

Monitoring Health Conditions in the Russian Federation

*The Russia
Longitudinal Monitoring Survey
1992-2001*

April 2002



Russia Longitudinal
Monitoring Survey

University of North Carolina
at Chapel Hill

The Russia Longitudinal Monitoring Survey (RLMS) is a series of nationally representative surveys of the Russian Federation between 1992 and 2001. This report is based on those conducted in September 1992 (Round 1), February 1993 (Round 2), August 1993 (Round 3), November 1993 (Round 4), December 1994 (Round 5), October 1995 (Round 6), October 1996 (Round 7), November 1998 (Round 8), October 2000 (Round 9), and October 2001 (Round 10). Data from all rounds have been weighted to ensure comparability.

To date, the RLMS has been carried out in two phases, each following a different nationally representative sample. All aspects of field work in Phase II (the current phase, consisting of Rounds 5-10) have been handled by the Institute of Sociology, Russian Academy of Sciences, headed by Drs. Polina Kozyreva and Mikhail Kosolapov, along with the late Dr. Michael Swafford of Paragon Research International. The Institute of Nutrition, Russian Academy of Medical Sciences, headed by Drs. Alexander Baturin and Arseni Martinchik, has coordinated, collected, and processed health and diet data.

Data collection for Phase I (Rounds 1-4) was implemented by the Russian State Statistical Bureau (Goskomstat), with Alexander Ivanov and Igor Dmitrichev as co-directors. Assistance was provided by the Russian Center for Preventive Medicine, led by Drs. Alexander Deev and Svetlana Shalnova. The Russian Institute of Sociology, especially Drs. Kozyreva and Kosolapov, and Dr. Swafford of Paragon Research also provided detailed assistance in Phase I.

Funding for the RLMS has been provided by the United States Agency for International Development, the National Institutes of Health (Grant # RO1HD30880), the National Science Foundation (Grant # SES92-23326), the World Bank, the Swedish Ministry of Foreign Affairs (through the Stockholm Institute of Transition Economics), and the University of North Carolina at Chapel Hill.

The University of North Carolina team coordinating all phases of the RLMS includes Barry Popkin, Principal Investigator, and co-investigators Namvar Zohoori, Barbara Entwisle, Thomas Mroz, and Lenore Arab.

This document may be referenced as:

Zohoori, N., K. Gleiter, and B. Popkin. "Monitoring Health Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey 1992-2001." Report submitted to the U.S. Agency for International Development. Carolina Population Center, University of North Carolina at Chapel Hill, North Carolina. April 2002.

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Access to RLMS data is provided, as datasets become available to the public, at <http://www.cpc.unc.edu/rlms> (the RLMS home page on the World Wide Web).

Monitoring Health Conditions in the Russian Federation

The Russia Longitudinal Monitoring Survey 1992-2001

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took the lead in the preparation of this report, with assistance from
Karin Gleiter and Barry Popkin*

Part 1. Overview of Key Findings

- The steady decline in the prevalence of drinking that was seen between 1992 and 1998 is now reversing, with increases in prevalence since October 2000. Among teenagers, there was a 35% increase between 2000 and 2001.
- The mean quantity of alcohol consumed by drinkers was higher for adult women and teenagers in 2001 than in 2000, for women reaching the highest level since the RLMS began in 1992.
- The mean quantity of alcohol consumed by the heaviest drinkers (top 20%) in each group is three to four times the respective group mean.
- Adult male drinkers are still consuming greater amounts of alcohol than they did in 1992.
- Smoking prevalence among men is at its highest level (63.5%) since the start of the RLMS in 1992.
- Smoking prevalence among women has steadily risen, by 95% since 1992. The quantity smoked by women smokers has increased steadily since 1994, and quantity is up slightly for adult men and teenagers also.
- Among teenagers, there was an increase in smoking prevalence in 2001 (16.1%), reversing the declining trend of the prior six years.
- Over 90% of respondents are covered by some sort of medical insurance.
- About 56% of those seeking medical attention report paying “unofficial” money or gifts.
- Just over 1% of respondents report having had a diagnosis of tuberculosis.
- Commercial pharmacies continue to gain prominence as an important source of medications (31% in urban areas).
- Since 1994, lack of money has emerged as clearly the number one reason for the inability to obtain prescribed medications, although there was a slight decline in 2001.
- Dietary fat consumption, which had steadily and consistently decreased between 1992 and 1998 in all age groups, has been increasing since October 2000. Among the elderly the percentage of calories from fat is still below 30%.
- Protein intake, which was also showing a slow decrease, is now fairly stable.
- Between October 2000 and October 2001, prevalence of wasting (acute malnutrition) declined considerably among 0-24-month-olds, but doubled among older children.
- Among young adults, the prevalence of underweight steadily increased between 1992 and 2000, but was stable in 2001.
- Among the middle-aged and the elderly, there has been a steady increase in the prevalence of obesity. In the elderly, gross obesity increased by 45% between 1992 and 2001.
- There is great improvement in childhood immunization at all income levels. Between 98% and 100% of all children up to age 6 are now reported to have had some form of vaccination.
- In October 2001, 15% to 51% of children under two years of age had not received at least one of the vaccines specifically recommended to be administered during the first year of life.

Part 2. Discussion of Results

Drinking and Smoking

High levels of alcohol consumption in Russia have traditionally been, and continue to be, a matter of great concern. The RLMS provides information on intake levels since 1992.¹

Figures 1a and 1b present data on the prevalence and level of individual alcohol consumption

among adult men and women, and also among teenagers. (Due to the relatively small number of teenagers, aged 14 to 18, it is not useful to subdivide them by gender.) For the purposes of this report, a person was considered a drinker if there was any evidence in the data that he/she drank alcoholic beverages.

Figure 1a. Drinking Adults (18+) and Teenagers

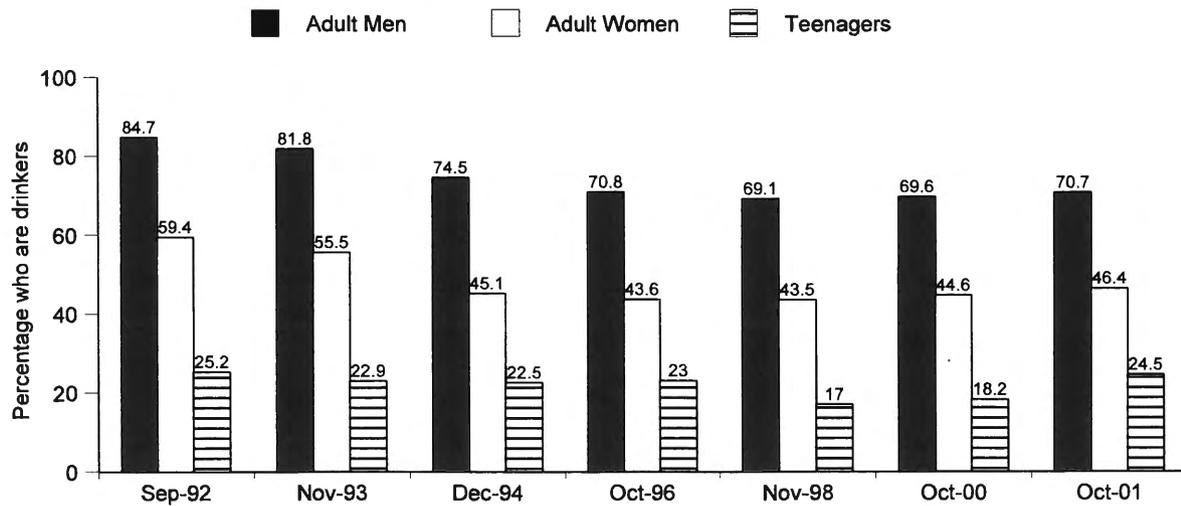
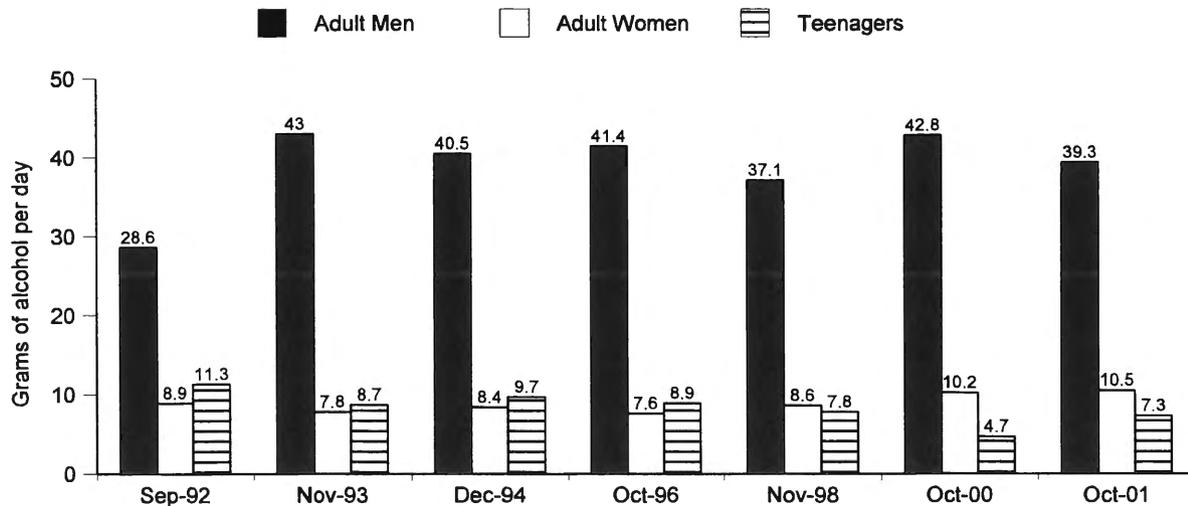


Figure 1b. Mean Daily Amount of Alcohol Consumption (for drinkers)



Between 1992 and 1998, there were steady decreases in the proportions of the adult population and of teenagers who were drinkers (from 84.7% to 69.1% for adult men, from 59.4% to 43.5% for adult women, and from 25.2% to 17% for teenagers), as seen in Figure 1a. However, the slight upward trend indicated in 2000 has continued in 2001, where prevalence figures are 70.7%, 46.4% and 24.5% for men, women, and teenagers, respectively. This is a 35% increase among teenagers over 2000. The mean daily amount of alcohol consumed by drinkers was higher for women and teenagers in 2001 than in 2000 (Figure 1b), being at the highest level for women since the RLMS began in 1992. These trends in consumption are corroborated by spending patterns over the past few years: whereas expenditures on alcohol declined steadily between 1992 and 1998, there was a steady

increase between 1998 and 2001 (see the companion report, "Monitoring Economic Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey 1992-2001"). These economic trends and the reversal of the decline in consumption over the past few years are noteworthy and should be monitored closely.

