THE NEW ADOLESCENTS: AN ANALYSIS OF HEALTH CONDITIONS, BEHAVIORS, RISKS, AND ACCESS TO SERVICES AMONG EMERGING YOUNG ADULTS

“Emerging young adults are adrift in a perfect storm of health risks”

Lawrence S. Neinstein, MD
2013
Acknowledgements

The New Adolescents: An Analysis of Health Conditions, Behaviors, Risks, and Access to Services in the United States compared to California, Among Adolescents (12–17), Emerging Young Adults (18–25) and Young Adults (26–34).

Sponsors:
This report would not have been possible without the support and sponsorship of:

- California Wellness Foundation
- Leonard D. Schaeffer Center for Health Policy and Economics, University of Southern California
- The Community, Health Outcomes & Intervention Research Program, The Saban Research Institute of Children’s Hospital Los Angeles
- Division of College Health, Department of Pediatrics, Keck School of Medicine of USC and Division of Student Affairs, University of Southern California

Acknowledgements:
The Senior Author would like to acknowledge the following individuals and institutions for their guidance and support: Roberta Williams MD (Professor of Pediatrics, University of Southern California), D-Brent Polk MD (Chair and Professor of Pediatrics, University of Southern California), Michael Jackson Ed.D. (V.P. of Student Affairs, University of Southern California), Michele Kipke Ph.D. (Vice Chair of Research, Department of Pediatrics, Children’s Hospital Los Angeles), Calvin Gordon MD, Beth Dameron and Alvina Sundang (Kaiser Permanente, Northern California) and also the significant work and passion of my three associates and contributors: Yang Lu Ph.D., Lauren Perez MPH, and Bryan Tysinger, MPhil.

© 2013 The New Adolescents: An Analysis of Health Status, Lawrence Neinstein MD

Table of Contents

- Executive Summary 4
- 1 Demographics 8
- 2 Mortality 12
- 3 Injuries 16
- 4 Mental Health 22
- 5 Substance Abuse 24
- 6 Reproductive Health 32
- 7 Sexually Transmitted Infections 38
- 8 Chronic Disease 46
- 9 Health Promotion and Prevention 58
- 10 Services 66
- 11 References 78
Executive Summary

Background

This report examines the health risks facing the nation’s 34.6 million emerging young adults, a group defined as young people aged 18–25. They occupy the space between adolescence and young adulthood—they are separating from home and parents, but in many instances are not yet completely independent adults. It is a potentially precarious time of life.

As illustrated in the pages that follow, emerging young adults face greater behavioral and non-behavioral health risks than either adolescents aged 12–17 or young adults aged 26–34. Yet compared to those two age groups, emerging young adults often have the lowest perception of risk and the least access to care. Overall, emerging young adults have the highest rates of motor vehicle injury and death, homicide, mental health problems, sexually transmitted infections and substance abuse. They have the lowest rates of health insurance coverage. In short, emerging young adults are adrift in a perfect storm of health risks.

The figure below offers just one example of this perfect storm. Emerging young adults have the highest prevalence of binge drinking (blue), the lowest perception of high risk (red) and the highest rate of needing but not receiving treatment for this problem (green).

The Perfect Storm in Emerging Young Adults

Binge Drinking, Perceptions of Risk, and Access to Care by Age Group, U.S. and California 2008-2009

Why is emerging young adulthood fraught with health risks? Although outside the purview of this report, we offer some observations from the recent health literature.

- Evidence in brain development research that shows significant brain development still occurring in emerging young adults in the prefrontal cortex, the area controlling emotions and rational decision making (Giedd Jay N, 2008 and Johnson SB et al, 2009).

- A progressively increasing delay in attaining traditional life milestones including completing school, leaving home, becoming financially independent, marrying and having a child. In 1960: 77% women and 65% of men at 30 reached these five “milestones”. Among 30-year-olds in 2000, <50% of women and 1/3rd of men had done so (US Census Bureau and Marantz Henig, 2010).

- Emerging young adults are the most uninsured age group in the United States, often losing their insurance when they graduate high school or college. Although the Affordable Care Act has helped this situation, the recent Gallup-Healthway poll estimated only a small decline of uninsured emerging young adults from 28% uninsured 18 to 25 year olds in fall 2010 to 24.2% in second quarter of 2011 (http://www.gallup.com/poll/153737/uninsured-rate-year-olds-plateaus.aspx).

As this report demonstrates, emerging young adults—a group sometimes referred to as “young invincibles”—need access to broad health coverage to prevent significant negative health outcomes and treat acute and chronic medical conditions. In the words of “young invincibles” (www.younginvincibles.org):

- “We use the emergency room more than any age group under age 75 and 16 percent of us suffer from chronic conditions; we need preventive and primary care.”

- “If we are lucky enough to have jobs, they typically provide us with fewer benefits than older, more experienced workers.”

Our goal in producing this chart book is to provide health care providers, health care networks and vendors, institutions, and policy makers with the data they need to make informed decisions about broad health care coverage and health prevention interventions in emerging young adults.

Methods

This chart book focuses on the health of emerging young adults aged 18–25 in California and the United States and compares them to adolescents aged 12–17 and young adults aged 26–34. In addition, some of the data were stratified by gender and ethnicity. Data were extracted in the following areas: demographics, mortality rates, injuries (intentional and unintentional), mental health issues, substance use and abuse, reproductive health (pregnancy and contraception), sexually transmitted infections (STIs), chronic conditions, health promotion and prevention, and services (including utilization, cost and accessibility). Many existing national and state health databases have been utilized to obtain this data including:

- Behavioral Risk Factor Surveillance System Survey Data (BRFSS), CDC
- California Health Interview Survey (CHIS), UCLA Center for Health Policy Research
- CDC WONDER for Population Projections
- CDC WISQARS for injury and mortality data
- Health, United States, NCHS
- HIV Surveillance Reports, CDC
- MEPNet Household Component for 2009 Agency for Healthcare Research and Quality
- Monitoring the Future national survey results on drug use
- MMWR reports on mental health, CDC
- National Center for Health Statistics
- National Center for Injury Prevention and Control
- National Health Interview Survey (NHIS)
- National vital statistics reports
- National Health and Nutrition Examination Survey Data (NHANES)
- National Center for Chronic Disease Prevention and Health Promotion
- National Survey of Family Growth
- National Center for Chronic Disease, CDC
- National College Health Assessment II (NCHA), American College Health Association
- SEER Cancer Statistics, National Cancer Institute
- Sexually Transmitted Disease Surveillance reports
- Sexually Transmitted Diseases in California, California Department of Public Health
- Substance Abuse and Mental Health Services Administration reports on Drug Use and Health
- Youth Risk Behavior Survey Data
- US Census Bureau
Executive Summary continued

Other data were obtained from existing research studies. In addition, some utilization data were obtained from personal communications with Kaiser Permanente Northern California. The specific references to the data sources are listed in the last section of this chart book.

Limitations
The use of existing national databases allows for a large nationally representative sample. However, the use of existing data limits the ability to examine issues beyond the scope of the database. Specific limitations include:

- The inability to use consistent age groups throughout. Some databases report data in age groups that differ from the breakdown used in this chart book and the raw data are not available to make the necessary changes.
- Data are not always available for stratification by gender or ethnicity.
- National databases do not always include state-level data or may only be available from a different source, which weakens the comparability of national and state level data.
- The lack of availability of data in certain areas such as the epidemiology of chronic diseases. National registries and monitoring systems do not exist for most of these conditions which makes the compilation of such data challenging and limited.
- The lag in the public availability of certain data which results in the lack of timeliness of some data.
- Substance use and chronic diseases might be under-reported in survey data due to self-report bias.

