassified Soviet defense medical textbook.

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Leningrad, have been designed for conversion to emergency medical facilities during wartime. The design includes special electrical wiring, garage areas suitable for ambulances, and living areas that would become patient wards. Dual-purpose design of educational and other buildings could provide a large amount of space for relocated hospitals. We are unsure how many buildings incorporate such designs, however

Personnel Allocation and Protection

In peacetime, medical personnel generally are either inducted into the armed forces upon graduation or are issued reserve military service booklets. Each booklet, issued by military commissariats, contains a military specialty code, reporting location upon mobilization, and other service-related information. Military medical personnel upon completion of active duty are issued similar booklets. Although the Soviet law on universal military service varies the reserve retirement age according to rank, sex, and length of service—military commissariats generally carry male medical reservists on military reserve rosters until age 55, when they are assigned permanently to civil defense reserves. Female medical reservists usually are assigned to civil defense reserves at age 50

We are uncertain as to the number of medical personnel that would be allocated to the armed forces and civil defense after mobilization, but some would be available for civil defense after the needs of the armed forces were met. Even though the primary mission of medical personnel would be to support the military, according to some medical reserve personnel might be assigned to civilian hospitals after mobilization

We estimate that the total number of medical personnel available to both the Soviet armed forces and civil defense in wartime would be about 4.0 million. There are approximately 1.1 million doctors in the USSR (see table 2); there are about 2.9 million medical personnel including *feld'shers* (physician's assistants), nurses, midwives, laboratory technicians, medical orderlies, and other assistants. We have no reliable figures for medical workers by category since those of 1975, when about 17 percent were *feld'shers*, 50 percent were nurses, and 33 percent were technicians, midwives, or other medical personnel

Table 2
Soviet Physicians, by Specialty

Thousand persons

Specialty	Number
Internal medicine	237
Surgery	115
Obstetrics/gynecology	62
Podiatrics	120
Ophthalmology	21
Ear, nose, and throat	21
Neurology	26
Psychiatry	25
Tuberculosis	23
Dermatology	18
Radiology	36
Sports medicine	5
Epidemiology	61
Stomatology	92
Dentistry	48
General practitioners	153
Total	1,063

* Includes approximately 100,000 military physicians.

Medical personnel are a key resource for postattack recovery. Consequently, protecting them in wartime would be a priority of civil defense. We have identified or have reporting on 91 medical facilities with personnel shelters. We believe that these shelters are designed primarily to protect medical personnel when warning time is inadequate to allow for relocation or evacuation of the medical facility. In medical facilities with limited shelter space, we believe that medical personnel would have priority over patients

Transportation

The military and civil defense compete for transport as well as for medical personnel. During mobilization, the Soviets plan to draw transportation assets from the civilian economy to meet the needs of the armed forces and civil defense; allocations of transport would be made through the military commissariats. One source reports that the Moscow Main Administration

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of Motor Transport would transfer 30 percent of its heavy trucks, 30 percent of its lifting machinery, and 70 percent of its fuel-carrying vehicles to the military. Most of the rest would be available for use in civil defense. We believe that, on completion of mobilization, the military commissariats would make additional transportation assets available for the medical evacuation and supply of civilians. Military commissariats also maintain rosters of civilian ambulances to be mobilized in wartime.

We estimate that the USSR has approximately 681,000 buses; 86,000 were built in 1982 alone. Although some of these buses would be used to support the military, many probably would be available for civil defense. Modification kits for converting buses to ambulances have been available since at least 1977, but we are uncertain as to the numbers and locations of these kits. The conversion process, reportedly requiring four to six hours, involves the addition of litters and medical equipment and the painting of windows. Once converted, a bus can accommodate 10 to 20 stretchers.

Soviet unclassified sources also mention the use of special ambulance trains and water transport to evacuate casualties. However, we have no information on the extent of planning for use of these transportation assets by the Civil Defense Medical Service in wartime.

Medical Reserves

The Soviets have extensive stockpiles of medical equipment and supplies for civil defense. We have reporting, [] on 132 facilities that maintain medical reserves. These range from simple first aid kits stored in personnel shelters to wartime pharmaceutical stocks kept in medical depots. Most of the first aid kits are A-12 medical kits that contain basic supplies, antibiotics, painkillers, bandages, and stretchers. Such kits are carried by the OPM medical teams. Many shelters are stocked with first aid kits, but not all are equipped with medical stocks. In the late 1970s, the Soviets apparently changed shelter guidelines and deleted the requirement for medical kits. Those now in shelters may have been there before the change in criteria; however, a more likely explanation is that they are part of the equipment that a medical team would carry when it runs its designated OPV.