Figure 1c presents annual per capita alcohol consumption for all adult men, all adult women, and all teenagers.² The patterns are similar to those in Figure 1b: maximum per capita consumption for men was reached in 1994, with about 17 liters per year. For October 2001, annual per capita consumption figures are 12.9, 2.3, and 0.8 liters among men, women, and teenagers, respectively.

Figure 1c. Annual Per Capita Alcohol Consumption

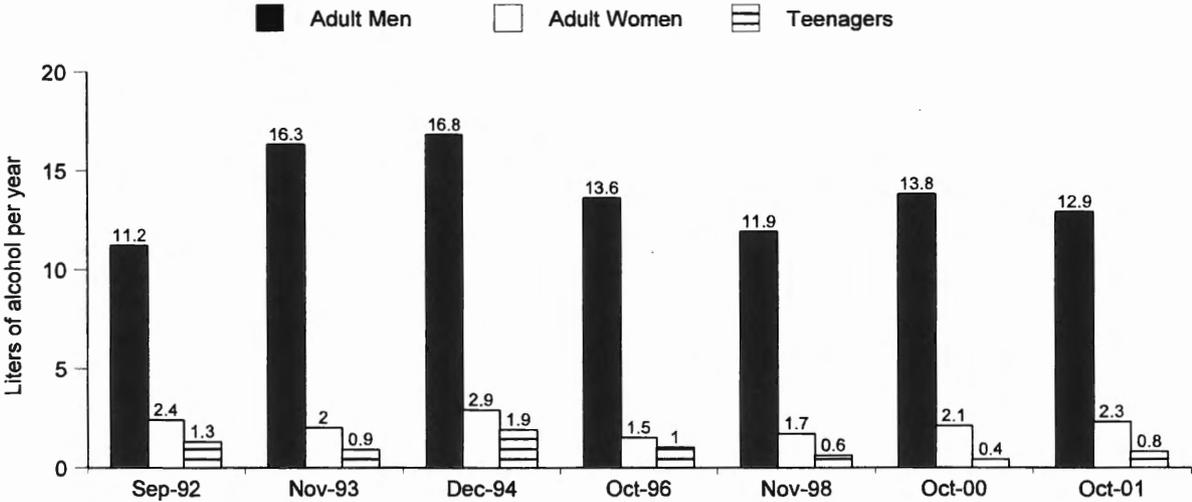
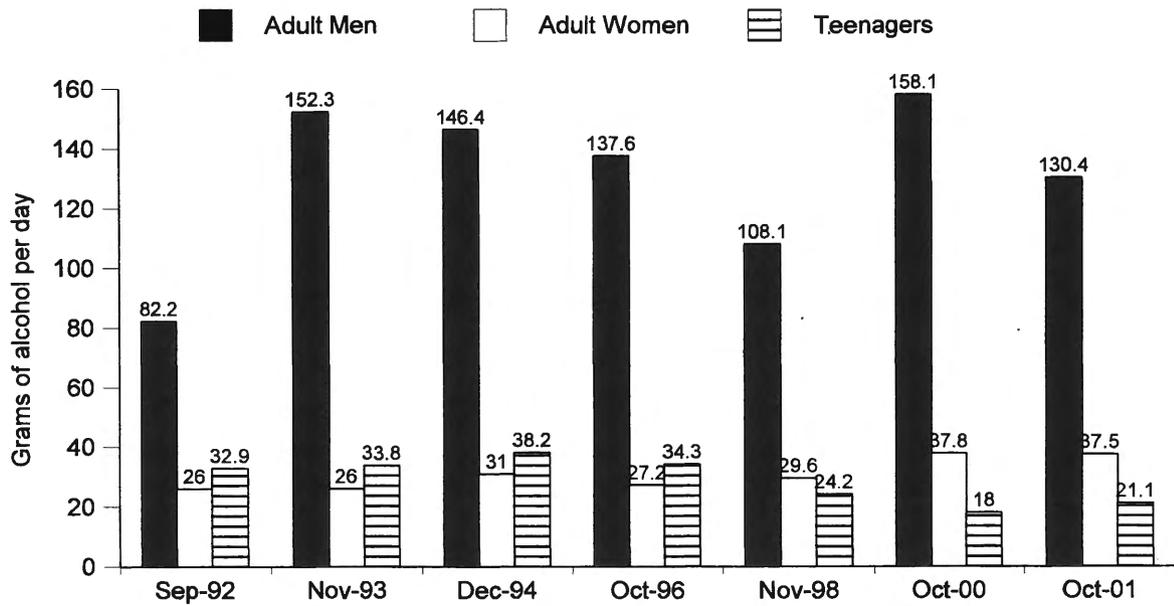


Figure 1d shows the mean daily amount of alcohol consumption for the 20% of drinkers who drink the most among adult men, adult women, and teenagers. The patterns over time are very similar to those in Figure 1b. However, it is important to note the several-fold higher levels of consumption among these heavy drinkers. While the overall mean daily alcohol consumption among men who are drinkers in 2001 was about 39 grams, the

mean consumption for the top quintile was 130 grams. Corresponding figures for women are 10.5 grams (overall mean) versus 37.5 grams (top quintile), and for teenagers 7.3 grams (overall mean) versus 21.1 (top quintile). These figures point to subsets of the drinking population that are at considerable risk.

Figure 1d. Mean Daily Amount of Alcohol Consumption for the Heaviest 20% of Drinkers



Figures 2a and 2b show the prevalence and extent of smoking. In October 2001, smoking prevalence among men was at the highest level (63.5%) since the start of the RLMS in 1992. There has also been a steady increase in the prevalence of smoking among women, from 7.3% in 1992 to 14.2% in 2001—a 95% increase over a nine-year

period. Among teenagers, there was an increase in prevalence in 2001 (16.1%), reversing the declining trend of the prior six years. Figure 2b indicates that there has also been an increase in the number of cigarettes smoked by both adult women and teenagers.

Figure 2a. Smoking Adults (18+) and Teenagers

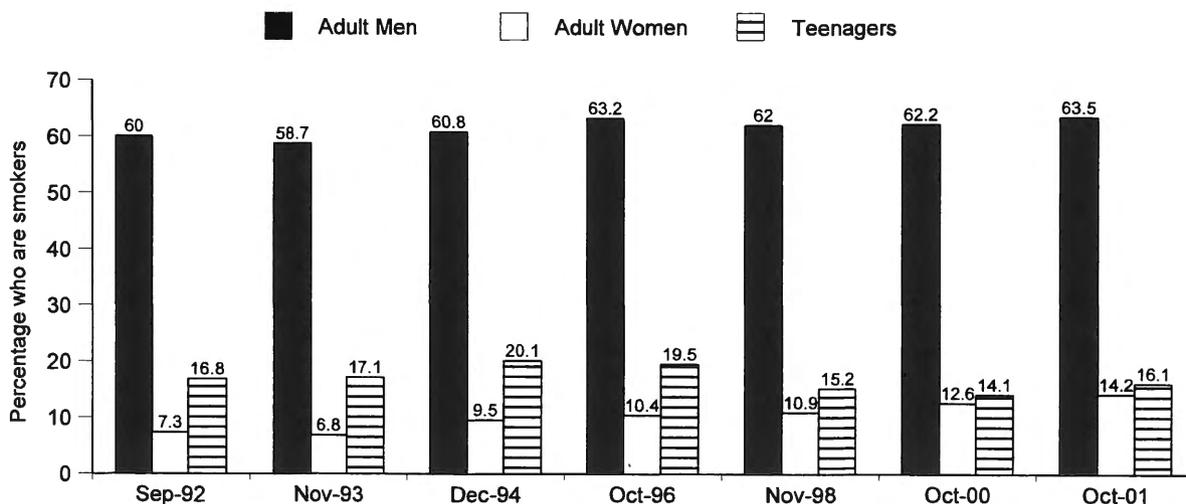
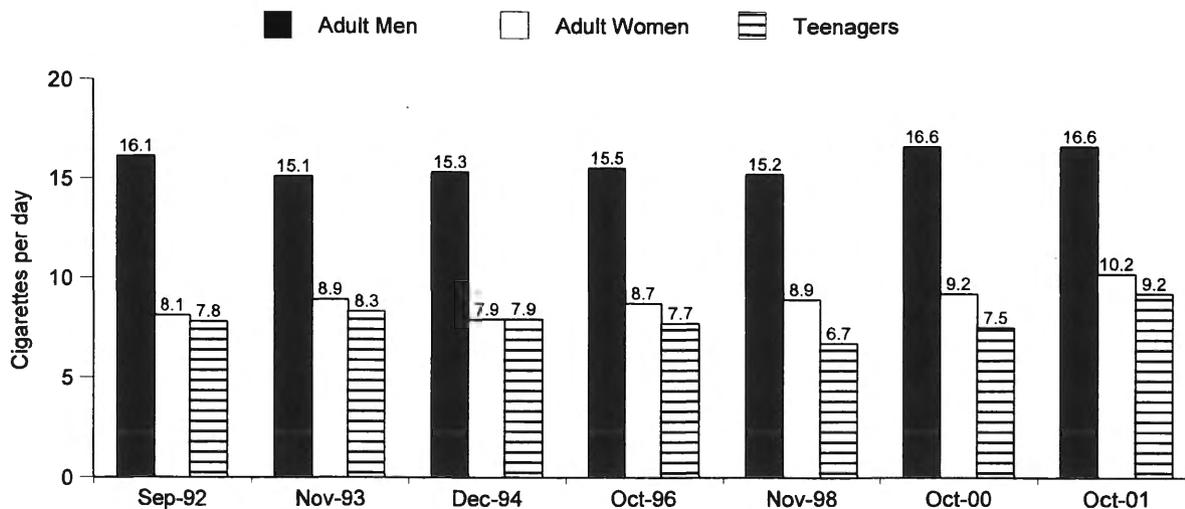