Results and Key Points
The detailed results are listed in each section and highlighted by both "take home messages" and "bullet points." Overall, emerging young adults have the highest rates of motor vehicle accidents, homicides, substance abuse, mental health issues and sexually transmitted infections while having the highest rate of being uninsured.

Demographics: In 2010, there were approximately 34.6 million emerging young adults in the U.S., including 4.3 million in California. In the U.S., whites are the largest racial/ethnic group, accounting for approximately 60 percent of the population in each age group. However, in California, in all three age groups, Hispanics/Latinos are the largest racial/ethnic group, accounting for 43.3% of emerging young adults, 47.7% of adolescents and 42% of young adults.

Mortality: Unintentional injuries are the leading cause of mortality among young people aged 12–34, which includes motor vehicle accidents (MVA) accounting for the largest percentage. Emerging young adults aged 18–25 face the highest risk. In 2010, MVA-related hospitalization and emergency department treatment of emerging young adults cost the U.S. health care system $9 billion. Homicides and suicides are the second- and third-leading causes of death, respectively, in young people aged 12–34.

Mental Health: Emerging young adults aged 18–25 are more likely to spend $0 on annual health care expenditures. Regardless of age group, uninsured individuals are more likely to spend $0 on annual health care expenditures.

Conclusions
Emerging young adults 18–25 have a higher prevalence of significant health risks compared to adolescent and young adults. At the same time they have a lower perception of risk in many of these areas and are the largest uninsured age group in the United States.

Recommendations
Broad health care coverage for emerging young adults is urgently needed. A national “emerging young adult” health agenda—including thoughtful health care research, programs and national and state policies regarding delivery and access to health care—must be developed for this at-risk age group.

Sexually Transmitted Infections: The highest incidence rates of chlamydia and gonorrhea are in young adult males aged 20–24 and in older adolescent and young adult females aged 15–24. Incidence rates in young adults are highest in African American females aged 20–24, followed by African American males aged 20–24. The highest numbers of new cases of HIV occur in emerging young adults aged 20–24. Cervical and vaginal HPV infections are the most common STIs in the young sexually active U.S. population with 74% of the 6.2 million new infections each year occurring in those aged 15–24.

Chronic Diseases: In the U.S. there are over 16.3 million cases of the top seven common chronic diseases—cancer, diabetes, heart disease, hypertension, stroke, mental disorders and pulmonary conditions. Three—cancer, heart disease and mental disorders (suicide)—are among the top five causes of mortality in young adults. Many of the most frequent chronic diseases either start or continue in the young adult years and others, such as heart disease, stroke and diabetes, can be prevented with interventions during this period of life. Young adults aged 20–35 have the lowest improvements in cancer survival rates during the past 25 to 35 years, potentially related to differences in involvement in treatment protocols, treatment centers and access to health care.

Health Promotion and Prevention: Overall compliance with HPV, influenza, and pertussis vaccinations is low in emerging young adults and young adults. In California and the nation, emerging young adult males are least likely to always or almost always wear a seatbelt, and correspondingly have the highest fatal MVA-occupant injury rates. Preventive health guidelines for emerging young adults are not consistent among medical and health organizations.

Services (Accessibility, Utilization and Cost): Emerging young adults have the highest uninsured rates in both the U.S. and California with males more likely to be uninsured than females. Emerging young adults have the lowest number of outpatient healthcare visits per person per year and the highest number of emergency room visits. Young adults aged 18–24 are most likely to report no health care visits in the past 12 months. Emerging young adults had the highest prevalence of $0 spending per person per year (26%). Regardless of age group, uninsured individuals are more likely to spend $0 on annual health care expenditures.
TAKE HOME MESSAGE:

This chapter provides a demographic snapshot of emerging young adults in California and the nation, and compares them to adolescents 12–17 years, and young adults, defined as individuals 26–34 years. To perform our analysis, we adjusted population data to account for the disparate number of years in each age cohort. This adjustment produced an average that could be compared across groups. Our population statistics are from 2009, the latest year for which figures are available.

There were 34.6 million emerging young adults in the U.S., including 4.3 million in California. In the nation and the state, males slightly outnumber females among 18–25 year olds. In the U.S., whites are the largest racial/ethnic group, accounting for approximately 60 percent of the population in each age group. However, the ethnic/racial composition of California differs sharply from the nation as a whole. In California, in all three age groups, Hispanics/Latinos are the largest racial/ethnic group, accounting for 43.3% of emerging young adults, 47.7% of adolescents and 42% of young adults.

Figure 1.1A
Population by Gender and Age Group, U.S., 2009

Among U.S. males aged 12–34, 20 year olds form the most populous age group. The female population peaks at 20 years and 29 years.

Figure 1.1B
Population by Gender and Age group, U.S. and California, 2009

Emerging young adults make up the largest age group in the U.S. and California, after adjusting for the years in each cohort, and emerging young adult males make up the largest group (Figures 1.1B, 1.1C).

Figure 1.1C
Average Population per Year* by Gender and Age Group, U.S. and California, 2009

In the U.S. and California, males have a larger population per age group than females (Figures 1.1B, 1.1C).

Figure 1.1D
Percentage of Population by Race and Age Group, U.S., 2009

Within each age cohort in the U.S., whites are the largest racial/ethnic group with approximately 60% in each age group, followed by Hispanics/Latinos (19.5%, 18.2%, and 19.8% respectively) and blacks (14.8%, 14.6%, and 15.2% respectively).

Figure 1.1E
Percentage of Population by Race and Age Group, California, 2009

By contrast, Hispanics/Latinos are the largest racial/ethnic group within each age cluster in California, with 47.7%, 45.3%, and 42% respectively in each age group followed by whites, Asian-Pacific Islanders, and blacks.

*adjusted by number of years/age group
Source: US Census Bureau (2009)
Source: US Census Bureau, American Fact Finder (2010)
Compared to adolescents and young adults, emerging young adults will experience the greatest population decline (between 2010 and 2020) and gain (between 2020 and 2030), after adjusting for the years in each cohort (Figures 1.2A, 1.2B, 1.2C & 1.2D).

Source: Population Projections, CDC Wonder

Demographics continued
TAKE HOME MESSAGE:

Unintentional injury, homicide, and suicide, respectively, are the three leading causes of death among young people aged 12–34. Mortality rates are higher among males than females. Compared to adolescents and young adults, emerging young adults aged 18–25 are more likely to die from unintentional injury and homicide. Homicide rates for emerging young adults are higher in California than in the nation as a whole. Cancer and heart disease are the fourth- and fifth-leading causes of death, respectively, across all age groups.

Figure 2.1A
Overall Mortality Rates (per 100,000) by Age Group, Race, and Gender, U.S., 2008
Overall mortality rates are higher for males than females across all age groups in California and the nation (Figures 2.1A, 2.1B).

Figure 2.1B
Overall Mortality Rates (per 100,000) by Age Group, Race, and Gender, California, 2008
Among all age groups, in both genders, in both the U.S. and California, blacks have the highest overall mortality rates and Asian/Pacific Islanders have the lowest rates (Figures 2.1A, 2.1B). Note that Hispanic emerging young adult males have the highest overall mortality rate compared to the other two age groups for Hispanic males.

