

Monitoring Health Conditions in the Russian Federation

*The Russia
Longitudinal Monitoring Survey
1992-2000*

March 2001

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 implemented between 1992 and 2000. This report is based on surveys 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) and October 2000 (Round 9). Data from all rounds have been weighted to ensure comparability of the information presented herein.

To date, the RLMS has been carried out in two phases, each of which has followed a different nationally representative sample of the Russian population. All aspects of field work in Phase II (the current phase, consisting of Rounds 5-9) were handled by the Institute of Sociology, Russian Academy of Sciences, headed by Drs. Polina Kozyreva and Mikhail Kosolapov, along with Dr. Michael Swafford, Paragon Research International. The Institute of Nutrition, Russian Academy of Medical Sciences, headed by Drs. Alexander Baturin and Arseni Martinchik, coordinated and carried out the collection and processing of 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 co-directing this effort. 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. Polina Kozyreva and Mikhail Kosolapov, and Dr. Michael Swafford of Paragon Research International 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 that has coordinated 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 1992-2000." Report submitted to the U.S. Agency for International Development. Carolina Population Center, University of North Carolina at Chapel Hill, North Carolina. March 2001.

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Access to RLMS data is being provided, as data sets 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 1992-2000

Namvar Zohoori

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Karin Gleiter and Barry Popkin*

Part 1. Overview of Key Findings

- Since 1992 there has been a steady decline in the prevalence of drinking, although 2000 results indicate a slight increase.
- The quantity of alcohol consumed by drinkers has been declining since its peak in 1993, again with a slight increase in 2000.
- Adult male drinkers are still consuming greater amounts of alcohol than they did in 1992.
- Smoking prevalence among females has steadily risen, by 85% since 1993. The quantity smoked by female smokers has also increased steadily since 1994, and is also up slightly for adult males and teenagers.
- There is a continuing decline in teenage smoking prevalence since its peak in 1995, when one-quarter of teenagers were smokers. In 2000, teenage smoking was at its lowest level since 1992.
- Close to 90% of respondents are covered by some sort of medical insurance.
- About one-half 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 are gaining prominence as an important source of medications (30% in urban areas).
- Since 1994, lack of money has emerged as clearly the number one reason for the inability to obtain prescribed medications, with almost 70% of respondents citing it as the primary reason for not being able to get medications in October 2000 (an increase of 6-7 percentage points since 1998).
- Dietary fat consumption which had steadily and consistently decreased between 1992 and 1998 in all age groups, showed a slight increase in 2000. Among the elderly the percentage of calories from fat is still below 30%.
- Protein intake has also continually declined since 1992, although at a very slow pace.
- Among young adults, the prevalence of under-weight has steadily increased, by 63% between 1992 and 2000.
- Among the middle-aged and the elderly, there has been a steady increase in the prevalence of obesity. In the elderly, gross obesity has increased by 43% between 1992 and 2000.
- There now appears to be a reversal of the declining trend in childhood malnutrition that was seen in earlier rounds. In October 2000, about 10% of all children under 6 years were chronically malnourished.
- There are notable differences in childhood immunizations among different income levels, with younger children in poorer households less likely to be immunized. Coverage rates for all income groups were lower in 2000 than in 1998.
- In October 2000, 25% to 55% of children under two years old had not received specific vaccines 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 a matter of great concern. The RLMS data provide information on intake levels since 1992.¹

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

respectively. Data are presented for adult males and females, as well as for teenagers (due to the relatively small number of teenagers, ages 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

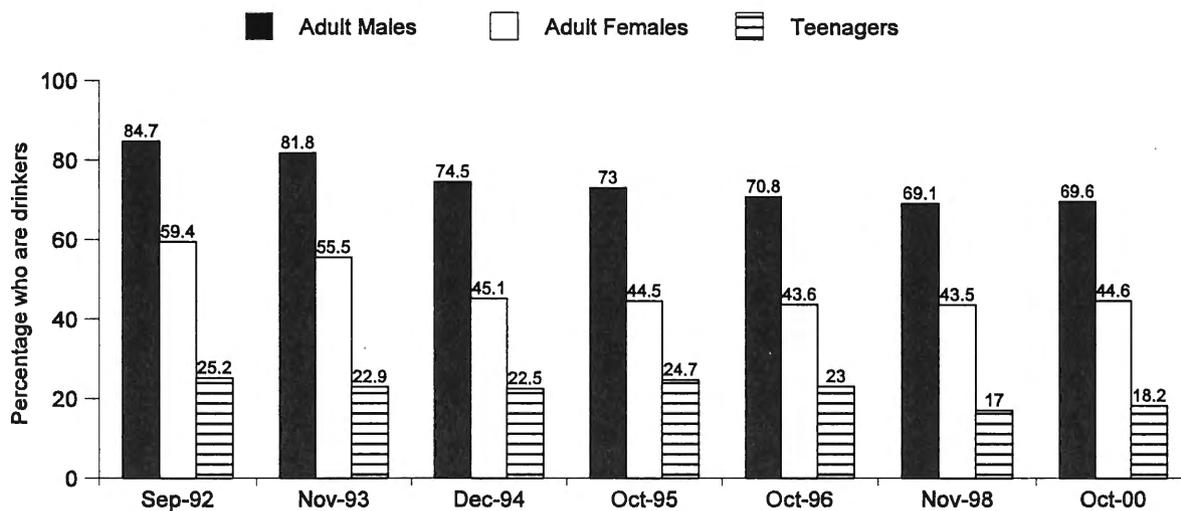
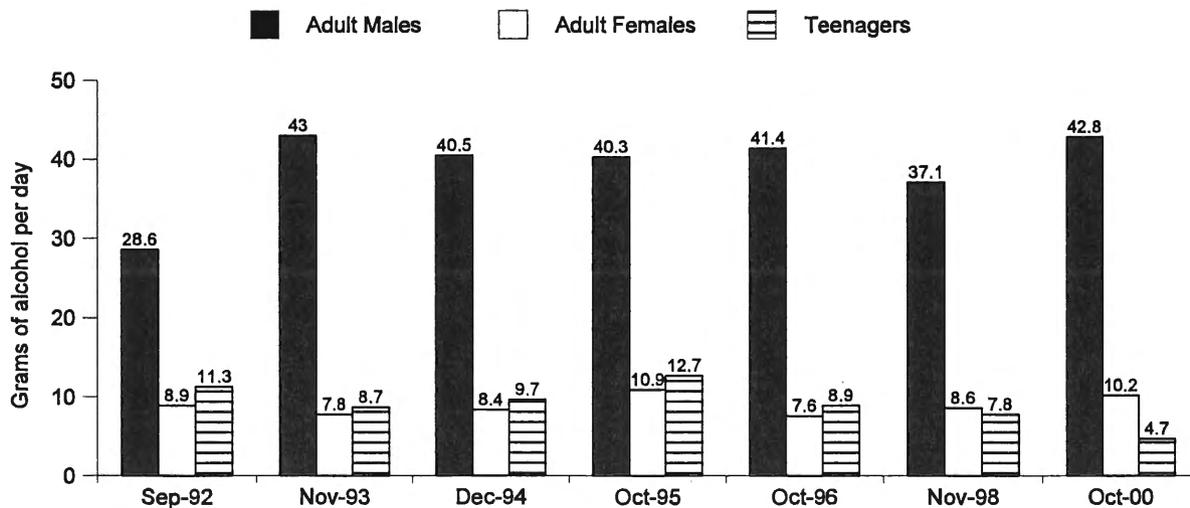


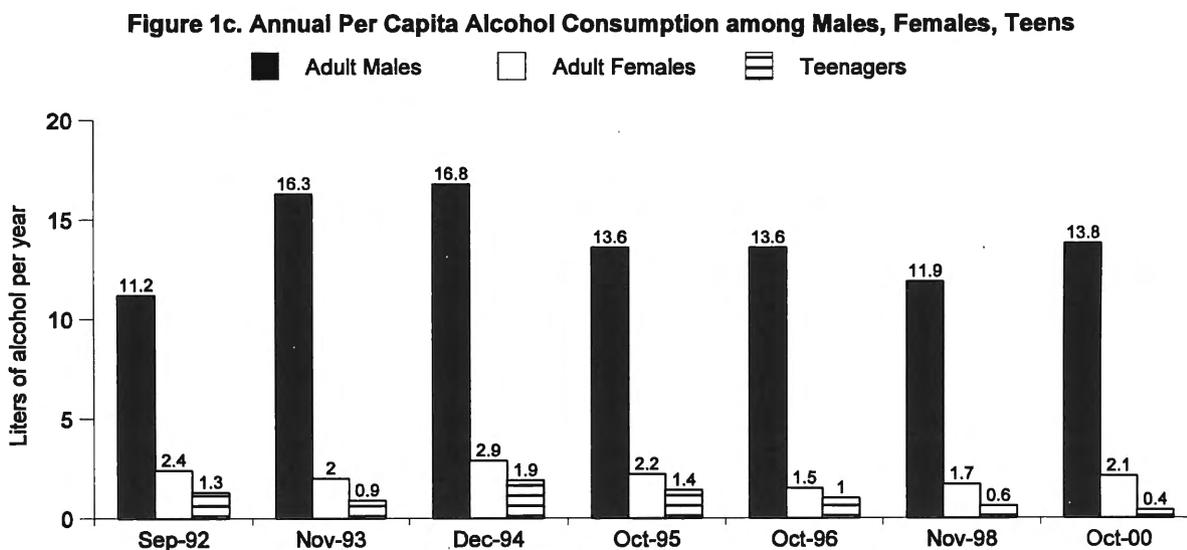
Figure 1b. Mean Daily Amount of Alcohol Consumption (for drinkers)