Figure 2b. Mean Daily Number of Cigarettes Smoked (for cigarette smokers)



Health Insurance, Medical Problems, Health-Services Use, and Hospitalization

Beginning in 1993, information on medical problems and the use of health services for these problems has been collected for the 30-day period preceding the survey.³ In 2000, questions were added about out-of-pocket health-related expenses and types of health insurance.

Respondents are asked if they have any compulsory health insurance, and also if they have any supplemental voluntary health insurance. In 2001, 91.3 (87.7% in 2000) reported having

compulsory insurance, and 2.9% (1.9% in 2000) reported having supplemental insurance. Of those with supplemental insurance, 18.3% (19.5% in 2000) reported paying for it themselves, at annual amounts of up to 3,000 rubles (5,000 rubles in 2000).

Generally, more women than men report a recent medical problem (Figure 3a), but a slightly higher proportion of men with illnesses seek medical help (Figure 3b). There appears to be a trend over the past three years of increasing prevalence of self-reported medical problems, particularly among men, which should be monitored in the near future.

Figure 3a. Prevalence of Self-Reported Medical Problems

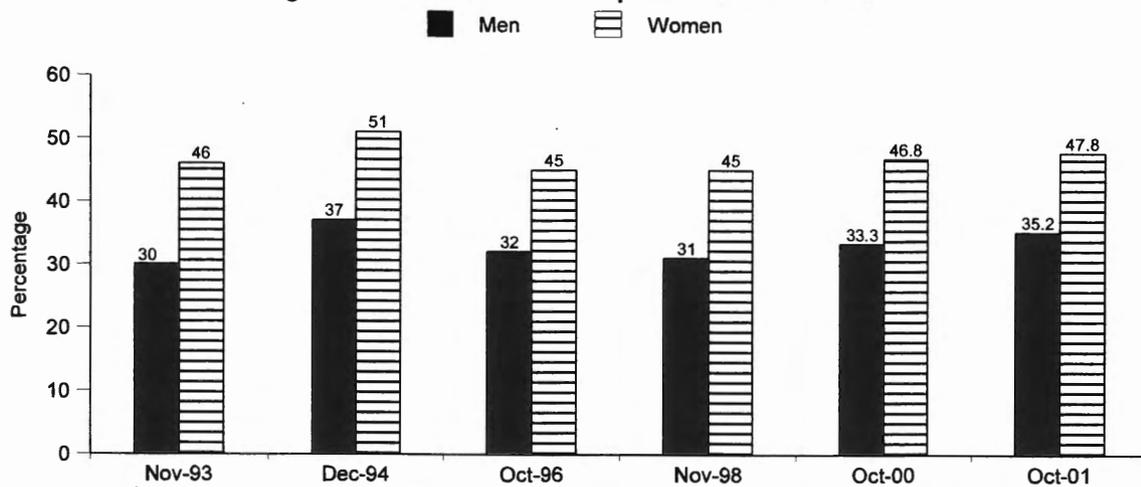
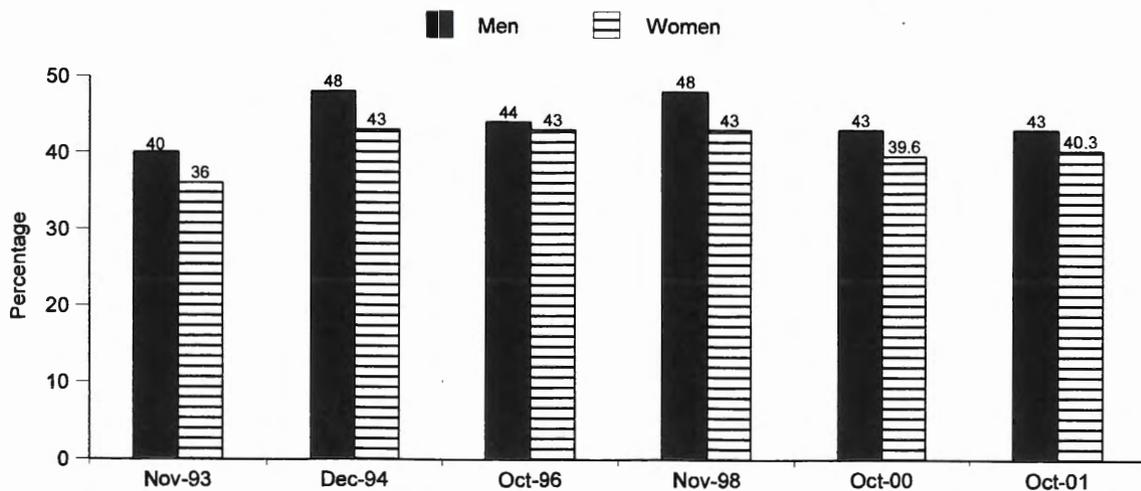


Figure 3b. Percentage of Those with Medical Problems Who Used Medical Services



In 2000 and 2001 the RLMS collected data about the types of medical-care payments. Here we report the 2001 data (*with 2000 figures italicized and in parentheses for comparison*). Of those who sought medical help, about 10.1% (8.5%) reported paying for it. Of these, 49.7% (53.2%) paid "officially in the cashier's office," in amounts ranging from 2 to 3,000 (2 to 5,000) rubles, and 55.8% (51%) paid "money or gifts to the medical personnel," with reported amounts ranging from 10 to 3,000 (12 to 2,000) rubles. Also, among those who sought medical help, 39.2% (41.1%) reported undergoing "additional tests or procedures." Of these 21.0% (16.7%) paid for

tests or procedures, of whom 75.2% (68.1%) paid "officially," in amounts ranging from 0.5 to 2,000 (2 to 3,400) rubles, and 29.7% (38.6%) paid "unofficially," in amounts ranging from 0.4 to 4,000 (1 to 4,500) rubles.

Figures 4a and 4b present data on the prevalence of hospitalization among all respondents and the mean number of days of hospitalization among those who were hospitalized. The numbers for 2001 are almost identical to those for 2000. Trends over time are not indicated.

Figure 4a. Percentage Hospitalized (within 30 days prior to the survey)

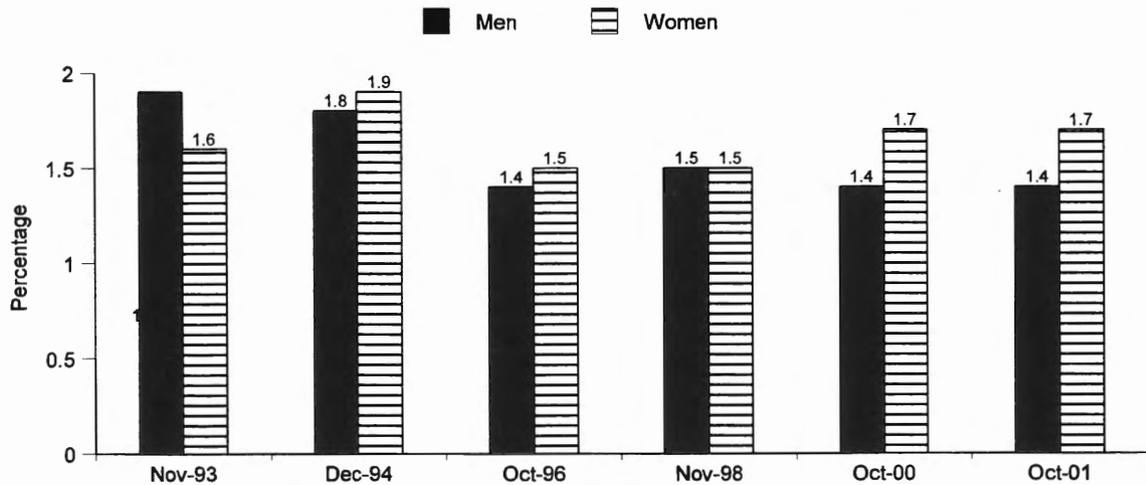
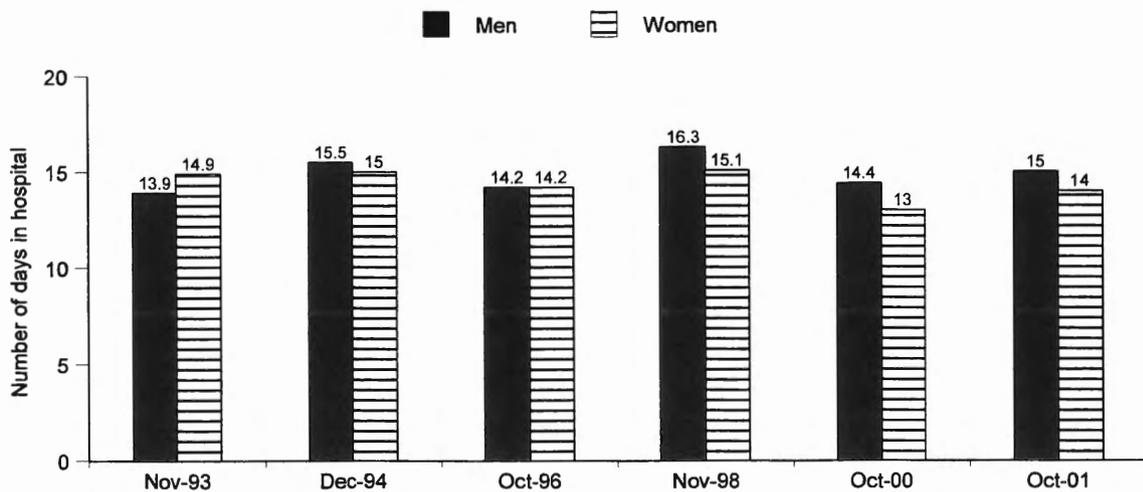