Table 2.1
Leading Causes of Death, Rates (per 100,000), U.S. and California, 2008

United States

<table>
<thead>
<tr>
<th>Rank</th>
<th>Cause of Death</th>
<th>12 - 17</th>
<th>Cause of Death</th>
<th>18 - 25</th>
<th>Cause of Death</th>
<th>26 - 34</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unintentional Injury</td>
<td>11.9</td>
<td>Unintentional Injury</td>
<td>39.1</td>
<td>Unintentional Injury</td>
<td>27.1</td>
</tr>
<tr>
<td>2</td>
<td>Homicide</td>
<td>4.0</td>
<td>Homicide</td>
<td>14.5</td>
<td>Suicide</td>
<td>12.9</td>
</tr>
<tr>
<td>3</td>
<td>Suicide</td>
<td>3.8</td>
<td>Suicide</td>
<td>12</td>
<td>Homicide</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>Malignant Neoplasms</td>
<td>2.7</td>
<td>Malignant Neoplasms</td>
<td>4.4</td>
<td>Malignant Neoplasms</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Heart Disease</td>
<td>1.1</td>
<td>Heart Disease</td>
<td>3.2</td>
<td>Heart Disease</td>
<td>8.3</td>
</tr>
<tr>
<td>6</td>
<td>Congenital Anomalies</td>
<td>0.9</td>
<td>Congenital Anomalies</td>
<td>1.1</td>
<td>HIV</td>
<td>2.5</td>
</tr>
<tr>
<td>7</td>
<td>Cerebrovascular</td>
<td>0.3</td>
<td>Diabetes Mellitus</td>
<td>0.6</td>
<td>Diabetes Mellitus</td>
<td>1.5</td>
</tr>
<tr>
<td>8</td>
<td>Chronic Low. Respiratory Disease</td>
<td>0.3</td>
<td>HIV</td>
<td>0.6</td>
<td>Cerebrovascular</td>
<td>1.4</td>
</tr>
<tr>
<td>9</td>
<td>Influenza &amp; Pneumonia</td>
<td>0.3</td>
<td>Influenza &amp; Pneumonia</td>
<td>0.6</td>
<td>Liver Disease</td>
<td>1.3</td>
</tr>
<tr>
<td>10</td>
<td>Benign Neoplasms</td>
<td>0.2</td>
<td>Cerebrovascular</td>
<td>0.5</td>
<td>Congenital Anomalies</td>
<td>0.9</td>
</tr>
</tbody>
</table>

California

<table>
<thead>
<tr>
<th>Rank</th>
<th>Cause of Death</th>
<th>12 - 17</th>
<th>Cause of Death</th>
<th>18 - 25</th>
<th>Cause of Death</th>
<th>26 - 34</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unintentional Injury</td>
<td>10.4</td>
<td>Unintentional Injury</td>
<td>43.3</td>
<td>Unintentional Injury</td>
<td>36.9</td>
</tr>
<tr>
<td>2</td>
<td>Homicide</td>
<td>5.9</td>
<td>Homicide</td>
<td>24.7</td>
<td>Homicide</td>
<td>16.1</td>
</tr>
<tr>
<td>3</td>
<td>Suicide</td>
<td>2.0</td>
<td>Suicide</td>
<td>11.9</td>
<td>Suicide</td>
<td>14.0</td>
</tr>
<tr>
<td>4</td>
<td>Malignant Neoplasms</td>
<td>3.2</td>
<td>Malignant Neoplasms</td>
<td>6.9</td>
<td>Malignant Neoplasms</td>
<td>12.6</td>
</tr>
<tr>
<td>5</td>
<td>Heart Disease</td>
<td>0.6</td>
<td>Heart Disease</td>
<td>3.2</td>
<td>Heart Disease</td>
<td>9.2</td>
</tr>
<tr>
<td>6</td>
<td>Congenital Anomalies</td>
<td>0.5</td>
<td>Congenital Anomalies</td>
<td>1.3</td>
<td>HIV</td>
<td>2.7</td>
</tr>
<tr>
<td>7</td>
<td>Influenza &amp; Pneumonia</td>
<td>0.2</td>
<td>Cerebrovascular</td>
<td>0.9</td>
<td>Liver Disease</td>
<td>2.2</td>
</tr>
<tr>
<td>8</td>
<td>Anemias</td>
<td>0.1</td>
<td>HIV</td>
<td>0.5</td>
<td>Diabetes Mellitus</td>
<td>1.7</td>
</tr>
<tr>
<td>9</td>
<td>Cerebrovascular</td>
<td>0.2</td>
<td>Diabetes Mellitus</td>
<td>0.4</td>
<td>Cerebrovascular</td>
<td>1.4</td>
</tr>
<tr>
<td>10</td>
<td>Chronic Low. Respiratory Disease</td>
<td>0.1</td>
<td>Chronic Low. Respiratory Disease</td>
<td>0.3</td>
<td>Congenital Anomalies</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2008 on CDC WONDER Online Database, released 2011
**Mortality continued**

**Figure 2.1C**

**Top Three Causes of Mortality Rates (per 100,000) by Age Group and Gender, U.S., 2009**

**Homicides:** Emerging young adult males face the highest risk of homicide in California and the nation. The majority of these homicides involve firearms. Among emerging young adults nationally, males face six times the risk of homicide compared to females. In California, emerging young adult males face nearly 10 times the risk (Figures 2.1C, 2.1D).

**Suicides:** Emerging young adults are nearly four times more likely to kill themselves than adolescents. Among emerging young adult males, the risk of suicide is six fold compared to females. In both the U.S. and California, in all age groups, suicide rates are higher in males with the highest rate being in males aged 26-34.

**Unintentional Injuries:** Accounts for nearly half of deaths among those aged 15–24 and the death rate has increased 5% (35.7/100,000 to 37.4) since 1997 (Figure 2.1E).

**Figure 2.1D**

**Top Three Causes of Mortality Rates (per 100,000) by Age Group and Gender, California, 2009**

**Suicides:** Emerging young adults are nearly four times more likely to kill themselves than adolescents. Among emerging young adult males, the risk of suicide is six fold compared to females (Figures 2.1C, 2.1D). In both the U.S. and California, in all age groups, suicide rates are higher in males with the highest rate being in males aged 26-34.

**Figure 2.1E**


Unintentional injuries account for nearly half of deaths among Americans aged 15–24 and the death rate has increased 5% (35.7/100,000 to 37.4) since 1997 (Figure 2.1E).

**Source:** Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. (2005)
TAKE HOME MESSAGE:

Unintentional Injuries

As noted in section 2, unintentional injuries are the leading cause of mortality among adolescents, emerging young adults, and young adults in California and the nation. Emerging young adults face the highest risk. Motor vehicle accidents (MVA) account for the largest percentage of fatal unintentional injuries. Emerging young adults are more likely to be injured or die in MVAs than adolescents or young adults. Compared to these two other age groups, emerging young adults also have more MVA-related hospitalizations and emergency department (ED) visits. In 2005, MVA-related hospitalization and ED treatment of emerging young adults cost the U.S. health care system $9 billion.

Intentional Injuries

Homicides and suicides are the second- and third-leading causes of death, respectively, in young people aged 12–34. Major non-fatal intentional injuries include non-sexual assault, sexual assault, firearm injury and suicide attempts (covered in section 4). Of the three age groups studied, emerging young adults have the highest rate of non-sexual assault. Males are at greatest risk of non-sexual assault; females are at greatest risk of sexual assault. Across all demographic groups, white females aged 12–25 are the likeliest victims of sexual assault. Emerging young adults are at greatest risk of firearm injury compared to adolescents and young adults. Emerging young adult males have 10 times the risk of firearm injury compared to females in the same age group.