Generally, in Figure 1a we see a steady decrease, between 1992 and 2000, in the proportion of the adult population who are drinkers (from 84.7% to 69.9% for males and from 59.4% to 44.6% for females). Among teenagers levels have fluctuated during this period and now stand at the relatively low level of 18.2% (down from about 25% in 1995). It must be noted that, for all three groups, the prevalence of drinking in October 2000 was slightly higher than in 1998. Similarly, the mean daily amount of alcohol consumed was higher in 2000 than in 1998 (Figure 1b). However, whether these increases are a significant indicator of a reversal of the decline of the past few years is a

question that cannot be answered now and will become more apparent with future rounds of the RLMS survey.

In Figure 1c we also present alcohol consumption data, in the form of annual per capita consumption for all adult males, all adult females, and all teenagers.² The patterns are the same as in Figure 1b—maximum annual per capita consumption for males was reached in 1994, with about 17 liters per year. In October 2000, annual per capita consumption among males was 13.8 liters, up about 2 percentage points from 1998.



Figures 2a and 2b present information on the prevalence and extent of smoking. The October 2000 data indicate a slow but steady decline in the prevalence of smoking among adult males and teenagers. Among teenagers, there has been a 41% decline in smoking prevalence between 1995 and 2000, from 23.9% to 14.1%, which is the lowest prevalence of smoking among this age

group since the RLMS began in 1992. Among adult females, however, smoking prevalence has steadily increased, from 6.8% in 1993 to 12.6% in 2000, an 85% increase. Figure 2b indicates that among smokers there is a slight increase in the number of cigarettes smoked per day between 1998 and 2000.

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

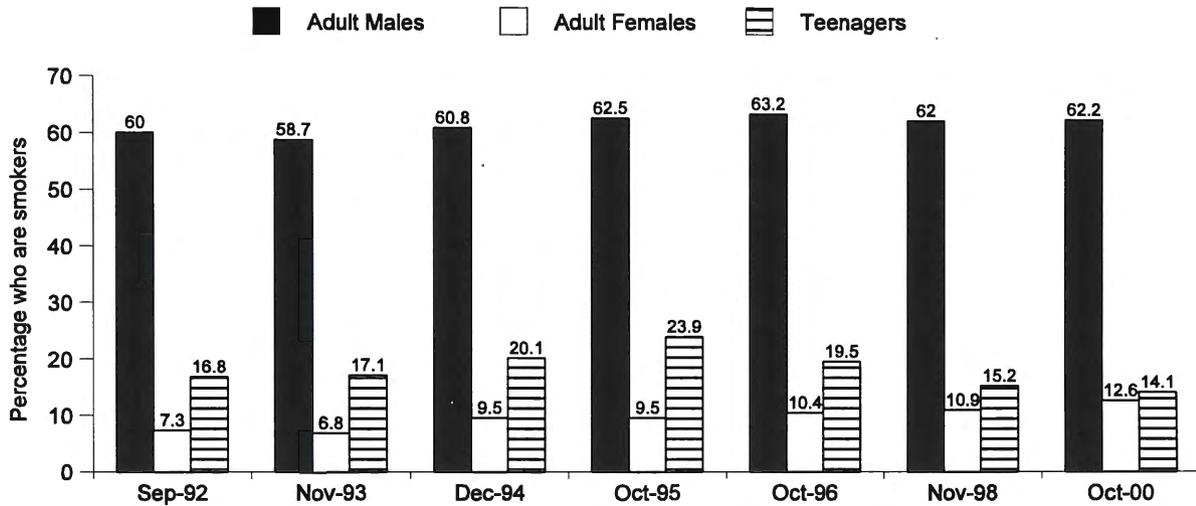
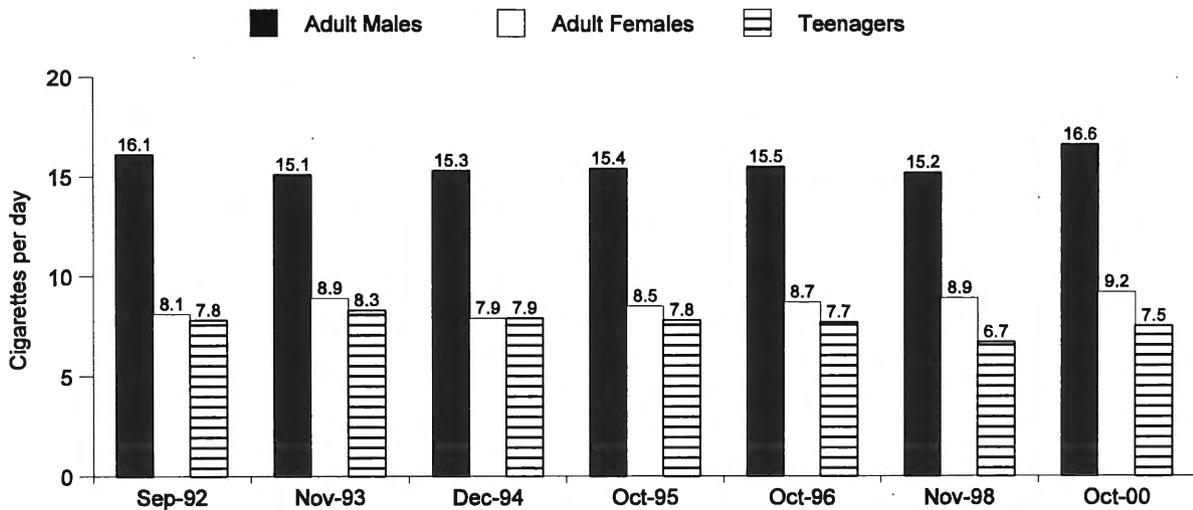


Figure 2b. Mean Daily Number of Cigarettes Smoked (for cigarette smokers)



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

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

Respondents were asked if they had any compulsory health insurance, and also if they had

any supplemental voluntary health insurance. 87.7% reported having compulsory insurance, and 1.9% reported having supplemental insurance. Of those with supplemental insurance, 19.5% reported paying for it themselves, with reported annual amounts of up to 5,000 rubles.

Generally, more women than men report a recent medical problem (Figure 7a), but a higher proportion of men with illnesses seek medical help (Figure 7b). There do not appear to be any systematic shifts in these patterns over time.