Figure 4b. Mean Length of Hospitalization (in days)



Among those who were hospitalized, about 15.4% (13.9%) reported paying for the hospital stay. Of these, 65.3% (43.2%) paid "officially in the cashier's office," in amounts ranging from 5 to 20,000 (10 to 50,000) rubles, and 51.3% (46.4%) paid "money or gifts to the medical personnel," in amounts ranging from 26 to 7,000 (5 to 5,000) rubles. Also, among those who were hospitalized, 49.6% (12.4%) reported paying for "medicines, syringes, and dressing materials." Of these, 45.8% (50%) paid "officially," in amounts ranging from 4.6 to 8,500 (60 to 1,500) rubles, and 9.4% (7.4%) paid "unofficially." It should be noted, however, that the numbers who responded to the questions reported in this paragraph were fairly small (fewer than 70).

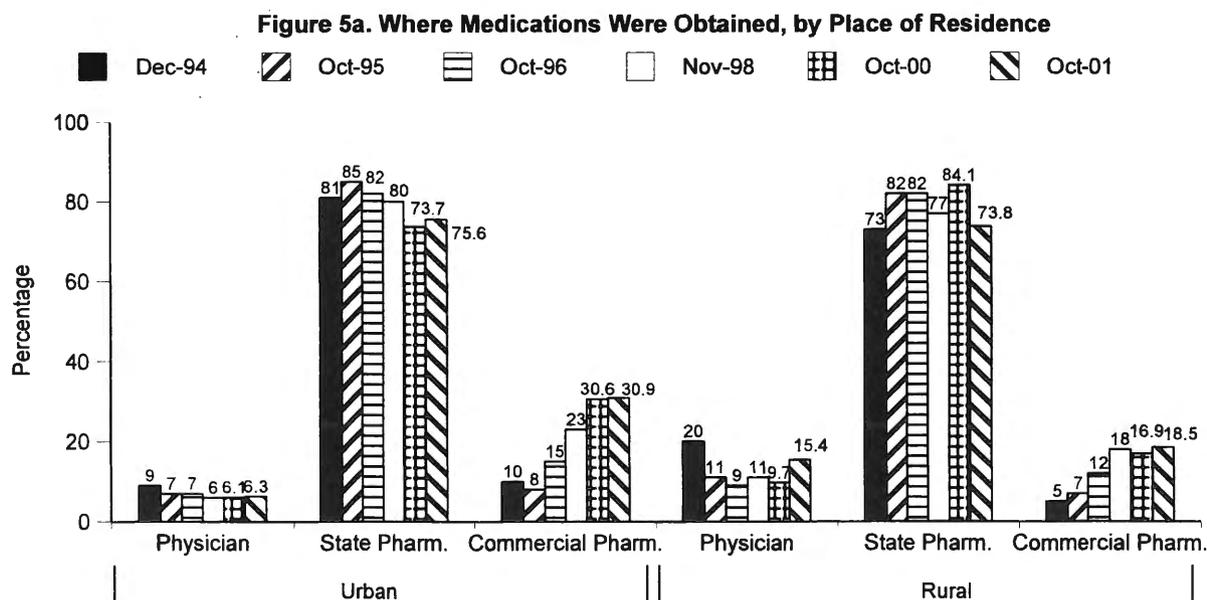
Finally, due to a perceived increasing prevalence of tuberculosis (TB) in Russia, in the 2000 and 2001 surveys respondents were asked if they had ever been told by a doctor that they had TB. Of the almost 11,000 respondents in 2001, 1.1% (106 persons) reported such a diagnosis, of which about 47% were made since 1991. These figures are almost identical to those in 2000.

Drug Availability and Costs

In the six latest rounds of the RLMS (1994 to

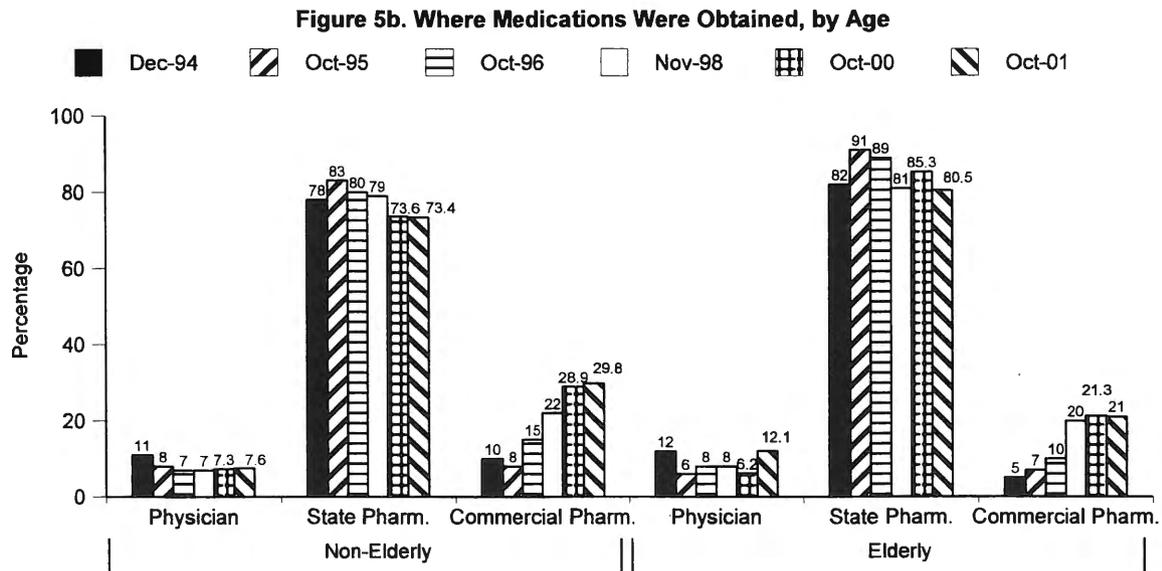
2001), a series of questions investigated respondents' ability to obtain medications prescribed by health workers. Respondents reported where these medications were obtained and, if they could not be obtained, the reasons why.

In 2000, overall, 78% of respondents who received prescriptions were able to get all or some of the medications; in 2001, the figure was 93%. In both rural and urban areas, state pharmacies remain the predominant source of medications (Figure 5a), but commercial pharmacies are gaining ground. Between 1994 and 2001, commercial pharmacies, as a source of medications, have increased from 10% to 30.9% in urban areas, and from 5% to 18.5% in rural areas. In rural areas, but not in urban areas, there was a jump in the proportion of respondents who received medications directly from physicians and a corresponding decline in the use of state pharmacies. This may be due to improving economic circumstances (see the companion report, "Monitoring Economic Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey 1992-2001") and is something the RLMS will continue to monitor.



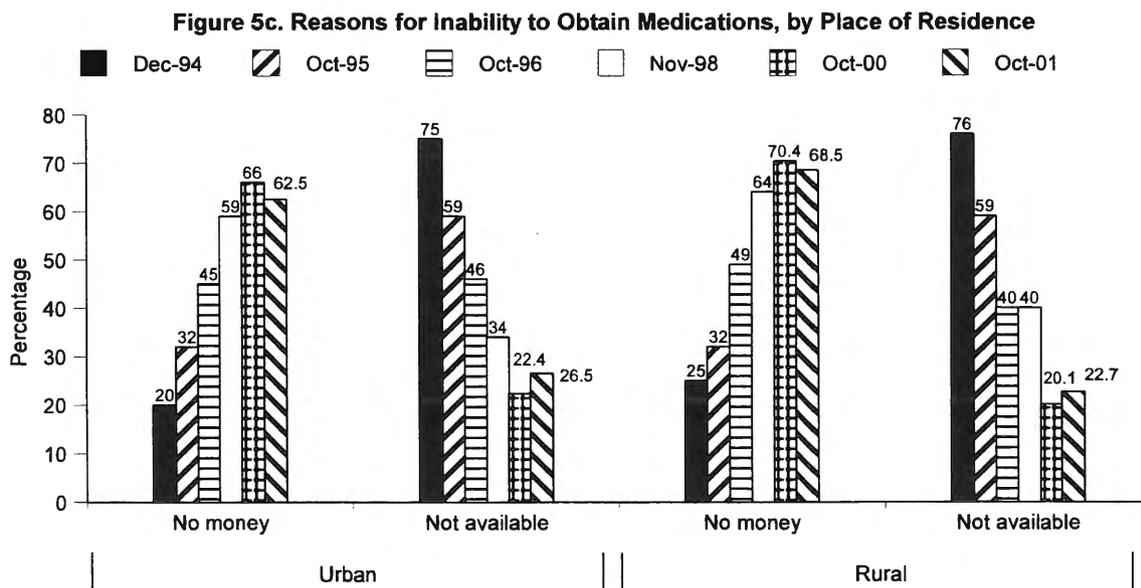
Due to interest in the conditions of the elderly, Figure 5b presents the same drug availability information reported in 5a but separates the elderly (60 years and older) from the non-elderly. The purchasing pattern of the elderly does not

differ much from that of the general population; the majority received their medications from state pharmacies, but increasing proportions are using commercial pharmacies.