Figure 3.1A
Non-Fatal Motor Vehicle Accident Occupant Injury Rates (per 100,000) by Gender, Race, and Age Group, U.S., 2010

Non-fatal unintentional MVA injuries: Emerging young adults have the highest non-fatal injury rates from motor vehicle accidents, compared to adolescents and young adults.

Race: Emerging young adult and young adult black females have the highest non-fatal MVA-related injury rate among all age, gender and racial groups studied.

Figure 3.1B
Non-Fatal MVA-Occupant Injury Rates (per 100,000) by Age and Gender, U.S., 2010

Gender: Females are more likely to experience non-fatal MVA-related injuries than males. Non-fatal MVA-related injury rates peak in females at age 18; in males, at age 20.

Figure 3.1C
Fatal MVA-Occupant Injury Rates (per 100,000) by Age and Gender, U.S., 2009

Fatal unintentional MVA injuries: Males are at greater risk of MVA-related death than females. Mortality rates peak in males at age 19; in females, at age 18.

Figure 3.1D
Fatal MVA-Occupant Injury Rates (per 100,000) by Age and Gender, U.S. and California, 2009

Compared to adolescents and young adults, emerging young adults are most likely to die in motor vehicle accidents. California: In California, as in the nation, emerging young adults are more likely than young adults or adolescents to die in motor vehicle accidents; males have the highest risk in each age group. However, fatality rates are lower in California than the U.S. as a whole.
Injuries continued

**Figure 3.1E**

Total Number and Cost Per Hospitalization for Non-Fatal MVAs by Age Group, U.S., 2005

Hospitalizations and ED visits:
Emerging young adults have more hospitalizations and emergency department visits due to non-fatál MVAs than other age groups studied (Figures 3.1E, 3.1F).


**Figure 3.1F**

Total Number and Cost per ED Visit for Non-Fatal MVAs by Age Group, U.S., 2005

Emerging young adults have 190% more hospitalizations and 150% more emergency department visits than adolescents; emerging young adults have two-thirds more hospitalizations and 37% more emergency department visits than young adults (Figures 3.1E, 3.1F).


**Figure 3.1G**

Number of Hospitalizations for Non-Fatal MVAs by Gender and Age Group, U.S., 2005

Gender: Males have higher numbers of hospitalizations; females have higher numbers of ED visits (Figures 3.1G, 3.1H).


**Figure 3.1H**

Number of ED Visits for Non-Fatal MVAs by Gender and Age Group, U.S., 2005

Emerging young adults have 190% more hospitalizations and 150% more emergency department visits than adolescents; emerging young adults have two-thirds more hospitalizations and 37% more emergency department visits than young adults (Figures 3.1E, 3.1F).


**Figure 3.1I**

Total, Medical, and Work Lost Costs for Hospitalizations for Non-Fatal MVAs by Age Group, U.S., 2005

Costs: Compared to adolescents and young adults, emerging young adults have the highest medical costs, work-lost costs, and total costs for ED visits and hospitalizations due to non-fatal MVAs. Hospitalizations and emergency room visits for emerging young adults cost $6.5 billion and $2.6 billion, respectively (Figures 3.2I, 3.2J).


**Figure 3.1J**

Total, Medical, and Work Lost Costs for ED Visits for Non-Fatal MVAs by Age Group, U.S., 2005

Costs: Compared to adolescents and young adults, emerging young adults have the highest medical costs, work-lost costs, and total costs for ED visits and hospitalizations due to non-fatal MVAs. Hospitalizations and emergency room visits for emerging young adults cost $6.5 billion and $2.6 billion, respectively (Figures 3.2I, 3.2J).
Injuries continued

Intentional Injuries

Figure 3.2A
Estimated Non-Sexual Assault Rates (per 100,000) by Age Group and Gender, U.S., 2010

Non-sexual assault victimization rates: Emerging young adults face the highest risk of non-sexual assault compared to adolescents and young adults. Emerging young adult males are 70% and 50% more likely to be victimized than adolescent males and young adult males, respectively. The victimization rate for emerging young adult females is 100% and 50% higher than the rates for adolescent females and young adult females, respectively.

Gender: Across all age groups and races/ethnicities, males have a higher rate of non-sexual assault compared to females.

Race: For all age groups, blacks have the highest rates of non-sexual assault compared to other races/ethnicities.

Age: Victimization rates increase sharply as white and black females and white and Hispanic/Latino males move from adolescence into emerging young adulthood.


Figure 3.2B
Estimated Sexual Assault Rates (per 100,000) by Gender, Race and Age Group, U.S., 2010

Sexual assault victimization rates: Females aged 12–25 have the highest sexual assault victimization rates.

Gender: Across all age groups, females are at greater risk for sexual assault than males. Compared to their male counterparts, emerging young adult females face 18 times the risk of sexual assault.

Race: Black females have the highest rate of being sexually assaulted in each age group. Among emerging young adult females, blacks are 63% and 216% more likely to be assaulted sexually than whites or Hispanics/Latinos, respectively.


Figure 3.2C
Non-Fatal Firearm Injury Rates (per 100,000) by Gender and Age Group, U.S., 2010

Non-fatal firearm injury rates: Emerging young adults face the greatest risk of non-fatal shootings. Compared to adolescents and young adults, emerging young adults are 220% and 75% more likely to be non-fatally shot, respectively. Emerging young adult males are 8.6 times more likely to suffer non-fatal firearm injury than their female counterparts.

Mental Health

TAKE HOME MESSAGE:

Depression and suicidal thoughts, attempts and deaths are major problems in emerging young adults. Compared to young adults aged 26–34, emerging young adults have higher rates of serious psychological distress and suicidal thoughts, plans and attempts. Compared to adolescents, emerging young adults are more likely to complete suicides. It should be noted that people with health insurance are less likely to suffer from depressive disorder than people without health insurance. For the U.S. overall, 8% of insured individuals and 15.2% of uninsured individuals had depressive disorders. (Centers for Disease Control and Prevention. MMWR 2010; 59:1229-1235).

Figure 4.1A

Serious Psychological Distress in Past Month and Past Year, U.S. (NSDUH 2010) and California (CHIS 2009)

Nationally: Emerging young adults have higher rates of past-month and past-year prevalence of serious psychological stress compared to young adults (Figure 4.1a). In the past year, nearly 18% of emerging young adults report serious psychological distress; in the past month, nearly 8% report serious psychological distress.

California: The rates of serious psychological distress appear lower in California than in the nation for both age groups.

Figure 4.1B

Current Depression Among Adults by Age Group and Type, U.S., 2006-2008

Depression: More than 11% of young adults aged 18-24 have depression compared to more than 9% of young adults aged 25 to 34.

Figure 4.1C

Suicide Ideation, Plan, and Attempt in Past 12 Months, U.S., 2010

Suicidal thoughts, plans and attempts: The prevalence of past-year suicidal thoughts, plans and attempts is higher among emerging young adults than among young adults. More than 6% of emerging young adults report suicidal thoughts in the past 12 months; nearly 2%, suicidal plans; more than 1%, a suicide attempt.

Figure 4.1D

Suicide Ideation, Plan, and Attempt in Past 12 Months by Age Groups, U.S. and California, 2009

U.S. and California: Prevalence rates of suicidal thoughts, plans and attempts were similar in the young adult population 18-29 comparing the U.S. and California but were much higher in this age group than those 30 and over (Figures 4.1C & 4.1D).
TAKE HOME MESSAGE:

Alcohol

Emerging young adults have the “perfect storm” of alcohol risk: i.e., the highest rate of past-month binge drinking* but the lowest perception of risk; the greatest need for services but lowest access to services. A subset of emerging young adults, those aged 21–25, is more likely to drive under the influence of alcohol than any other age group studied.