Figure 7a. Prevalence of Self-Reported Medical Problems

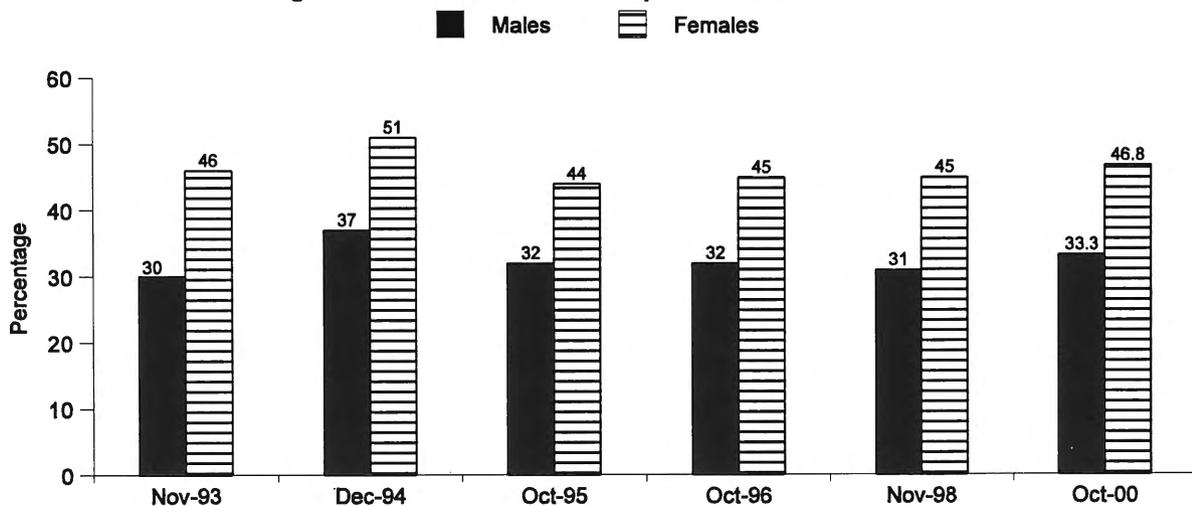
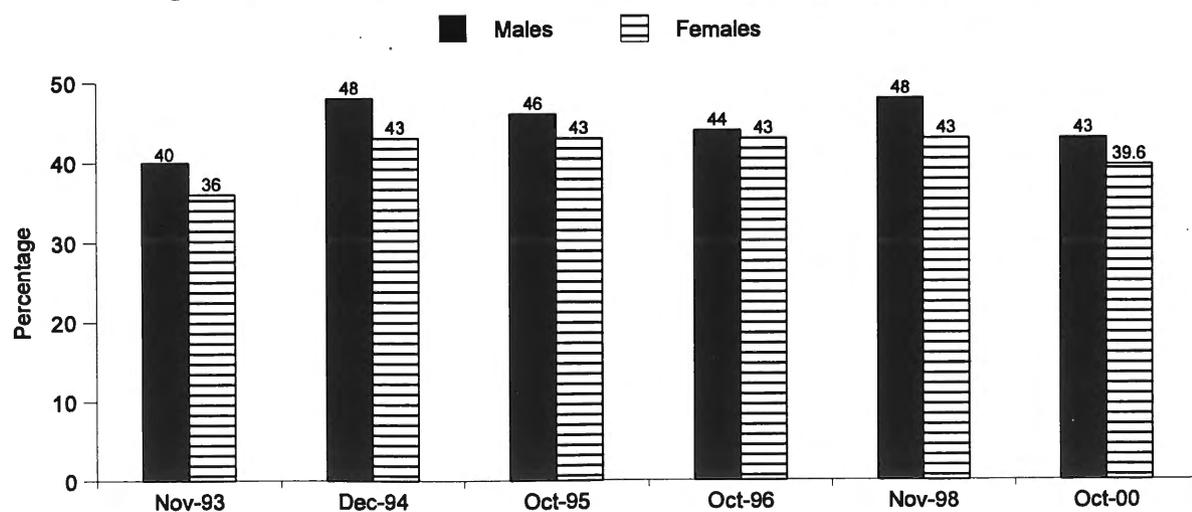


Figure 7b. Percentage of Those with Medical Problems Who Used Medical Services



New in 2000 were questions about the type of payment made for medical care. Of those who sought medical help, about 8.5% reported paying for the treatment; of these, 53.2% paid "officially in the cashier's office" (with reported amounts ranging from 2 to 5,000 rubles), and 51% paid "money or gifts to the medical personnel" (with reported amounts ranging from 12 to 2,000 rubles). Also, among those who sought medical help, 41.1% reported undergoing "additional tests or procedures." Of these 16.7% reported paying for these tests or procedures, 68.1% of whom paid "officially" (with reported amounts ranging from

2 to 3,400 rubles) and 38.6% paid "unofficially" (with reported amounts ranging from 1 to 4,500 rubles).

Figures 8a and 8b present data on the prevalence of hospitalization among all respondents and the mean number of days of hospitalization among those who were hospitalized. Although there appears to be a decrease in the mean length of hospitalization in the 2000 survey, these two figures do not indicate any notable trends, and seasonal variations cannot be ruled out.

Figure 8a. Percentage Hospitalized (within 30 days prior to the survey)

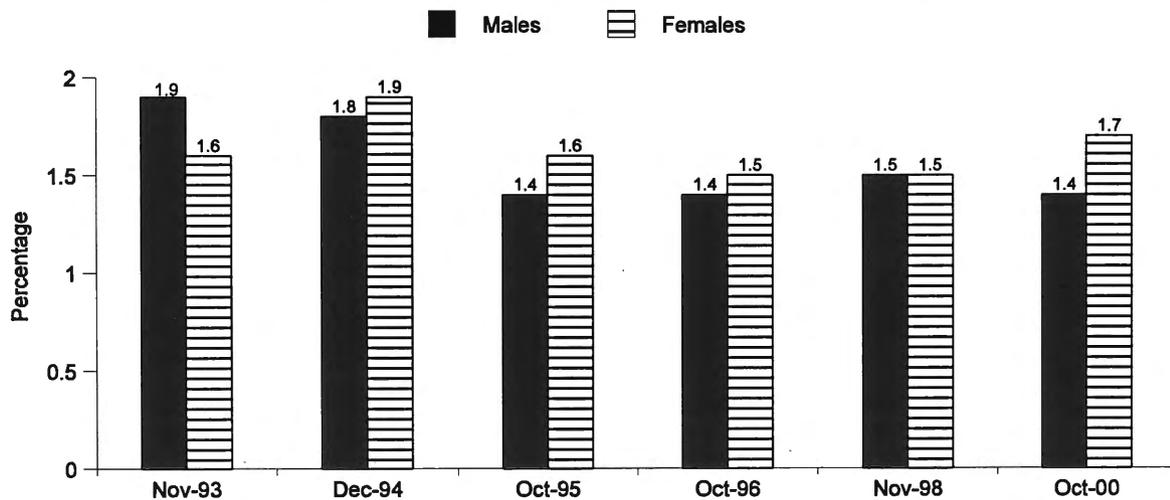
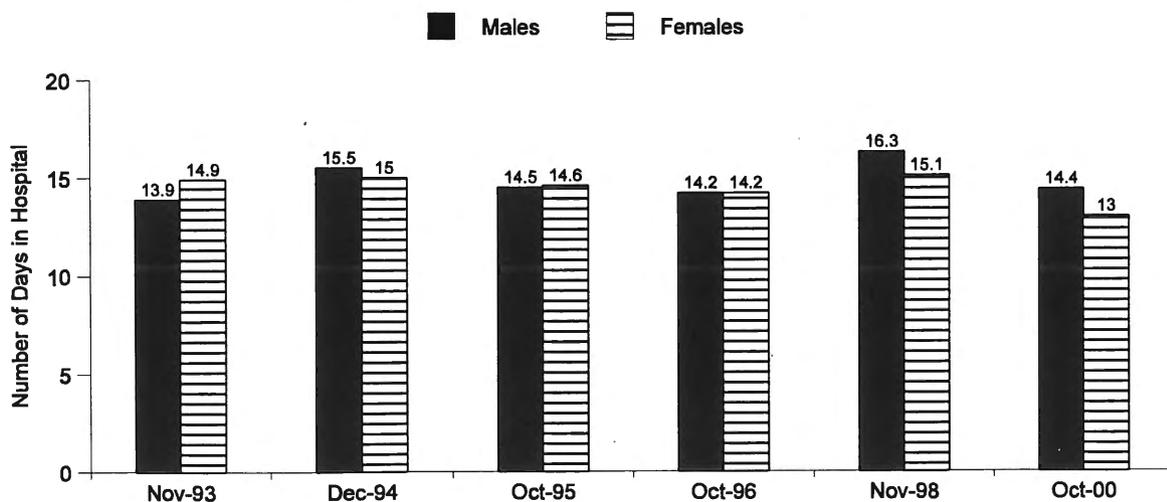


Figure 8b. Mean Length of Hospitalization (in days)



Of those who were hospitalized, about 13.9% (56 people) reported paying for the hospital stay. Of these, 43.2% paid "officially in the cashier's office" (with reported amounts ranging from 10 to 50,000 rubles), and 46.4% paid "money or gifts to the medical personnel" (with reported amounts ranging from 5 to 5,000 rubles). Also, among those who were hospitalized, 12.4% reported paying for "medicines, syringes, and dressing materials." Of these, 50% paid "officially" (with reported amounts ranging from 60 to 1,500 rubles), and 7.4% paid "unofficially." It should be noted, however, that the numbers of respondents to the questions reported in this paragraph were fairly small (fewer than 60).