Among respondents unable to fill prescriptions, the two reasons most often cited are unavailability of the drug and lack of money. Over the past few years, however, lack of money has emerged as the

major reason in both urban and rural areas (Figure 5c). Concomitant with this increase has been a decrease in drug unavailability as the primary reason.

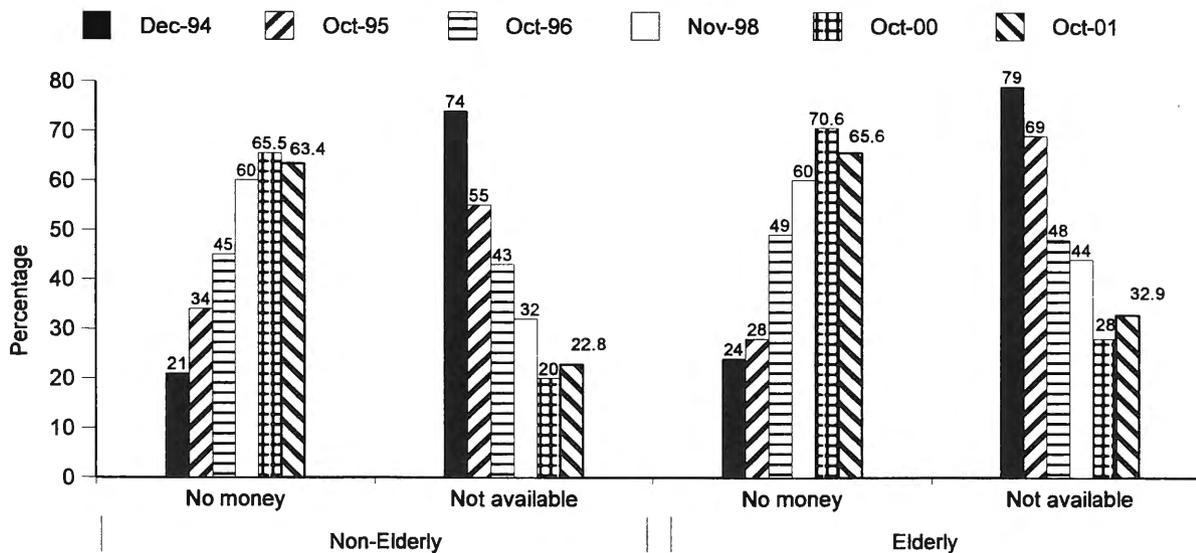


It must be noted that this latter decline is not necessarily due to an increased availability of drugs. All that can be reported is that more respondents are citing lack of money as the primary reason for not obtaining medications. In 2001, however, there appears to be a slight reversal of these shifts, which may be due to improving economic conditions.

In 2001, of the 1,640 (1,456 in 2000) respondents who received prescriptions and were able to obtain some or all of their medications, about 70% (15%) were entitled to a full discount. The others reported paying amounts ranging from 6 to 850 (1 to 10,000) rubles. The median amount paid was about 90 (95) rubles.

The inability of the elderly to obtain medications follows a similar pattern, with lack of money the reason most often cited (Figure 5d). Shifts in 2001 are also similar. The elderly report both unavailability of drugs and lack of money more often than do the non-elderly. It may be that some types of medications prescribed for the elderly are less available than are those prescribed for younger people. Also, in the RLMS there is a somewhat greater proportion of elderly in rural areas. Hence, the reason that more elderly find drugs unavailable may be due to the fact that more elderly live in rural areas where drugs are less readily available.

Figure 5d. Reasons for Inability to Obtain Medications, by Age



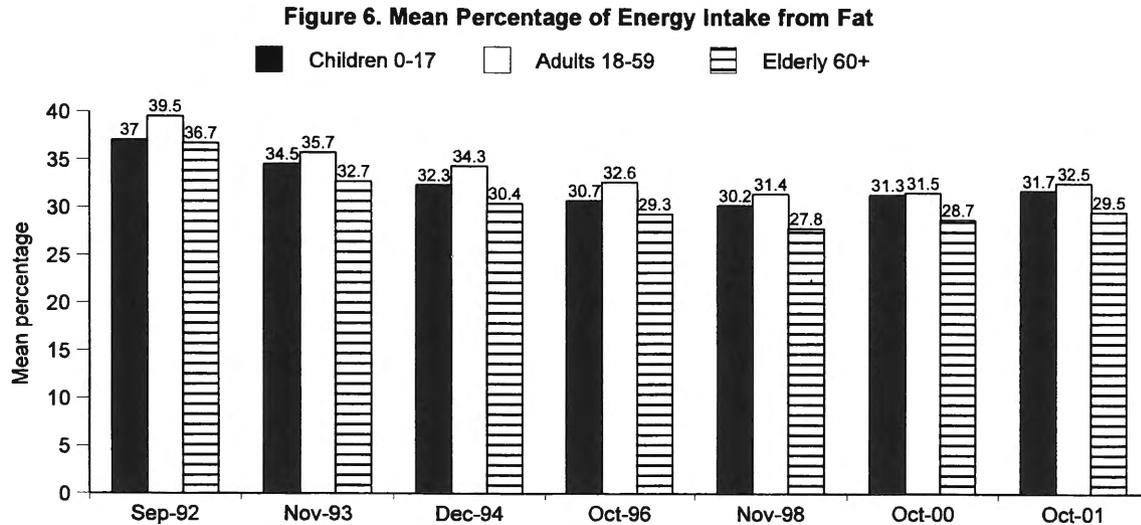
Although one might propose disability as another cause of reduced access among the elderly, only 12 people named it in 2001. Similarly low numbers have done so in each year since the answer choice “disability” was added in 1995. It is not disability that is preventing the elderly from going to the pharmacy and obtaining medications.

Composition of Diet

The RLMS contains detailed information on dietary intake collected with a 24-hour dietary recall. Herein, we present data on fat and protein. Fat intake in Russia has historically been much higher than the recommended level of 30% of total energy intake. This has been of great concern since it has serious implications for a number of

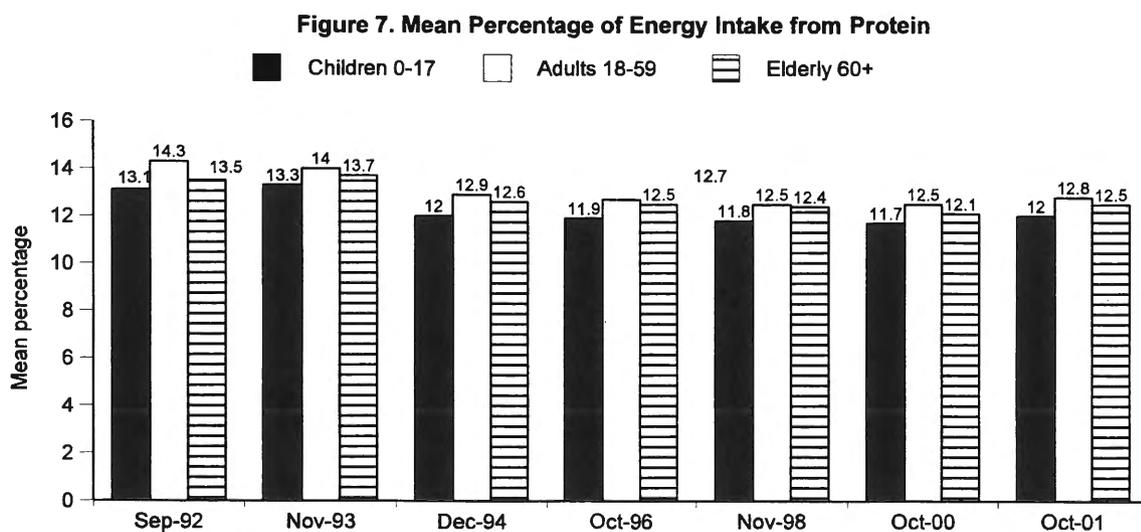
chronic diseases. For all age groups, we saw a steady decline in the percentage of energy from fat between September 1992 and November 1998 (Figure 6). However, beginning in October 2000

and continuing in 2001, a reversal of this trend has appeared, with the percentage of energy from fat increasing for all age groups.



Among the elderly, the percentage of energy from fat declined from 36.7% in 1992 to 27.8% in 2000, but increased again to 29.5% in 2001. There are similar trends in fat consumption among adults and children. Also, as shown in Figure 7, there was a persistent but much slower decline in the percentage of energy from protein between 1992

and 2000. For adults, energy from protein declined from 14.3% in September 1992 to 12.5% in October 2000. The corresponding decline for the elderly was from 13.5% to 12.1%, and for children from 13.1% to 11.7%. However, for all age groups, percentages increased slightly in 2001.