Tobacco

In both California and the nation, emerging young adults have the highest rates of past-month tobacco and cigarette use, although the trend has been declining for 20 years.

Illicit Drug Use

Emerging young adults are more likely than other groups studied to use marijuana, cocaine and other illicit drugs, and to abuse prescription pain relievers. Past-month trends in California and the nation are similar. As with alcohol, emerging young adults have a “perfect storm” for drug abuse risk: they have lowest perception of marijuana-related risk, the greatest need for drug abuse services, and the lowest treatment rates.

*NSDUH Definitions

Binge use - Five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days.

Heavy use - Five or more drinks on the same occasion on each of 5 or more days in the past 30 days.

Source: Substance Abuse and Mental Health Services Administration, State Estimates of Substance Use and Mental Disorders from the 2008-2009 National Surveys on Drug Use and Health.
Figure 5.2A
Tobacco Product and Cigarette Use in Past Month by Age Group, U.S. and California, 2008-2009
Emerging young adults in California and the nation have the highest rates of tobacco and cigarette use.

Figure 5.2B
Cigarette Use in Past Month by Age, U.S., 2010
Broken down by specific smaller age groups, the prevalence of cigarette use in the past month is above 35% in 21-25 year olds and 26-29 year olds.

Figure 5.2C
Trends in Any Cigarette Smoking Past Month by Grade and Age Group, U.S., 1991-2010
The 30-day prevalence of cigarette smoking among young people has been trending downward since 1995. Smoking is more common among young adults not in college than college students.

Source: Substance Abuse and Mental Health Services Administration, State Estimates of Substance Use and Mental Disorders from the 2008-2009 National Surveys on Drug Use and Health

Source: Substance Abuse and Mental Health Services Administration, Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings

Source: Substance Abuse and Mental Health Services Administration, Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings

Source: Johnston, L. D., O’Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2011)
Emerging young adults in California and the nation have the highest rates of past-month illicit drug use, regardless of whether marijuana is included (~20%) or excluded (~8%).

Emerging young adults in California and the nation have the highest rates of past-year drug dependence or abuse and the greatest need for, but not receiving treatment services.

Emerging young adults in California and the nation have the highest past-month marijuana use (>15%) and the lowest perception of marijuana-related risk.

Compared to other groups, emerging young adults in California and the nation have the greatest percentage of past-month cocaine users and (~6% nationally) and the highest nonmedical use of prescription pain relievers (~12% nationally).

The NSDUH study shows a slight increase in illicit drug use between 2008 and 2011 in all age groups with largest increase in emerging young adults.
### Table 5.3A

#### Annual Prevalence of Use for Various Types of Drugs Among Respondents 1 to 4 Years Beyond high School by Gender and Full-Time College vs. Others, U.S., 2011

In general, non-college students have higher past-year drug use than college students in all categories except marijuana, Adderall and "being drunk." Marijuana usage is about the same.

**Source:** Johnston, L.D., O'Malley, P.M., Bachman, J.G., & Schulenberg, J.E. (2011). Adapted from Table 8-2

### Table 5.3B


**Trends:** Longer term declines of annual drug usage appeared to end in 1992 or 1993. Among the sample of 19–28 year olds, this was true for the use of any illicit drug, marijuana, any illicit drug other than marijuana, hallucinogens, narcotics other than heroin, crack, amphetamines, sedatives (barbiturates), and tranquilizers.

**Source:** Johnston, L.D., O'Malley, P.M., Bachman, J.G., & Schulenberg, J.E. (2011). Adapted from Table 5-2
Reproductive Health

TAKE HOME MESSAGE:

Sexual Activity
Reproductive health issues are of major significance in terms of preventing many health risks including unintended pregnancy and sexually transmitted infections (STIs). The prevalence of sexual activity in the past 12 months increases with age and is between 70% and 80% in emerging young adults but varies depending on age, race, and gender.

Pregnancy and Birth Rates
Birth rates peak in young adults aged 25–29. While trends show a decrease in birth rates since 1980 in adolescents and young adults until age 29, there has been a continuing rise in the percent of pregnancies resulting in a live birth in this age group. The highest percent of Medi-Cal funded therapeutic abortions (TABs) in California is in the young adult population aged 18–24.

Contraception
Condoms and birth control pills are the most frequently used methods of contraception. While condom use has been increasing in high school students over time and is above 60%, the frequency of “always” using a condom is much lower.

Alcohol, Drugs, and Sexual Behaviors and Risks
Alcohol is frequently used during sexual activity and can result in unprotected sexual activity and non-consensual sexual activity.

Sexual Activity

Any Sexual Activity Within Last 12 Months by Race, Gender, and Age Group, U.S., 2006-2010

Sexual activity: Sexual activity in the past 12 months rises with age and is between 70% and 80% in emerging young adults depending on gender and race.


High school students: 46% of high school students report ever having sexual intercourse and this has trended downward since 1991 (54.1%). More males than females report ever having sexual activity, though the gap between them appears to have decreased over time.

Figure 6.1C
Percent Reporting Lifetime Oral Sex Behaviors by Gender and Age Group, U.S., 2010

Oral sex: Participation in oral sex increases with age and is fairly similar between males and females.

Percent Reporting Lifetime Vaginal Intercourse by Age Group and Gender, U.S., 2010
Vaginal intercourse: Likewise, the percent of individuals reporting lifetime vaginal intercourse increases with age and there are not large differences between males and females, with the exception of those aged 20–24. 85.6% of females in this age group reported ever having vaginal intercourse compared to 70.3% of males.
Reproductive Health continued

Figure 6.2B

Pregnancy Rates (per 1,000) by Age Groups of Mother, U.S., 2006

Pregnancy Rates: Pregnancy rates increase with age up through age 29 (Figure 6.2a, b). The percentage of pregnancies that end in births also increases with age, while the percent ending in abortions decreases and miscarriages remain fairly constant.


Figure 6.2C

Percent of Unwanted Pregnancies Ending in Abortion by Age of Mother, U.S., 2006

Abortion: The percent of unwanted pregnancies that end in abortion range from 37% among 15-19 year olds to 49% among girls younger than 15 (Figure 6.2C). Among women aged 20–24, 23% of all pregnancies result in abortion, but this number jumps to 41% when the pregnancy is unwanted (Figure 6.2A, 6.2C).

Source: Hamilton BE, Martin JA, & Ventura SJ, 2011
Contraception

Methods: Among sexually active males and females aged 18–25, condoms and birth control pills were the most frequently used contraceptive method at last sex at 55% and 37%, respectively for males and 41% and 32% for females.

*Respondents could select up to four methods.

Source: National Survey of Family Growth 2006-2010

Contraceptive Methods* Used at Last Sex Among Males Who Have Had Sex in the Past 12 Months by Age Group, U.S., 2006-2010

Contraceptive Methods* Used at Last Sex Among Females Who Have Had Sex in the Past 12 Months by Age Group, U.S., 2006-2010

Consequences as a Result of Drinking in Past 12 Months Among College Students, U.S., 2009

Alcohol and drugs: Alcohol and drugs play a role in sexual activity in adolescents and young adults and can lead to risky behaviors.