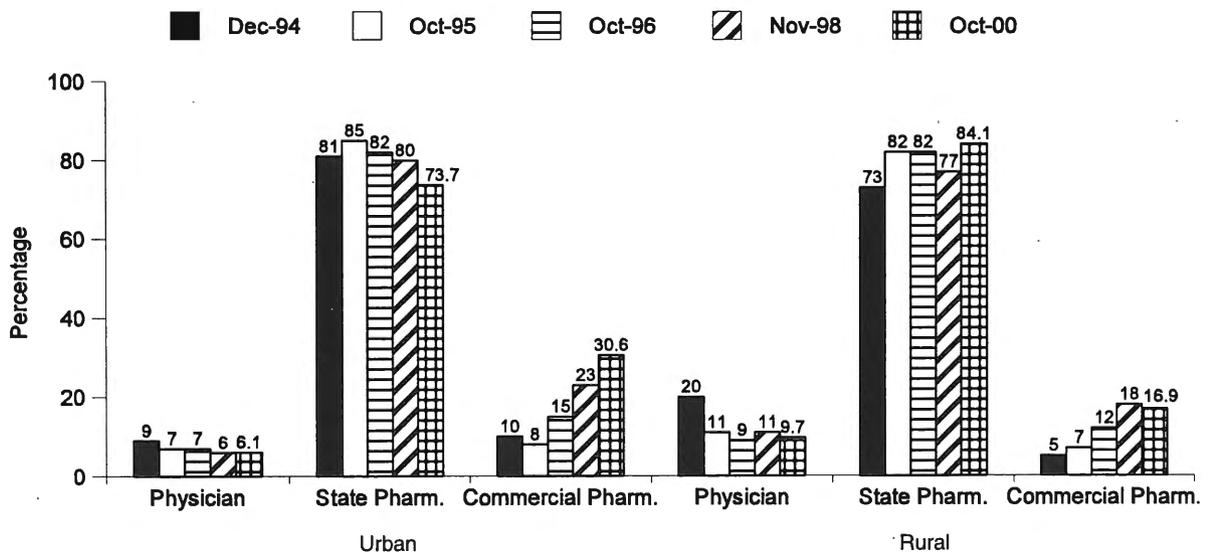
Finally, due to the interest in the perceived increasing prevalence of tuberculosis (TB) in Russia, a question was added to the 2000 RLMS survey on whether respondents have ever been told by a medical practitioner that they have TB. Of the almost 11,000 respondents, 1.1% (82) reported such a diagnosis, of which about 44% were made since 1991. The trend in the response to this question will be monitored in future rounds of the RLMS.

Drug Availability and Costs

In the five latest rounds of the RLMS (1994 to 2000), a series of questions were added to investigate respondents' ability to obtain medications prescribed by health workers. Respondents were asked where these medications were obtained; if they could not be obtained, the reasons why were recorded.

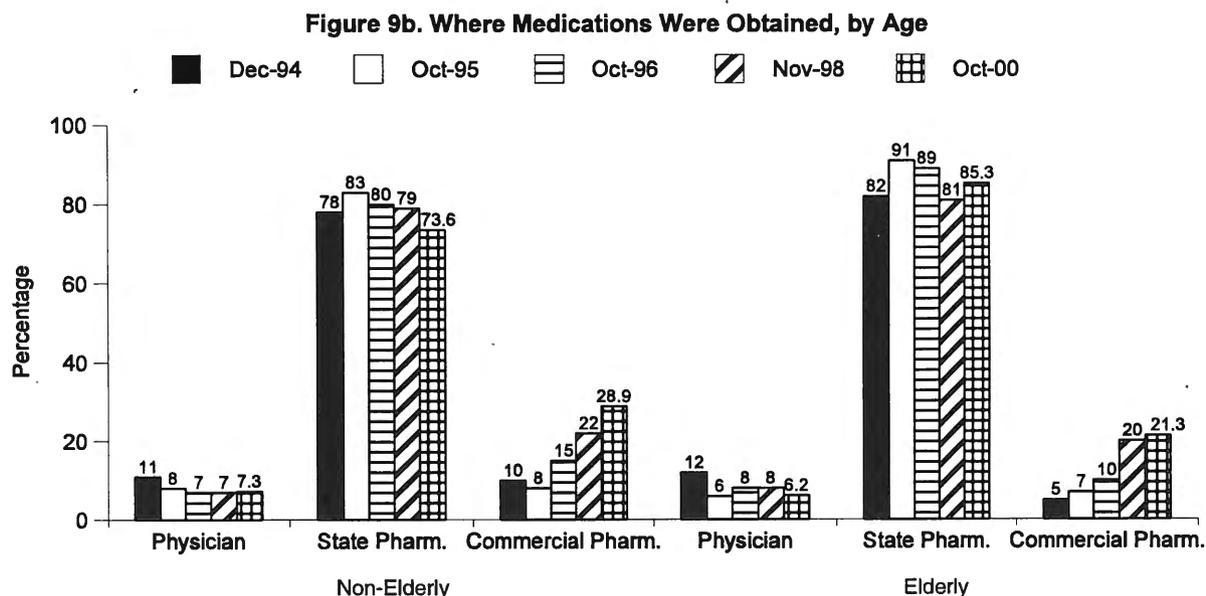
The overall percentages of respondents who received prescriptions and were able to obtain all the medications were 62 in 1994, 70 in 1995, 75 in 1996, 68 in 1998 and 78 in 2000.⁴ In both rural and urban areas, by far the most common source of medications was a State pharmacy (Figure 9a). In 1994, 20% of rural respondents and 9% of urbanites received medications directly from physicians. Since then, these proportions have declined, with corresponding increases in the proportions obtaining medications from State and commercial pharmacies. The latest data indicate a steady increase in commercial pharmacies as the sources of medications, particularly in urban areas.

Figure 9a. Where Medications Were Obtained, by Place of Residence



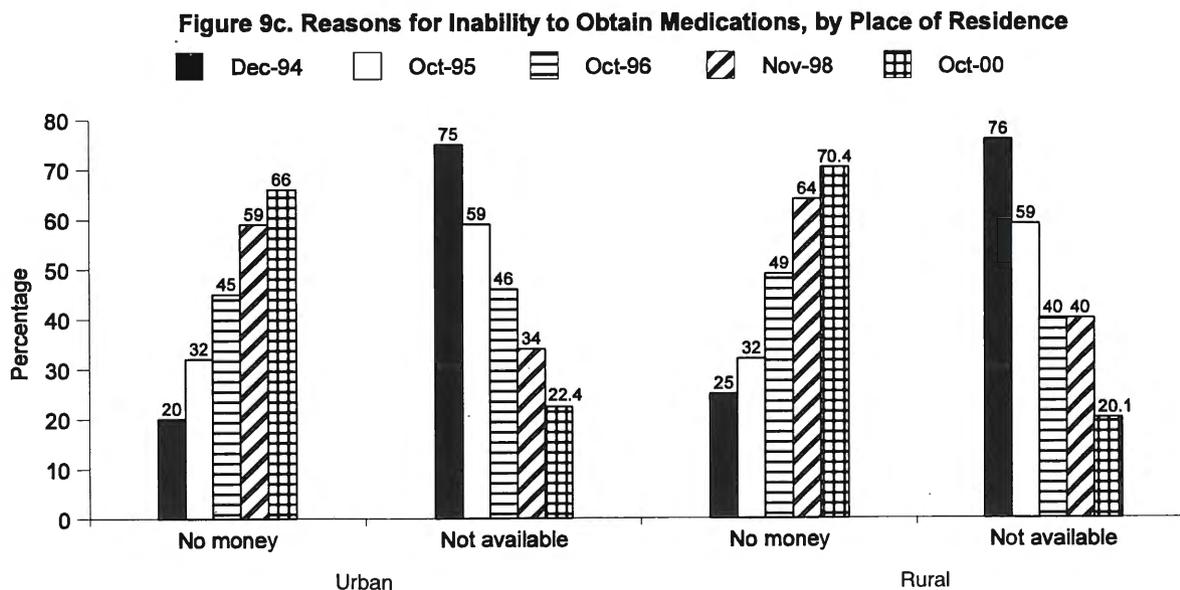
Recently, there has been much interest in the situation of the elderly in Russia, particularly in their ability to obtain health care. Figure 9b presents the same drug availability information reported in 9a, but separates the elderly (60 years and older) from the non-elderly. The purchasing

patterns of the elderly do not differ much from those of the general population; the majority received their medications from State pharmacies, with increasing proportions using commercial pharmacies.



Among those respondents who were unable to obtain prescribed medications, the two reasons most often cited were unavailability of the drug and lack of money. Over the past few years, however, lack of money has emerged as the top

reason for not being able to obtain medications in both urban and rural areas (Figure 9c). Concomitant with this increase has been a decrease in drug unavailability as the primary reason. It must be noted, however, that this later



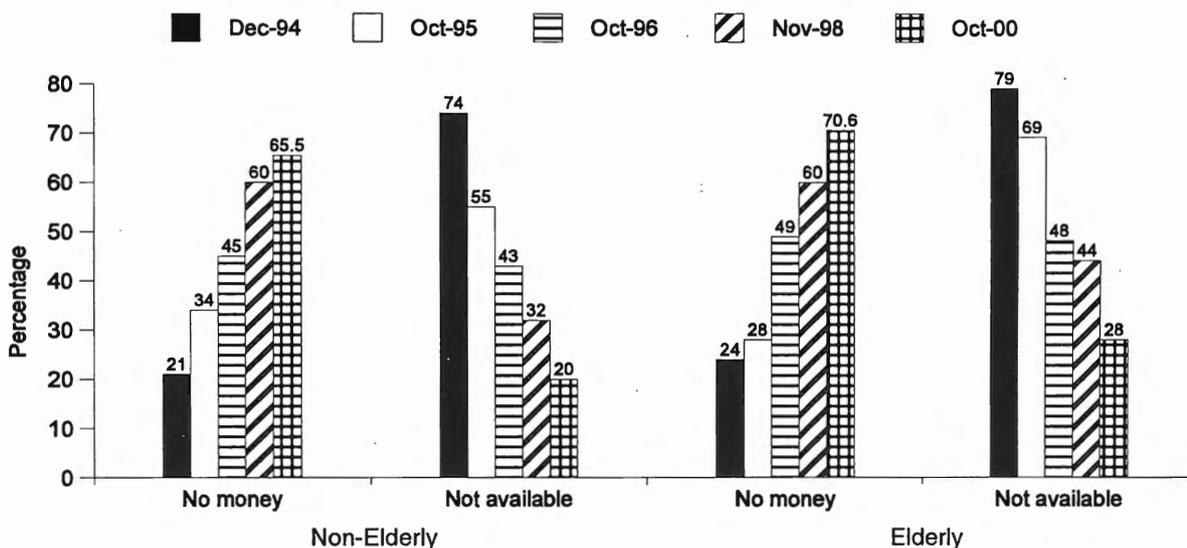
decline is not necessarily due to an increased availability of drugs. All that can be reported is that more respondents are citing lack of money as the primary reason for not obtaining medications.