These dietary intake shifts are indicative of important changes in Russian food-purchasing patterns and diets (see “Nutritional Status,” below, and also the companion report, “Monitoring Economic Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey 1992-2001”). The shifts result from a combination of socioeconomic, market availability, and personal factors. It should be noted that these dietary changes, while perhaps desirable to some extent in some population groups, are approaching levels at which they may impact vulnerable groups unfavorably. However, RLMS data indicate relatively stable levels over the past few years.

Nutritional Status

Figures 8a and 8b present data on the nutritional status of children (height and weight are measured for all respondents). They show a mixed picture. Of particular concern in previous rounds was an increase in the prevalence of stunting (an indicator of chronic malnutrition) among children two years old and younger.⁴ Between September 1992 and December 1994 there was a 26% increase in stunting in this age group (from 11.8% to 14.9%,

as shown in Figure 8a). Between 1994 and 1996 there was a decline to 8%. In the past five years, however, the prevalence of stunting in this group has been higher again, with levels of 12.4%, 10.5%, and 10.2% in 1998, 2000, and 2001. The prevalence of stunting among two- to six-year-olds has followed a similar trend (Figure 8b), with a sharp increase in October 2000 (10.5%). This prevalence declined somewhat in 2001, to 7.2%. Wasting (a measure of acute malnutrition) also presents a mixed picture. Among 0- to 24-month-olds, prevalence of wasting is at its lowest level since 1992: 2.2%. However, the declining trend of wasting among older children (Figure 8b) was interrupted in 2001 when the prevalence rose to 6.6%. It should be noted that children’s nutritional status is quite sensitive to socioeconomic factors. Despite income increases since 1998, incomes during the fall of 2001 were still 17% below their levels in the fall of 1992; and, while total household expenditures rose by 33% from 1998 to 2001, average real food expenditures in 2001 were only 61% of their 1994 level (see the companion report, “Monitoring Economic Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey 1992-2001”).

Figure 8a. Children's Nutritional Status (0-24 months)

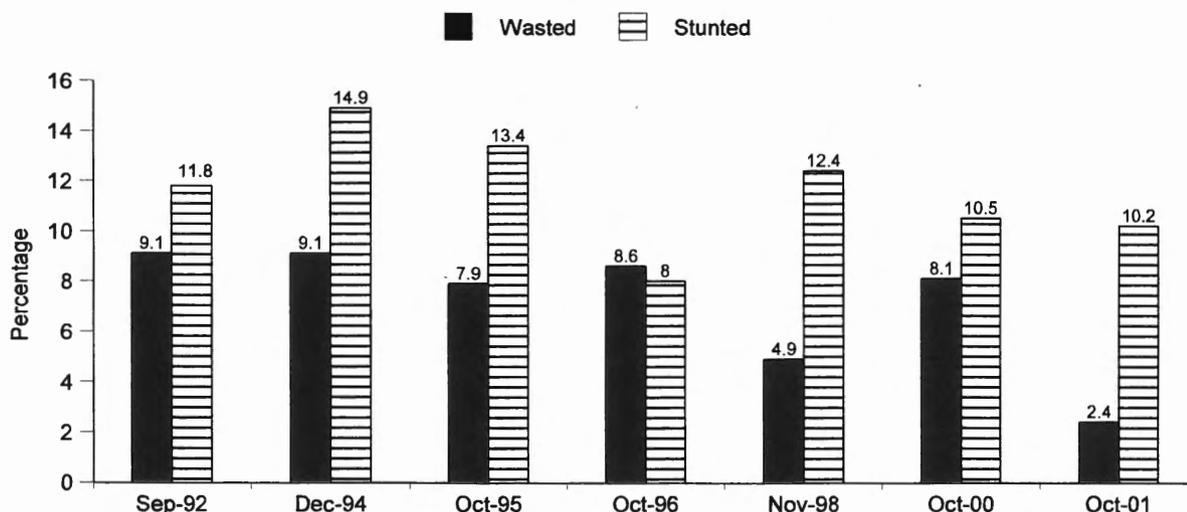
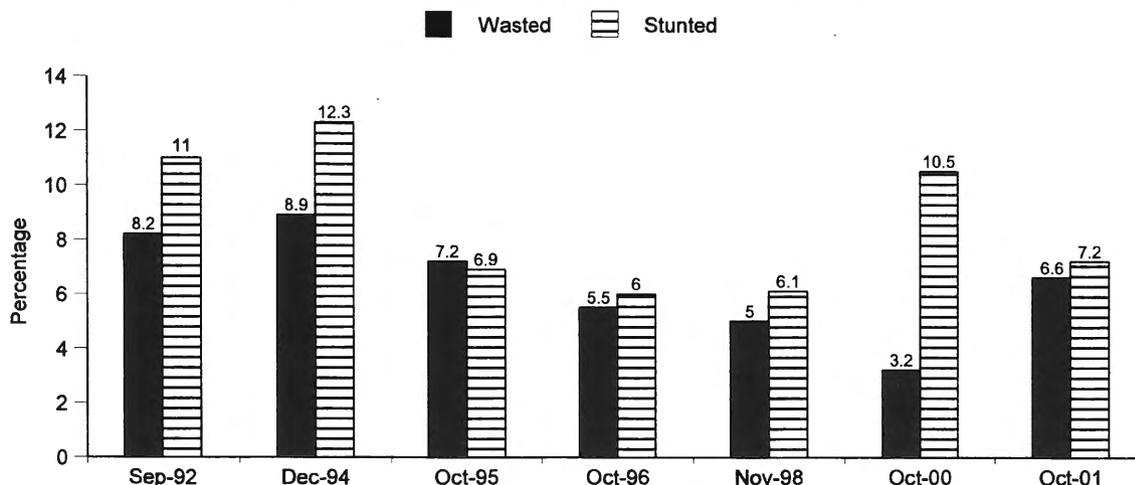


Figure 8b. Children's Nutritional Status (25 months-6 years)



The nutritional status of adults varies by age group (Figure 9). Among young adults (18-29 years), the trend of concern has been increasing under-nutrition, which steadily rose between 1992 and 2000 from 4.3% to 7% (a 63% increase). This prevalence is currently stable at 6.8% in 2001. Conversely, among the elderly there has been a steady increase in the proportion who are obese (according to WHO classifications),⁵ from 22.8%

in 1992 to 33.1% in 2001, a 45% increase. These patterns in the two age groups are better understood against what the RLMS reveals about the economic situation of the Russian people and changes in their food expenditures, as outlined in the paragraph above, in addition to the fact that the elderly have traditionally fared better economically than the rest of the population.

Figure 9. Adult Nutritional Status

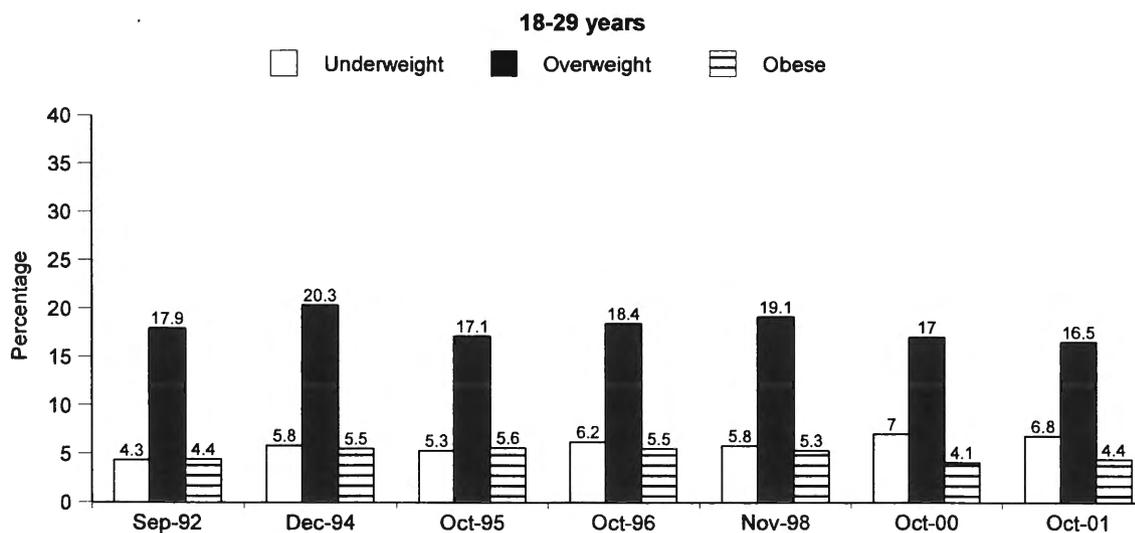
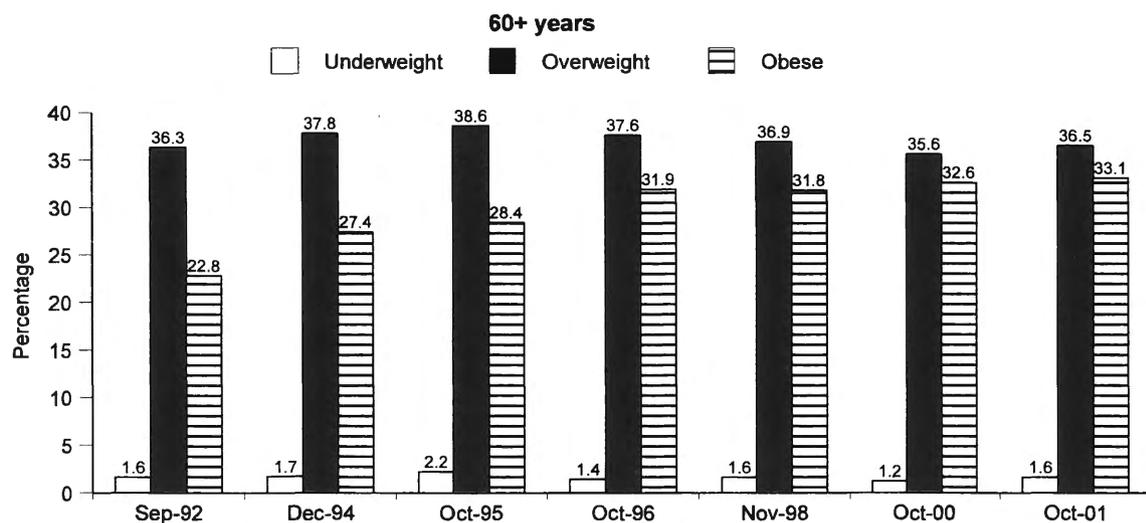
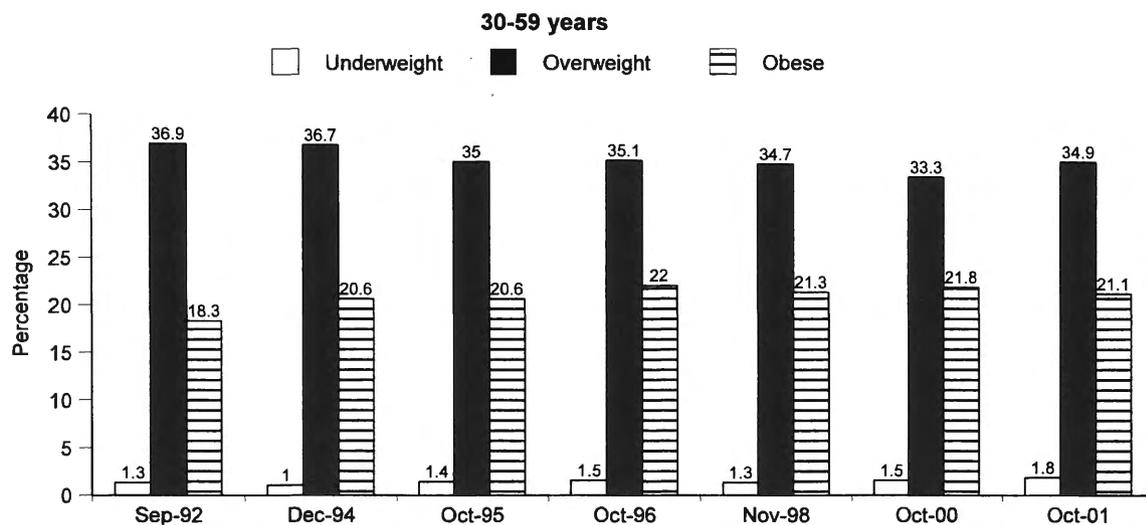