Consequences: College students report that secondary to alcohol, 16.2% had unprotected sex, 1.9% had sexual intercourse without giving consent and 0.4% had sexual intercourse without getting consent.

Source: American College Health Association: NCHA Report Fall 2009


High School Students: Almost two thirds of sexually active high school students reported using a condom the last time they had sexual intercourse and this has increased since 1991.

Source: Centers for Disease Control and Prevention (CDC). 1991-2009 High School Youth Risk Behavior Survey Data

Contraceptive Methods* Used at Last Sex Among Males Who Have Had Sex in the Past 12 Months by Age Group, U.S., 2006-2010

Contraception

Percentage of High School Students Who Used Both a Condom and Birth Control Pills or Depo-Provera to Prevent Pregnancy Before Last Sexual Intercourse, 1999-2009

Only 8.9% of high school students used both a condom and either birth control pills or Depo-Provera to prevent pregnancy before their last sexual intercourse. However, the percent using both of these methods has increased from 4.8% in 1999 to 8.9% in 2009.

Source: Centers for Disease Control and Prevention (CDC). 1991-2009 High School Youth Risk Behavior Survey Data

Alcohol, Drugs, and Sexual Behaviors and Risks

Consequences as a Result of Drinking in Past 12 Months Among College Students, U.S., 2009

Alcohol and drugs: Alcohol and drugs play a role in sexual activity in adolescents and young adults and can lead to risky behaviors.

Consequences: College students report that secondary to alcohol, 16.2% had unprotected sex, 1.9% had sexual intercourse without giving consent and 0.4% had sexual intercourse without getting consent.
Take Home Message:

**Chlamydia**
The highest incidence rates of chlamydia among males is in young adult males aged 20-24 and among females the highest rates are in adolescent and young adult females aged 15-24. Incidence rates in young adults are highest in African American females 20-24, followed by African American males 20-24.

**Gonorrhea**
Similar to chlamydia, the highest incidence rates of gonorrhea are in young adult males aged 20–24 and in older adolescent and young adult females aged 15–24. Incidence rates in young adults are highest in Black females 20–24, followed by Black males 20–24.

**Syphilis**
The highest incidence rates of syphilis are in young adult males aged 20–29. Among young adults aged 20–29, incidence rates for syphilis are highest in black males.

**HIV**
The largest number of HIV diagnoses are occurring among emerging young adults aged 20–24.

**Chlamydia**

Figure 7.1A

Chlamydia Rates (per 100,000) by Age Group and Gender, U.S. and California, 2010

Chlamydia Incidence rates: The highest incidence rates of chlamydia are in young adult males 20–24 and adolescent and young adult females 15–24.

California/US: Incidence rates are slightly lower in California than in the U.S. as a whole. This is most noticeable in 15–24 year old females.


Figure 7.1B

Chlamydia Rates (per 100,000) by Age Group, Gender, and Race Among 20-29 Year Olds, U.S. and California, 2010

Gender/Racial difference: Incidence rates in young adults are highest in Black females 20-24, followed by Black males 20–24, and Hispanic females 20–24. Lowest incidence rates in young adults 20–29 were in white and Asian males.


Figure 7.1C

Trends in Chlamydia Incidence Rates (per 100,000) by Age Group, U.S., 2006-2010

Trends: Incidence rates were always highest in the 20–24 age group both nationally and in California.

U.S.: Nationally, incidence rates appear to be increasing in 20–24 and 15–19 year olds and rates are higher in these age groups than in California.

Source: Sexually Transmitted Diseases in California, 2010.

Figure 7.1D

Trends in Chlamydia Incidence Rates (per 100,000) by Age Group, California, 2005-2010

California: Chlamydia incidence rates are higher in the 25 to 29-year-old age group in California than in the U.S.
Sexually Transmitted Infections continued

Gonorrhea

Figure 7.2A
Gonorrhea Rates (per 100,000) by Age Group and Gender, U.S. and California, 2010

Gonorrhea Incidence rates: Similar to chlamydia, the highest incidence rates of gonorrhea are in older adolescent and young adult females 15–24 and young adult males 20–24 compared to younger adolescents and young adults over 24.

California/US: Incidence rates are much lower in California than in the U.S. as a whole for all age groups of females and most noticeably lower in males aged 15–24.

Figure 7.2B
Gonorrhea Rates (per 100,000) by Age Group, Gender, and Race Among 20-29 Years Olds, U.S. and California, 2010

Gender/Racial difference: In young adults, incidence rates are highest in Black females 20-24, followed by Black males 20–24, with large drops in other ethnic groups. The lowest rates in young adults aged 20–29 were in the Asian/Pacific population.

Figure 7.2C
Trends in Gonorrhea Incidence Rates (per 100,000) by Age Group, U.S., 2006-2010

Trends: Incidence rates were always highest in the 20–24 age group (Figure 7.2C—7.2D).

U.S.: Gonorrhea incidence rates were higher in the U.S. than in California regardless of age group.

Figure 7.2D
Trends in Gonorrhea Rates (per 100,000) by Age Group, California, 2005-2010

Syphilis

Figure 7.3A
Syphilis Rates (per 100,000) by Age Group and Gender, U.S. and California, 2010

Syphilis Incidence rates: The incidence rates of syphilis increase with age and peak in the U.S. in 20-24 year olds. In California males, the peak incidence is in 30–34 year olds.

Gender: Young adult males aged 20–24 in the U.S. have a 3.9 times greater incidence rate of syphilis compared to U.S. females. Californian young adult males have rates nearly 20 times that of Californian females aged 20–24.

California/US: Among females, incidence rates are higher in the U.S. compared to California.


Figure 7.3B
Syphilis Rates (per 100,000) by Age Group, Gender, and Race Among 20-29 Year Olds, U.S. and California, 2010

Racial difference: In young adults, the incidence rates are highest in Black males 20–29, followed by Black females 20–24 and Hispanic males 20–29. The lowest rates in young adults aged 20–29 were in the White and Asian/Pacific female population.


Figure 7.3C
Trends in Syphilis Incidence Rates (per 100,000) by Age Group, U.S., 2006-2010

Trends: Incidence rates differ among and age groups and in trends in the U.S. and California (Figure 7.3C, 7.3D)

U.S.: Incidence rates have trended upward between 2006 and 2010 and are highest among 25–29 and 20–24 year olds.


Figure 7.3D
Trends in Syphilis Rates (per 100,000) by Age Group, California, 2005-2010

California: Between 2005 and 2010, syphilis rates in California have fluctuated, with 25 to 29 year olds and 30 to 34 year olds having the highest rates in 2010.

Source: Sexually Transmitted Diseases in California, 2010
**HIV/AIDS**

**Figure 7.4A**

**Number of Diagnoses of HIV Infection by Age Group, U.S., 2010 (46 states with confidential reporting)**

HIV: The largest number of HIV diagnoses are occurring among emerging young adults aged 20–24.

**Figure 7.4B**

**Rate (per 100,000) of Diagnoses of HIV Infection by Age Group and Race, U.S., 2010 (46 states with confidential reporting)**

**Race:** Rates of HIV diagnoses are highest in Blacks regardless of age and peak at 148.3 per 100,000 among emerging young adults aged 20–24. This is nearly 4 times as high as Hispanics and 12 times as high as whites of the same age group.

**Figure 7.4C**

**Distribution Percent of Diagnosis of AIDS by Age at Diagnosis and Gender, U.S., 2005-2009**

AIDS: The percent distribution of AIDS diagnoses increases with age in both males and females, peaks in the 35–44 year old age group and declines thereafter.