Of the 1456 respondents who received prescriptions and were able to obtain some or all of their medications, about 15% were entitled to a full discount. The remaining respondents reported paying amounts ranging from 1 to 10,000

rubles for their medications. However, the median amount paid was about 95 rubles, and close to 98% paid less than 1000 rubles.

The inability of the elderly to obtain medications follows a similar pattern, with lack of money being the reason most often cited (Figure 9d). However, the elderly report both unavailability of drugs and lack of money more often than do the non-elderly.

Figure 9d. Reasons for Inability to Obtain Medications, by Age



It may be that some types of medications prescribed for the elderly are less available than are those prescribed for younger people. Also, the proportions of elderly in the urban and rural samples are 14.2% and 18.4%, respectively; that is, 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.

One should also note that, although in 1995 a specific choice was added for "disability" as a reason for the inability to get medications, only three elderly respondents cited it as a primary reason in the 2000 survey (with similar low frequencies in previous RLMS surveys; data not

shown). That is, it is not disabilities that are preventing the elderly from going to the pharmacy and obtaining medications

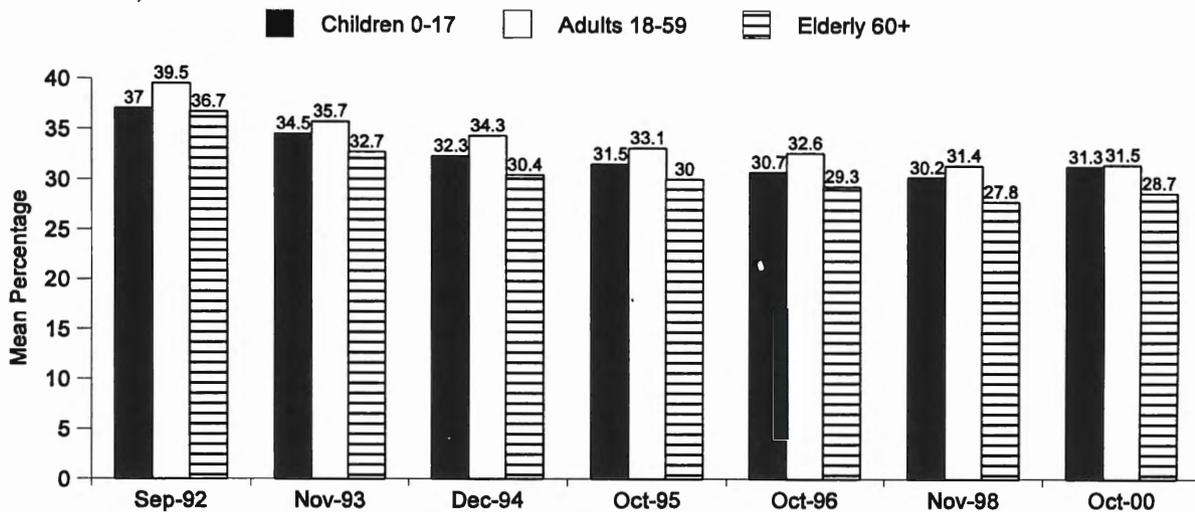
Composition of Diet

The RLMS contains detailed information on dietary intake collected via a 24-hour dietary recall at each round. In this report, we present data on fat and protein intake. Fat intake in Russia has historically been much higher than the recommended level of 30% of total energy intake. The high level of fat intake has been of great concern since it has serious implications for a number of chronic diseases.

Figure 10 indicates a declining trend in the consumption of fat. For all age groups, there was a steady decline in the percentage of energy from fat during the six years between September 1992 and November 1998. In October 2000, these figures were very slightly above the 1998 values.

Among the elderly (those 60 years and older), the percentage of energy from fat has declined from 36.7% in 1992 to 28.7% in 2000. There have been similar declines in fat consumption among adults and children.

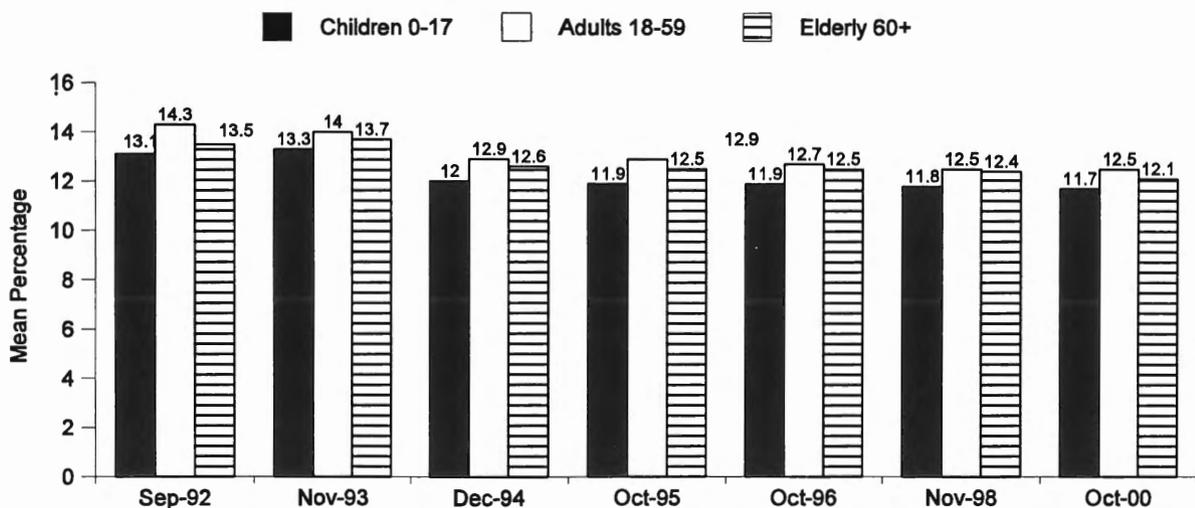
Figure 10. Mean Percentage of Energy Intake from Fat



Also, as indicated in Figure 11, there has been a persistent, but much slower, decline in the percentage of energy from protein. For adults, the percentage of energy from protein declined from

14.3% in September 1992 to 12.5% in October 2000. The corresponding decline for the elderly is from 13.5% to 12.1%, and for children from 13.1% to 11.7%.

Figure 11. Mean Percentage of Energy Intake from Protein



These dietary intake shifts are indicative of important changes in Russian food-purchasing patterns and diets (see the section on Nutritional Status below and also the companion report, "Monitoring Economic Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey 1992-2000"). These 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 if the declines continue. However, RLMS data indicate relatively stable levels over the past two years.

Nutritional Status

Figures 12a, 12b, and 13 present data on the nutritional status of children and adults (height and weight were measured for all respondents). Of particular concern in previous rounds had been an increase in the prevalence of stunting (an indicator of chronic malnutrition) among children two years old and younger.⁵ Between September 1992 and December 1994 there was a 26% increase in stunting in this age group (from 11.8%

to 14.9% in Figure 12a). Between 1994 and 1996 there was a decline in this prevalence to 8%. In the past four years, however, the prevalence of stunting among this age group has been higher, with levels of 12.4% and 10.5% in 1998 and 2000, respectively. The prevalence of stunting among two- to six-year-olds follows a similar trend (Figure 12b), with a sharp increase in October 2000 (10.5%). It should be noted that this high level of stunting in 2000 among two- to six-year-olds is probably partly due to the stunted under-two-year-olds of 1998 moving up into the upper age group by 2000. This, and the relatively higher prevalence of stunting (and wasting) among younger children in 2000 (Figure 12a), may be an indication of re-emerging nutritional problems during the past two to four years. This is corroborated by the fact that, despite income increases over the past four years, incomes during fall 2000 were 10% below their levels in 1995 and 1996, and 30% below their levels in the fall of 1992; and, while total household expenditures rose by 18% from 1998 to 2000, average real food expenditures in 2000 were only 69% of their 1995 level (see the companion report, "Monitoring Economic Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey 1992-2000").