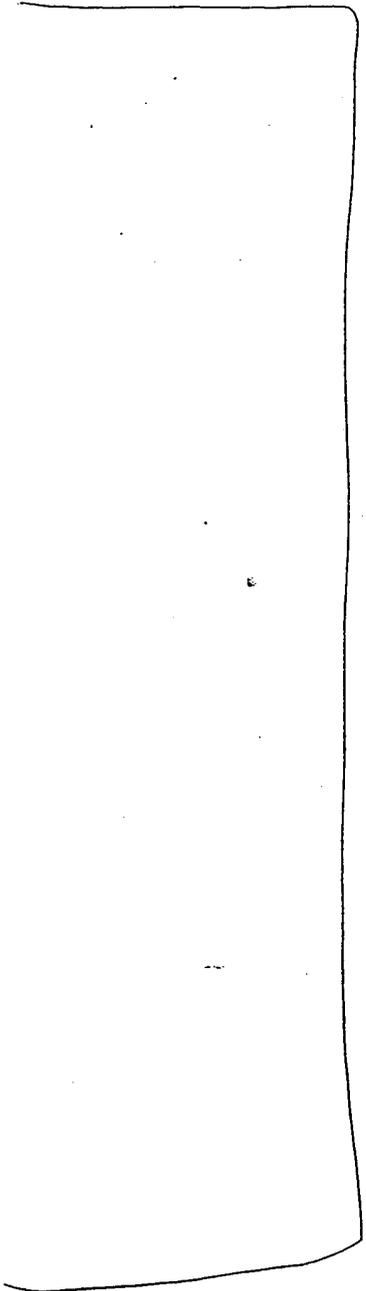
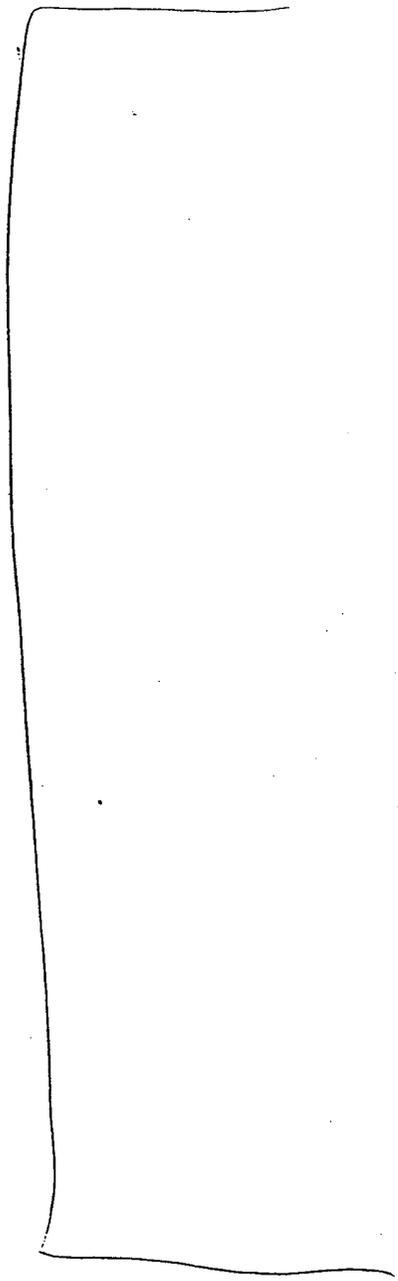
Medical treatment facilities are required to maintain a two-to-three-day supply of medical stocks for emergency use only. They are generally stored in hospital basements and are required to be rotated periodically. Warehouses and pharmacies also are required to maintain emergency stocks for treatment of chemical and biological casualties as well as other essential wartime medicines; they probably have wartime plans to provide medical supplies to relocated hospitals. [] report that there are special civil defense medical reserve supply depots only for wartime use. Outside Odessa there are three groups of wartime reserves capable of supporting 7,500 patients in relocated hospitals. The Odessa stocks reportedly are under the direct control of the civil defense department of the Ministry of Public Health.