Figure 9. *continued*



Among the middle-aged (30 to 59 years) also there has been a steady shift into the overweight and obese categories. The prevalence of

underweight among both the middle-aged and the elderly remains steadily low.

Childhood Immunizations

Figures 10a, 10b, and 10c present information about childhood immunizations between 1994 and 2001, for children up to six years of age.

The percentages of children who had received any vaccination by the time of these surveys are shown in Figure 10a. The data are displayed both by age group (0 to 24 months and 25 months to 6 years) and by poverty level. In the older group, 99% to 100% of all children, regardless of their household income level (measured as a proportion of the poverty level), have been vaccinated. In the younger group, also, immunization coverage has increased among all income groups, and ranges between 98% and 100%. These changes are probably a reflection of improved socioeconomic conditions.

Figure 10b shows the distribution of places where vaccinations were obtained as of October 2000. (No new information has been added to this figure

for October 2001 due to a clerical error that renders the 2001 data not comparable to data from previous rounds.) The figure will be updated in future versions of this report. As of 2000, for younger children, clinics (poly and children's) were the most common sites for immunization (Figure 10b). For older children, kindergartens assumed a greater share, which may partly explain the higher coverage in this age group.

Another point of concern is coverage by type of vaccine (Figure 10c). In 2001, by the age of two years, between 15% and 51% of children had not received specific vaccines usually called for during the first year of life, including DPT (diphtheria/pertussis/tetanus), polio, and measles. Coverage rates for hepatitis vaccination have improved steadily, from 5% in 1996 to 33% in 2001. Among older children, vaccination coverage is generally greater, with fairly steady levels over the past few years.

Figure 10a. Percentage of Children Ever Vaccinated (by percentage of the poverty line)

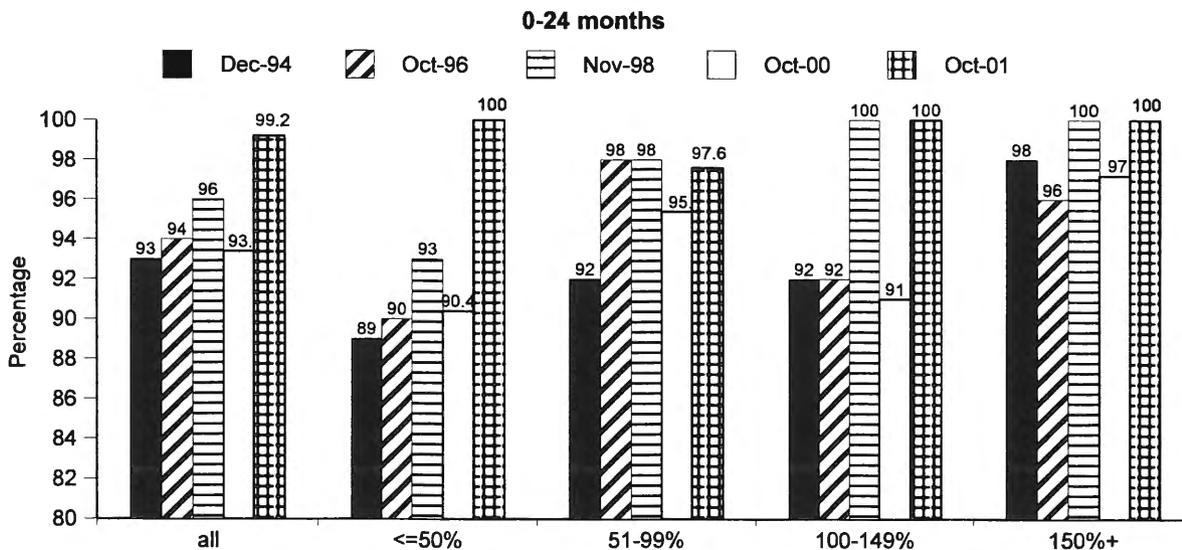


Figure 10a. continued

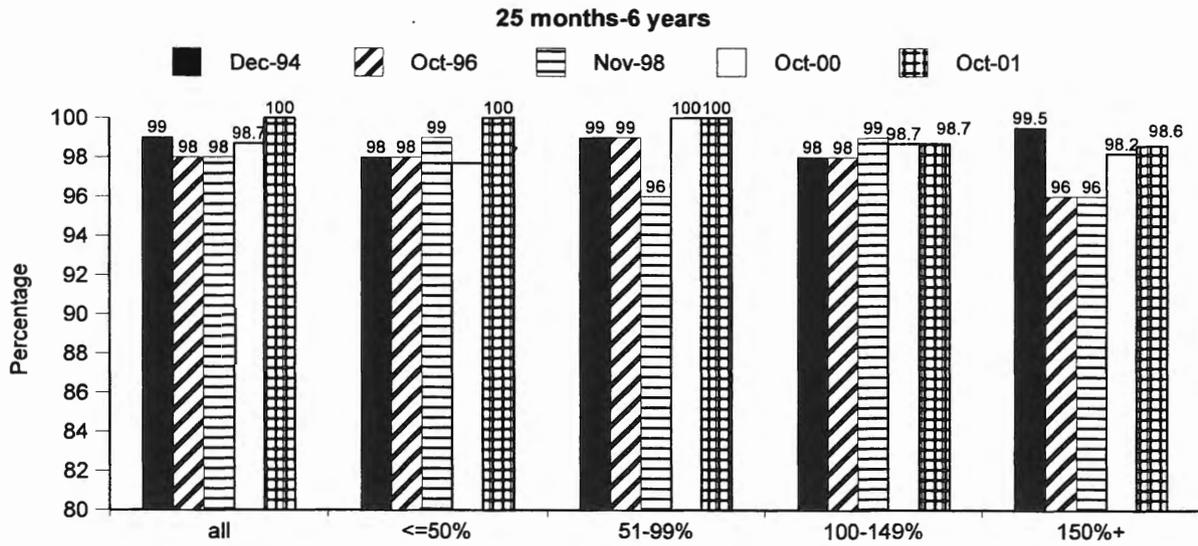


Figure 10b. Places of Vaccinations
(in the three months prior to the survey)