**Figure 7.4D**

**Trends in Percent of all Cases of Diagnosis of AIDS by Age Groups, U.S., 2005-2009**

Trends: Since 2005, trends in the percent of all cases of AIDS diagnosis have been decreasing in the 35–44 year old age group with a corresponding increase among emerging young adults and young adults aged 15–34.

**Figure 7.5A**

**Rate (per 100,000 person-years) of Genital Warts Prevalence Among Individuals in Private Health Plans by Age Group and Gender, U.S., 2000**

**Genital warts:** Rates peaked in females 20–24 (~6/1,000 person years), who had about twice the rate of males the same age.
TAKE HOME MESSAGE:

In the U.S. there are over 16.3 million cases of the top seven common chronic diseases — cancers, diabetes, heart disease, hypertension, stroke, mental disorders and pulmonary conditions. Many of these are also significant problems in young adults and three — cancer, heart disease, and mental disorders (suicide) — are among the top five causes of mortality in young adults. These conditions can shorten lives and reduce the quality of life. Many chronic diseases either continue or start in the young adult years and others such as heart disease, stroke and diabetes can be prevented with interventions during the adolescent and young adult years. There is both a human and economic cost to these chronic disease states. In the U.S. in 2003, the costs amounted to $277 billion in treatment expenditures and $1,047 billion in lost productivity. In California, the respective costs were $27 billion and $106 billion.

Prevention: It is estimated that with reasonable improvements in preventing and managing chronic disease, the U.S. could prevent 40.2 million chronic disease cases in 2023 and 4.3 million cases in California in 2023. The avoided economic costs could be $218 billion (28%) for treatment in U.S. and $895 billion (27%) for lost productivity. This would translate to savings in California of $19 billion (26%) and $98 billion (27%) respectively (Source: Devol, R. and Bedroussian, A., October 2007).

Asthma

The prevalence of ever being diagnosed with asthma decreases with age and is slightly lower in the U.S. than in California. Current asthma diagnosis is higher among emerging young adults than young adults.

Diabetes

The prevalence of diabetes, pre-diabetes and gestational diabetes increases with age in the U.S.

Cancer

The lowest improvements in cancer survival rates in the past 25 to 35 years occur in young adults aged 20 – 35. This may be related to many factors including potential differences in involvement in treatment protocols, treatment centers and access to health care.

Cardiovascular

Nationally, approximately 3% of emerging young adults have been told they have any kind of heart condition or disease. In California, the prevalence of heart disease is around 1%. High total cholesterol increases with age.

Epilepsy

1.8% of emerging young adult males and 0.9% of emerging young adult females have been diagnosed with epilepsy.

Renal Disease

Renal disease rates are higher among young adults aged 26–34 than emerging young adults for both genders.

Disability

According to the CDC, in 2005, the prevalence of self-reported disabilities among non-institutionalized U.S. adults 18 and over was 21.8% encompassing 47.5 million Americans. The proportion of the population with a disability increased with age and was 11% in those 18 to 44. Overall, more women in the U.S. have a disability (24.4%) than men (19.1%) both overall and in all age groups (Centers for Disease Control and Prevention: Prevalence and Most Common Causes of Disability among Adults).

Obesity

Nationally, obesity increases with age. Obesity prevalence rates have skyrocketed from 9.7% in females aged 20–34 in 1971–74 to 31.4% in 2005–2008; the numbers in males of the same age have increased from 8.9% to 25.4% over the same time period.
Diabetes and Pre-Diabetes Prevalence by Gender and Age Group, U.S., 2010

U.S.: The prevalence of diabetes, pre-diabetes and gestational diabetes increases with age in the U.S. The rate for diabetes is approximately 1% in emerging young adults and nearly doubles in the 26–34-year-old population.

Gestational diabetes: The prevalence of gestational diabetes increases with age, although there are large differences between national and state prevalence rates in young adults aged 26–34. Nationally, 3.6% of women aged 26–34 have gestational diabetes compared to 6.2% in Californian women of same age (Figures 8.2A, 8.2B, 8.2C).

Diabetes and Pre-Diabetes Prevalence by Gender and Age Group, California, 2010

California: The prevalence rates of diabetes in emerging young adults are higher in females in California (1.5% versus 1.1% U.S.) and lower in males in California (0.4% versus 0.9% U.S.) (Figures 8.2A, 8.2B).

Prevalence Ever Diagnosed with Diabetes by Gender and Age Group, U.S., 2009–2010

The big increase in ever diagnosed with diabetes appears to occur from adolescents/emerging young adults into the young adult age group.

Trends in Prevalence of Percent of Members with DM* by Age Group, Northern California Kaiser Permanente, 2007–2010

In data from young adult members in Kaiser Permanente Northern California the percent of members with the diagnosis of DM also increased with age (0.38% in 12–17 year olds, 0.67% in 18–25 year olds and 1.55% in 26–34 year olds in 2010.) There were no major changes in prevalence in any age group between 2007 and 2010.

Lab Results Indicate Diabetic but Undiagnosed by Gender and Age Group, U.S., 2009–2010

Undiagnosed Diabetes: NHANES provides an estimate of individuals who have diabetes, but who have not been diagnosed. In the emerging young adult population, 0.14% of males and 0.18% of females meet the American Diabetes Association criteria for a diabetes diagnosis, but do not report being diagnosed as diabetic.
Chronic Disease continued

**Figure 8.3A**
 Improvement in 5-Year Relative Survival. All Invasive Cancer Excluding Kaposi Sarcoma

Between 1986-1995 and 1996-2005 the lowest improvement rates in cancer survival were in older adolescents and young adults aged 15 to 25.

**Figure 8.3B**
 Trends in Improvement in Average Annual Percent Change in Cancer Mortality Rates by Age Group, U.S., 1975-2009

The trends in survival in Figure 8.3A are confirmed in SEER data through 2009 showing the lowest average annual improvement rates in survival for all cancers in those aged 20 to 24.

**Figure 8.3C**

Between 1990 and 1998, the lowest reduction in cancer mortality and lowest number of individuals enrolled in National Cancer Trials was 20–24 year olds suggesting a clinical trial enrollment gap in emerging young adults.

**Table 8.3A**
 NIH and NCI Recommendations for Adolescents and Young Adults with Cancer (AYA)

The NIH and NCI has suggested a comprehensive approach to improving the approach, delivery of care and treatment, awareness, prevention of adolescent and young adult (AYA) cancer patients.

1. Identify Characteristics of Unique Cancer burden in AYA oncology patients
2. Improve awareness, prevention, access and quality care
3. Create tools to study AYA cancer
4. Ensure excellence in service delivery across cancer control continuum
5. Strengthen and promote, advocate, and support AYA Cancer Patient

**Table 8.3B**
 Top Cancers in the U.S. and California, Incidence Rates (per 100,000) by Age Group and Gender, 2008

**Table 8.3C**
 Percentage of the U.S. Population < 65 Years of Age Who are Insured, by Age Plotted Against National Cancer Mortality Reduction, 1990-1998

There appears to be a relationship between the percent insured and the average annual reduction in cancer mortality and both hit their lows in the emerging young adult population ~18–24 suggesting an insurance coverage gap in emerging young adults.
**Cardiovascular**

**Figure 8.4A**

Prevalence Ever Told Have Heart Disease or Condition by Age Group and Gender, U.S. and Western States, 2010

**Heart Disease:** Approximately 3.1% of male emerging young adult and 3.2% of female emerging young adult report being told they have a heart condition or disease. The prevalence is lower in the western United States among emerging young adults (2.0% of males and 2.5% of females).