Although the Soviets maintain extensive medical stockpiles, we are uncertain as to how long these supplies would last under conditions of nuclear war. Even during peacetime the Soviets experience periodic shortages of medical supplies in certain areas, and stockpiles in other areas are not inspected and rotated. Also, Soviet medicines generally are of a lesser quality than those commonly found in the West. Moreover, certain drugs, available only from Western sources, presumably would be unavailable to the Soviets during wartime.

Underground Medical Facilities

We have reporting on 44 underground medical facilities located primarily in urban areas. Most are modestly equipped dispensaries in special basement-type shelters in hospitals and polyclinics. Others have extensive underground facilities. The Odessa Regional Clinical Hospital's facility was constructed in 1967. It reportedly has 25 to 30 small treatment rooms, contains reserve medical supplies and equipment, is connected to the main building by a network of underground passageways, and is hermetically sealed. []

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We also have reporting on some exurban underground medical facilities designed to support the evacuated urban population. For example [] visited a hospital under construction in a mountain outside Dushanbe; it is to support the civilian population of the city after evacuation. Other underground medical facilities are designed as storage depots for wartime medical reserves. In addition, [] reserve hospitals, equipped with medical supplies and underground facilities, are maintained by cadre staffs solely for wartime use by the Civil Defense Medical Service.

Although our evidence indicates that a large number of urban hospitals plan to relocate or evacuate in wartime, we believe that the urban underground medical facilities are designed to provide limited medical support for the leadership, essential work force, and other personnel who must remain in these areas during wartime. These facilities also serve as shelters for medical personnel who may not be able to evacuate or relocate in wartime. Exurban facilities are designed to serve casualties who would be evacuated from Soviet cities and to afford additional protection against radioactive fallout. Although we have reporting on only 44 such facilities, we believe that many more exist.

Implications

The available evidence indicates that the Soviets have taken extensive measures to provide medical support for the population during the postattack period. They probably believe that these preparations enhance their prospects for reducing fatalities should nuclear war occur.

Although there appears to be a potential for conflict between military and civil defense requirements in time of war, the subordination of civil defense staffs to military commissariats in some areas may have helped to eliminate conflicting assignments of medical personnel and civilian transportation assets. Nevertheless, the Soviets face significant uncertainties about the ability of the Civil Defense Medical Service to perform its wartime mission. We believe that these uncertainties center on the []

- Amount of warning time available for mobilization of the Civil Defense Medical Service

- Lack of integrated medical exercises designed to test the Civil Defense Medical Service's ability to mobilize, relocate, and operate medical facilities during wartime.
- Shortages of appropriate medical supplies and equipment—despite stockpiling—to treat the massive number of casualties expected.
- Shortages of medical personnel despite the emphasis on civil defense training for large numbers of medical and paramedical personnel.
- Problems with *sanepid* operations in peacetime that bring into question the ability of the *sanepids* to accomplish their wartime mission.
- Uneven implementation of stated civil defense training goals and the consequent ability of medical personnel to perform their wartime roles

Despite these uncertainties, the civil defense medical program continues to receive substantial emphasis. The Soviets probably will continue to work to improve their ability to provide postattack medical support to the population. Subordination of civil defense staffs to military commissariats in other regions could improve medical mobilization and resource allocation in wartime. The Soviets probably will continue to expand medical stockpiles, to construct shelters at hospitals and polyclinics, and to build underground medical facilities. It also is likely that the Soviets will continue to improve the quality and amount of civil defense training for medical personnel.

Soviet civil defense medical planning has important implications for the United States. Although we have not estimated the total cost of the program, the Soviets have clearly invested heavily in medical preparations for nuclear war. The scope of these activities indicates that such preparations probably could reduce fatalities among all segments of the population given adequate warning time. []

[] The Soviets probably would mobilize the Service before evacuating their cities, even though they would have to consider that [] done so would be detected. []

[] 7-11-48 postattack period []

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Appendix A

Medical Facilities With Emergency Plans

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Medical Facilities With Emergency Plans (continued)

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Medical Facilities With Emergency Plans (continued)

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Appendix B

**Reported Civil Defense Medical Storage
Locations**

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Reported Civil Defense Medical Storage
Locations (continued)

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Reported Civil Defense Medical Storage
Locations (continued)

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Reported Civil Defense Medical Storage
Locations (continued)

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Appendix C
Reported Underground Medical Facilities

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