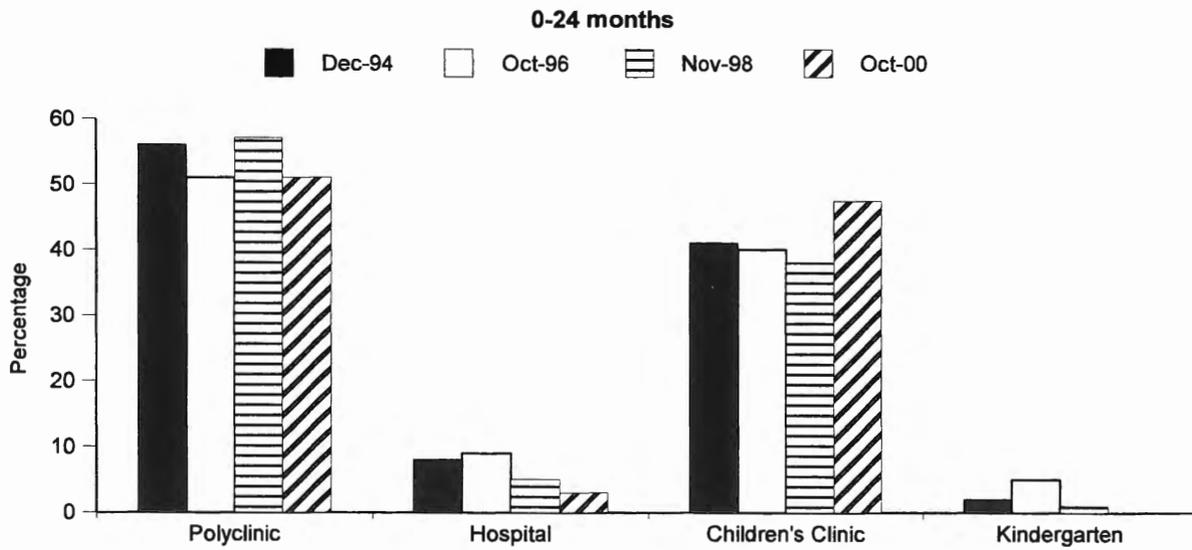


Figure 10b. *continued*

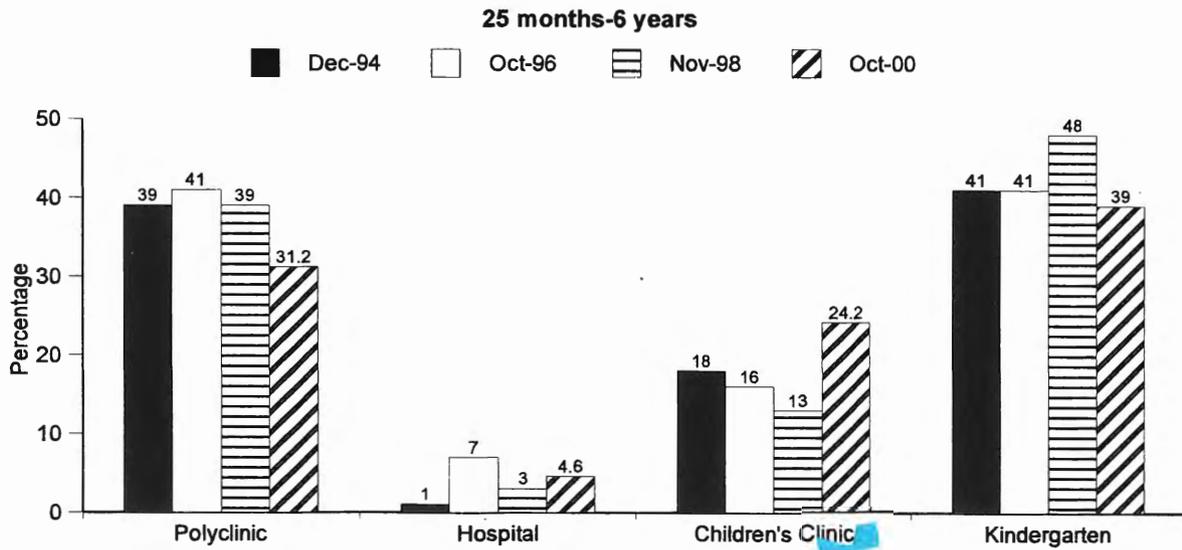


Figure 10c. Types of Vaccines Received, among Those Ever Vaccinated (by age group)

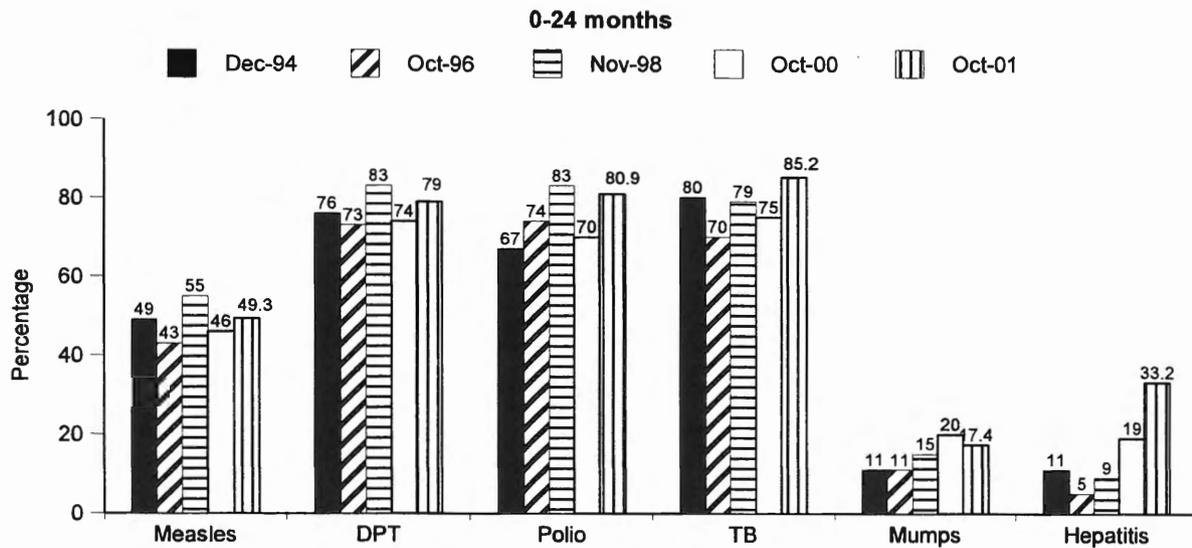
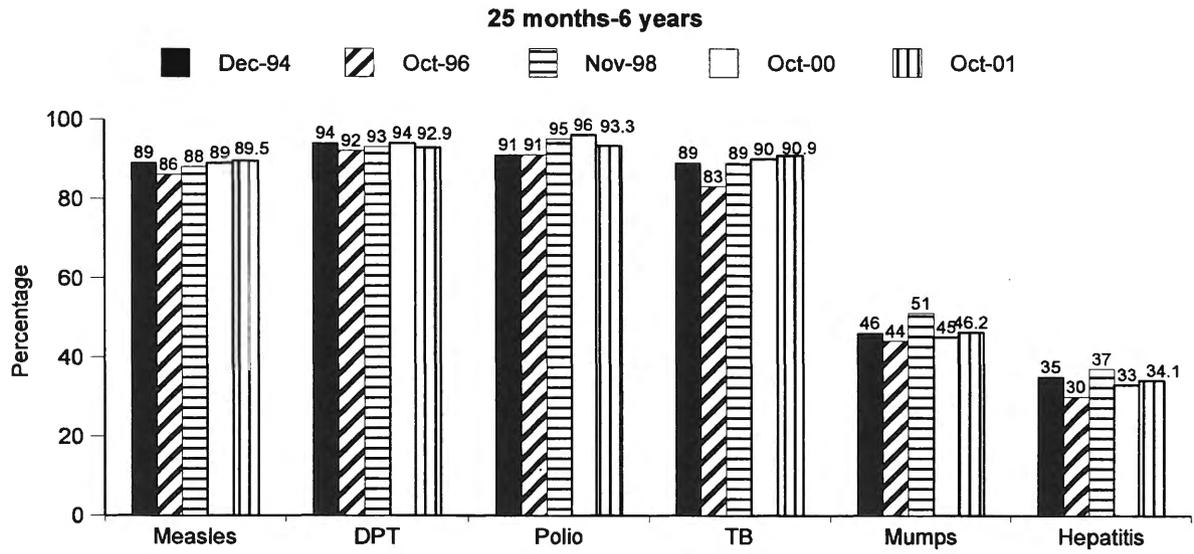


Figure 10c. *continued*



Endnotes

1. Information for the graphs on drinking behavior comes from two sources in the RLMS surveys—the battery of questions on *usual* patterns of drinking in the health section of the adult individual questionnaire and the 24-hour dietary recall data. If the respondent considered him/herself a non-drinker in the drinking section of the questionnaire, but the 24-hour dietary recall included an alcoholic beverage, then that person was counted as a drinker.

The calculations of quantities of alcohol consumed are based on respondents' evaluations of their usual intake of various beverages, and not on the single 24-hour dietary recall.

It should be noted that, in the September 1992 survey, *samagon*, a homemade alcoholic brew, was not included as a separate response category, but was lumped together with “vodka and other strong drinks.” However, in February 1993 and subsequent rounds, *samagon* consumption was asked about specifically.

2. The per capita data on alcohol consumption are meant to be comparable in their construction to those commonly reported, which give annual per capita consumption

for the entire sample population. However, due to the large disparity in alcohol consumption among adult men, adult women, and teenagers, we present per capita data drawn from the RLMS separately for each group.

3. Beginning in December 1994, questions on hospitalization and duration of hospitalization referred to the previous three months, as opposed to 30 days in the previous rounds. For the purposes of Figures 8a and 8b, the prevalence data from this and subsequent rounds were simply divided by 3, and only those with a duration of hospitalization of 30 days or less were used in the calculation of the mean.
4. The numbers for these figures prior to 2000 have changed in this edition of the report. The new numbers are based on new 2000 formulae and standards from the National Center for Health Statistics for the calculation of wasting and stunting.
5. The division of adults and elderly into various weight groups is based on Body Mass Index categories recommended by WHO: <18.6 (chronic energy deficiency), 18.6-25 (normal), 25.1-30 (overweight), and >30 (obese).