Figure 12a Children's Nutritional Status (0-24 months)

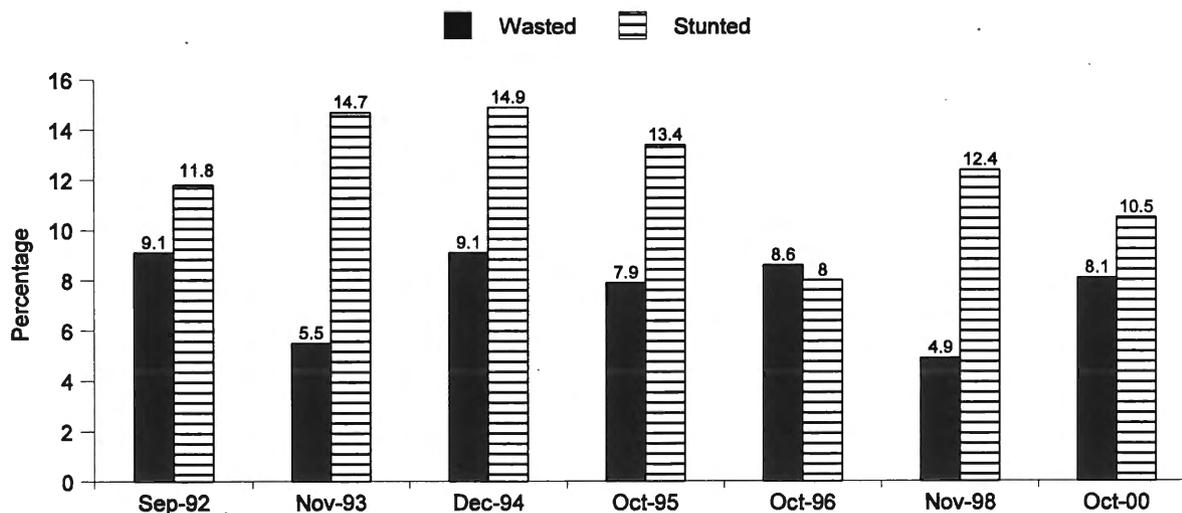
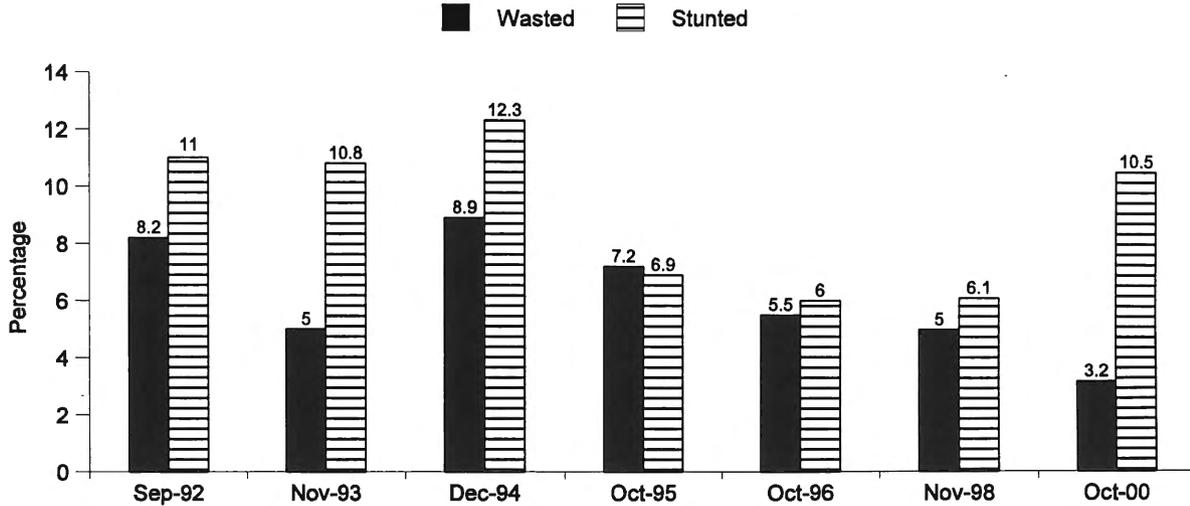


Figure 12b. Children's Nutritional Status (25 months-6 years)

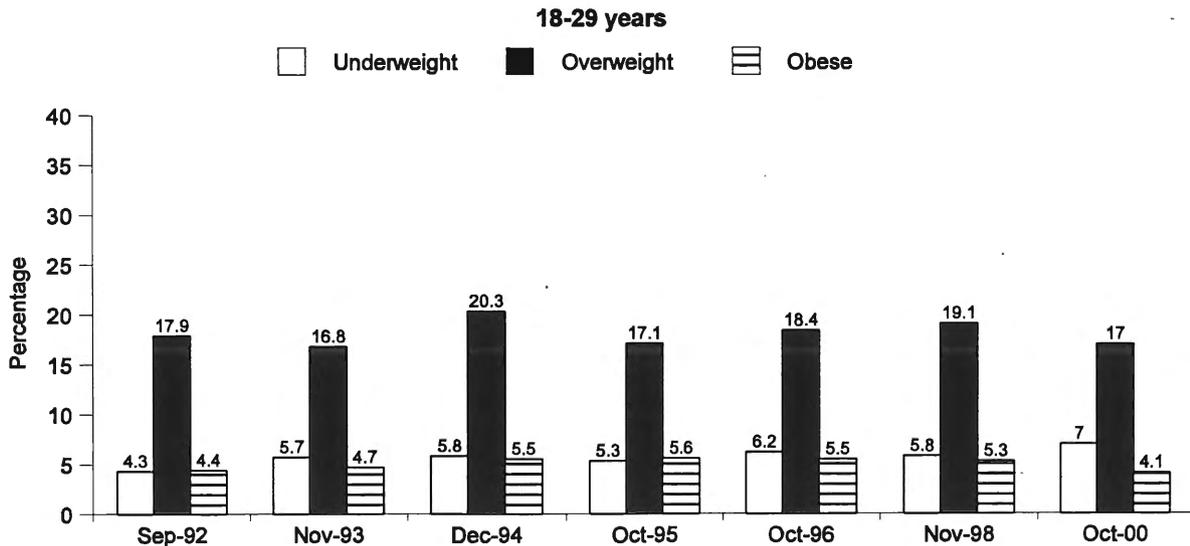


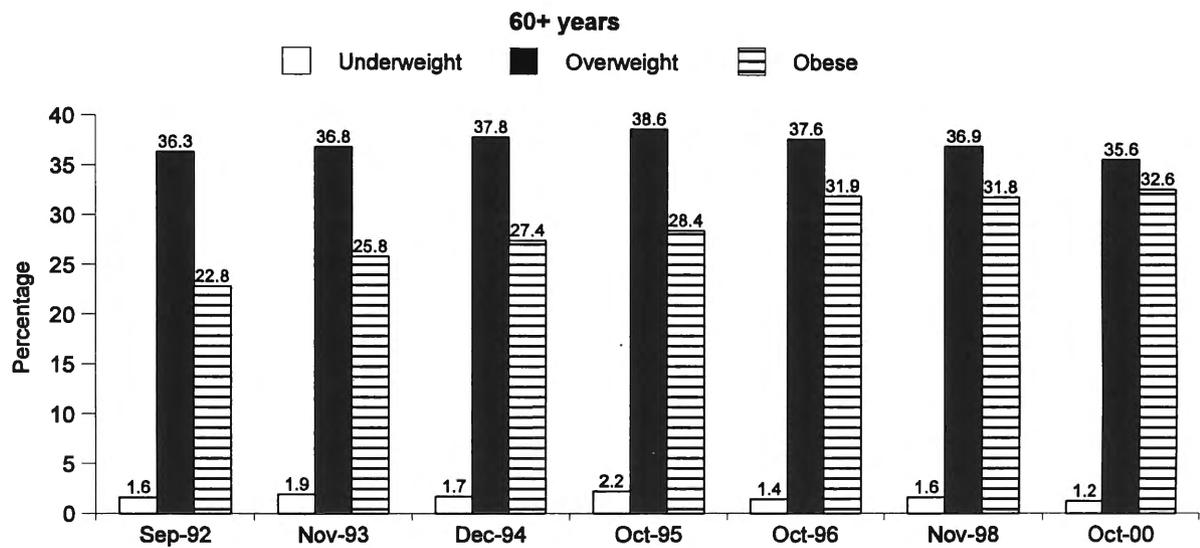
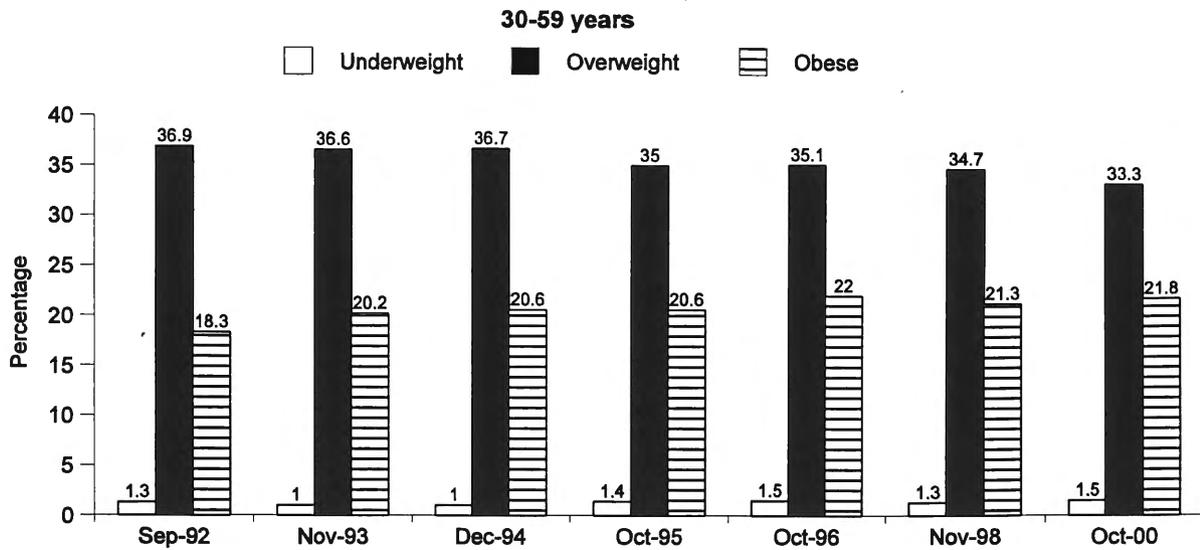
The nutritional status of adults varies by age group (Figure 13). Among young adults (18-29 years), the trend of concern is one of increasing prevalence of under-nutrition, which has steadily increased between 1992 and 2000, from 4.3% to 7% (a 63% increase). Conversely, among the elderly (60+ years) there has been a steady increase in the proportion of the population in the obese category (according to WHO classifications),⁶ from 22.8% in 1992 to 32.6% in October 2000 (a 43% increase). These patterns among these 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 above paragraph, in addition to the fact that the elderly have traditionally fared better economically than the rest of the population.

Among middle-aged adults (30-59 years) also, there is a steady shift from the overweight into the obese category. The prevalence of underweight in both the middle-aged and elderly groups remains steadily low.

Figure 13. Adult Nutritional Status





Childhood Immunizations

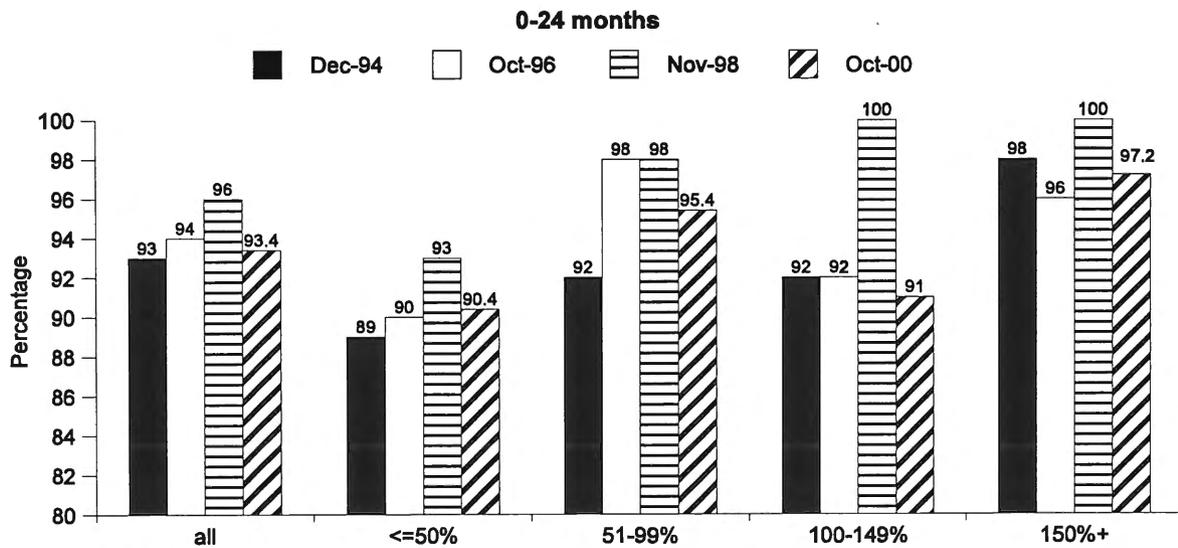
Figures 14a through 14c present information about childhood immunizations between 1994 and 2000 for children up to six years of age.

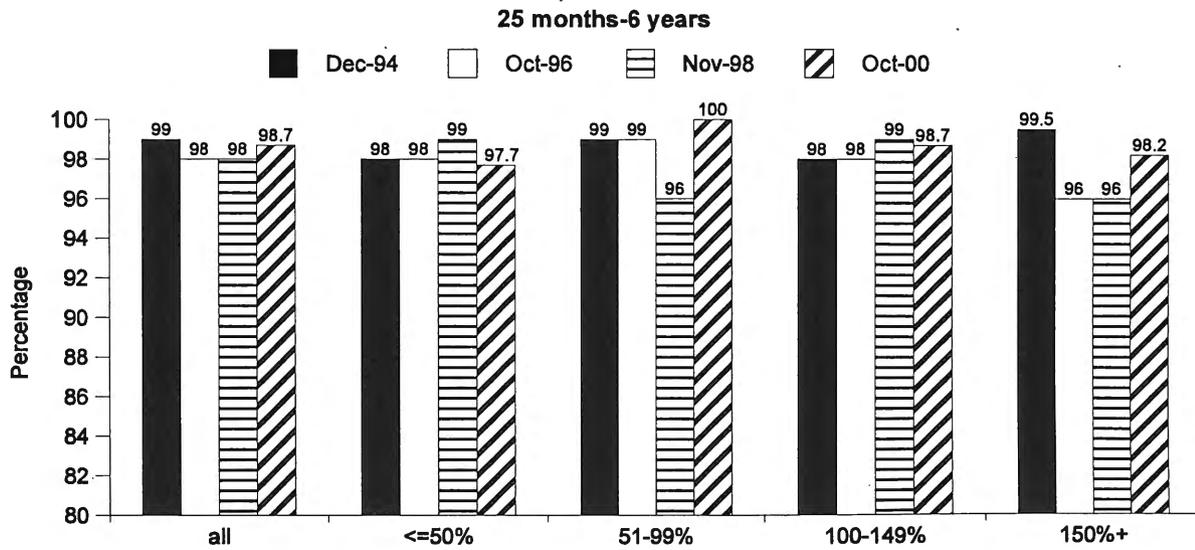
The percentage of children who had received any vaccination by the time of these surveys is shown in Figure 14a. The data are shown both by age group (0-24 months and 25 months-6 years) and by poverty level. Among the older group, 96-100% of all children, regardless of their income level (measured as a proportion of the poverty level), have been vaccinated. Among the younger group, however, those at the lowest income level continue to have the lowest vaccination rate. This suggests a socioeconomic effect on the rate of immunization in the two years immediately preceding each survey. It should also be noted that, although vaccination coverage rates were improving between 1994 and 1998 (particularly in the lowest income category), the latest 2000 data indicate a drop for younger children in all income groups.

The differences between the older and younger groups of children can be explained to some extent by the distribution of places where vaccinations are obtained. For younger children, clinics (poly and children's) are the most common sites (Figure 14b). For older children, however, kindergartens assume a greater share of the places where vaccinations are obtained, which may partly explain the higher coverage among this age group.

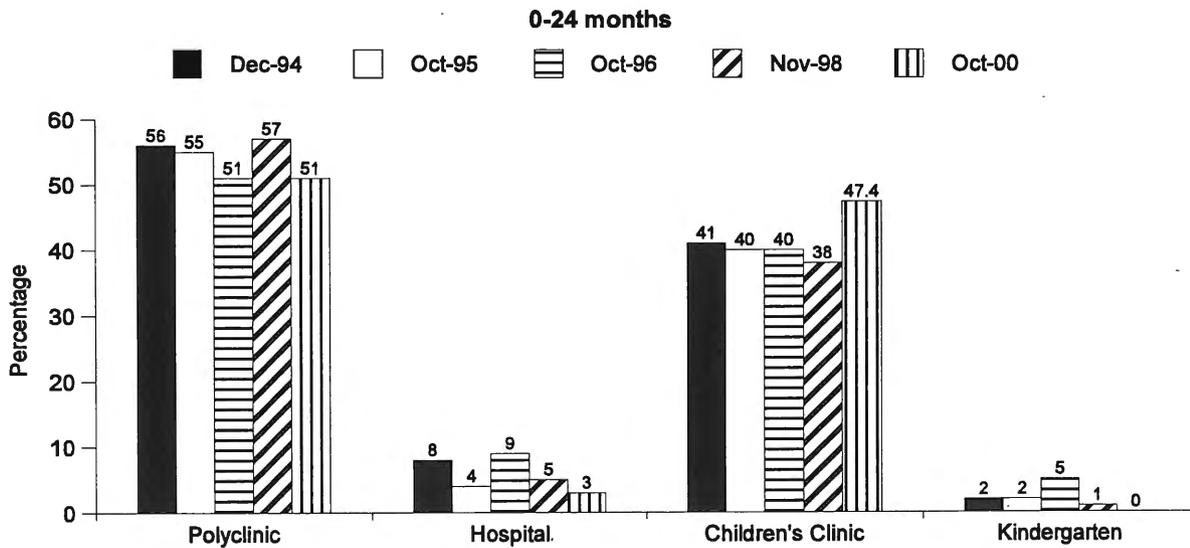
Another point of concern is coverage by type of vaccine (Figure 14c). In 2000, by the age of two years, between 25% and 55% of children had not received specific vaccines usually called for during the first year of life—these include DPT (diphtheria/pertussis/tetanus), polio, and measles. Even by age six, these immunizations are not universal. In this older age group, for almost all types of vaccines, there have been improvements in vaccination rates since 1994, which have continued in 2000. In the younger (under two years) age group, however, vaccination rates have dropped for all four of the more common vaccines (measles, DPT, polio, and TB).

Figure 14a. Percentage of Children Ever Vaccinated (by percentage of the poverty line)





**Figure 14b. Places of Vaccinations
(in the three months prior to the survey)**



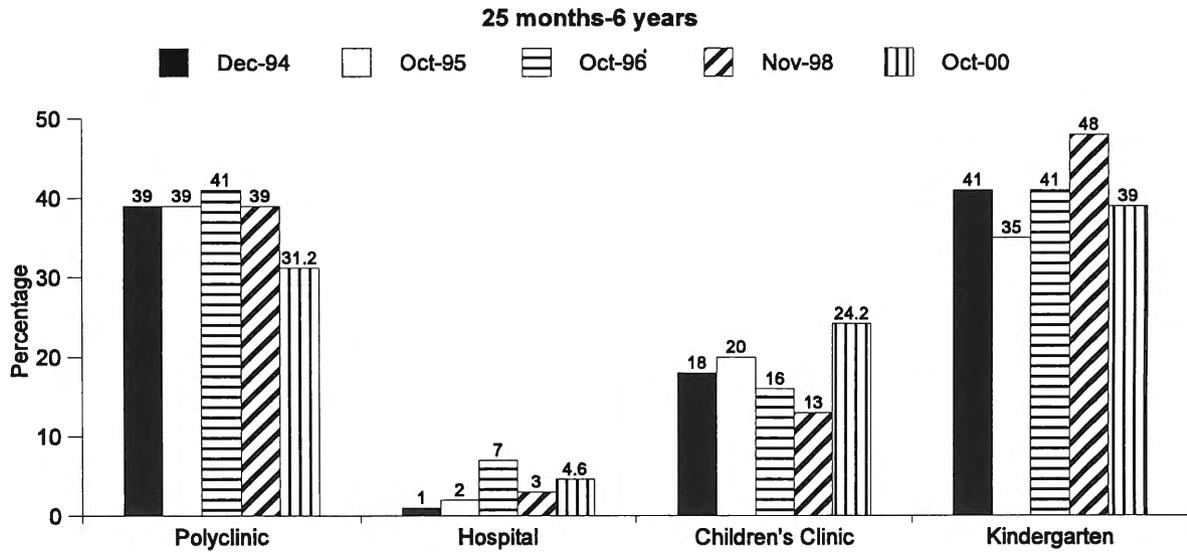
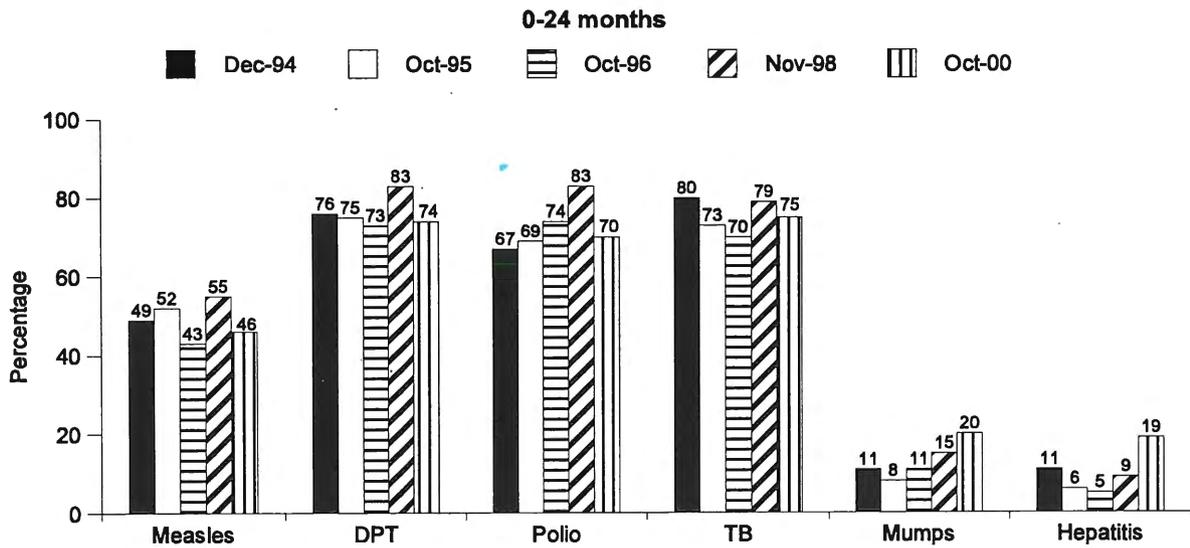
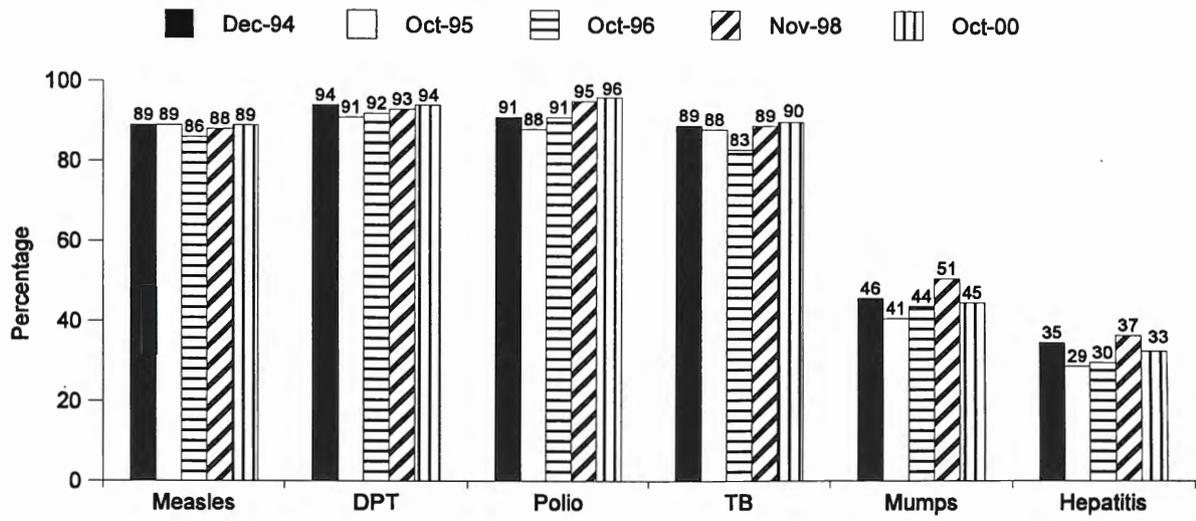


Figure 14c. Types of Vaccines Received, among Those Ever Vaccinated (by age group)



25 months-6 years



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 in each round 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 alcoholic 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 the 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 males, adult females, and teenagers, we present per capita data drawn from the RLMS separately for each group.
3. Beginning with the December 1994 survey, the questions on hospitalization and duration of hospitalization were asked with a three-month time frame, as opposed to a 30-day time frame 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. In some previous editions of this report, these numbers were given as 85% and 88% for 1994 and 1995, respectively. The changes in these and other numbers in Figures 9a-9d are due to a revision of the calculations. The revision expanded the denominator for the calculations to include not only those who were unable to obtain ALL of their prescribed medications, but also those who were unable to obtain SOME of their prescribed medications.
5. It should be noted that the numbers for all previous rounds in these figures have changed in this edition of the report. These new numbers are based on new 2000 formulae and standards from the National Center for Health Statistics for the calculation of wasting and stunting.
6. The division of adults and elderly into various weight groups is based on Body Mass Index categories as recommended by WHO: <18.6 (chronic energy deficiency), 18.6-25 (normal), 25.1-30, (overweight), and >30 (obese).