**Source:** National Health Interview Survey 2010. Sample Adult File.

**Figure 8.4B**

Prevalence Ever Told Had any Kind of Heart Disease by Age Group and Gender, California, 2009

**California:** 0.6% of emerging young adult males and 1.1% of emerging young adult females report ever being told they have any kind of heart disease. The prevalence was lower in young adult males and about the same in young adult females.

**Source:** 2009 California Health Interview Survey

---

**Figure 8.4C**

High Total Cholesterol Prevalence by Age Group, U.S., 1999-2008

**High Total Cholesterol:** In both the U.S. and in California the prevalence rates of high total cholesterol are higher in 25–44 year olds compared to the 20–24 year olds. In 2005, rates in 20–24 year olds were 5.9% nationally and 12.2% in California. Respective rates in 25–44 year olds were 16.8% and 25.9% (Figures 8.4C, 8.4D).

**Source:** Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web site

**Figure 8.4D**

High Total Cholesterol Prevalence by Age Group, California, 2001-2007

**Source:** Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web site

---

**Figure 8.4E**


**Hypertension:** Prevalence rates were higher in emerging young adults aged 18–24 in California (6.3%) than in the U.S. (2.8%). Respective rates in 25–44 year olds were 14.4% and 13.3%.

**Source:** Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web site
Epilepsy

Figure 8.5A

Prevalence Ever Diagnosed With Seizure Disorder or Epilepsy by Age and Gender, U.S., 2010 and California, 2005

NHIS estimates that 1.8% of emerging young adult males and 0.9% of emerging young adult females have been diagnosed with epilepsy. In California, CHIS estimates that in emerging young adults, 0.9% of males and 1.4% of females have been diagnosed with epilepsy.

Based on self-report, but in two different surveys and in two different years, epilepsy prevalence rates in emerging young adults were higher in males nationally and lower in adolescent females than those in California. In young adults aged 26–34 in these two different surveys, prevalence rates were higher nationally 1.8% in both sexes compared to 1.4% in both sexes in California.

Renal Disease

Figure 8.6A

Prevalence of Being Told Have Weak or Failing Kidneys by Age Group and Gender, U.S. and Western States, 2009

Renal disease rates are higher among young adults aged 26–34 than emerging young adults for both genders.

NHIS estimates approximately 0.5% of emerging young adult males and 0.7% of females nationally have been told the individual has weak or failing kidneys (Figure 8.6). In emerging young adults in the NHIS study, rates are higher in females both nationally and in western states.

Disability

Figure 8.7A

Disability Due to Physical, Mental or Emotional Condition by Age Group, U.S. and California, 2010

In the U.S. and California, disability status due to a physical, mental or emotional condition increased with age and was higher in the U.S. For emerging young adults this was 10.3% versus 8.9% in California.

Figure 8.7B

Percent With Diagnosis of Autism* by Age Group and Gender, Northern California Kaiser Permanente, 2010

In Northern California among a large HMO setting, the diagnosis of autism decreased in both males and females with increasing age. In emerging young adult males, the diagnosis of autism increased from 0.7 percent in 2006 to 1.2% in 2010 (Figures 8.7B, 8.7C).

Figure 8.7C

Trends in Percent With Diagnosis of Autism* Among Emerging Young Adults (aged 18 to 25) by Gender, Northern California Kaiser Permanente, 2006-2010

*Includes Autistic Disorder, Autistic Spectrum Disorders, Aspergers, PDD/PDD-NOS

Source: Northern California Kaiser Permanente, personal communication, 2011

*Data is statistically unstable

**Obesity**

**Figure 8.8A**

**Prevalence of Overweight or Obese, by Gender and Age Group, U.S., 2009-2010**

Prevalence rates: Nationally, the prevalence of overweight and obesity increases with age. Obese and overweight prevalence rates in emerging young adults hit nearly 50% in males and females and reach over 70% in young adult males aged 26–34.

**Source:** Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS). National Health and Nutrition Examination Survey Data. 2009-2010

**Figure 8.8B**

**Prevalence of Being Overweight or Obese by Age Group and Gender, California, 2010**

California: Obesity rates increase with age in California as well, with similar prevalence rates to the national estimates.

**Source:** Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data 2009-2010

**Figure 8.8C**

**Trends in Obesity Prevalence by Gender and Age Group, U.S., 1971-2008**

Trends: Obesity prevalence rates have skyrocketed from 9.7% in females aged 20–34 in 1971–74 to 31.4% in 2005–2008; the numbers in males of the same age have increased from 8.9% to 25.4% over the same time period.

**Source:** National Center for Health Statistics. Health, United States, 2010
TAKE HOME MESSAGE:

Diet and Exercise
Emerging young adults eat less fruits and vegetables and more fast food than young adults. However, emerging young adult males exercise more and spend fewer hours in sedentary activities than males aged 26–34.

Immunizations
Overall compliance with HPV, influenza, and pertussis vaccinations is low in emerging young adults and young adults.

Screening
Pap smear compliance increases with age. Screening for HIV increases with age and is consistently higher among females than males.

Sleep
The percent of individuals that don’t get enough sleep 15+ days a month increases with age and is higher in females.

Seatbelts
In California and the nation, emerging young adult males are least likely to always or almost always wear a seatbelt, both nationally and in California, and correspondingly have the highest fatal MVA-occupant injury rates (Figure 3.1D).

Preventative Health Care Guidelines
Preventive health guidelines for emerging young adults are not consistent among medical and health organizations and are often overlooked.

**Diet and Exercise**

---

**Number of Foods Eaten Per Month by Type of Food and Age Group, U.S., 2010**

**Diet:** Compared to young adults nationally, emerging young adults consume fewer fruits, salads, and vegetables but eat more potatoes and tomato sauce and drink more fruit juice monthly than young adults.

---

**Average Daily Cups of Fruits/Vegetables Excluding French Fries and Beans by Gender, Race, and Age Group, California, 2009**

California: In California, emerging young adults consume fewer fruits and vegetables daily than young adults regardless of race or gender. The widest gap occurs between emerging young adult Asian females, who consumed an average of 1.1 cups per day, and young adult Asian females, who ate 2.1 cups daily.

---

**Average Number of Fast Food Meals Eaten in the Past Week by Gender and Age Group, California, 2009**

Fast food: The average number of fast food meals eaten in the past week peaks in emerging young adults. Males consistently consume more fast food than females regardless of age.

---

**Percent of Individuals That Meet Recommended Physical Activity Guidelines by Age Group and Gender, U.S. and California, 2009**

Exercise guidelines: The Centers for Disease Control and Prevention recommend at least 75 minutes of vigorous or 150 minutes of moderate exercise per week for adults (Physical Activity, 2011). Emerging young adult males were the most compliant with these guidelines (64% and 65% in the U.S. and California, respectively).
Immunizations

Figure 9.3A
Percent of Respondents That Have Ever Had the HPV Vaccine by Age Group and Gender, U.S., 2010
HPV vaccine: 44.2% of emerging young adult females and 4.4% of emerging young adult males received the HPV vaccine compared to 7.5% of young adult females and 2.3% of young adult males (Figure 9.3a). However, many of the young adults were beyond the approved range for the vaccine during this survey.

Figure 9.3B
Average Number of Hours of Sedentary Activity in a Typical Day by Age Group and Gender, U.S., 2010
Sedentary activity: Sedentary activity is highest in the adolescent age group with males reporting an average of 7.4 hours per day of sedentary activity and females reporting 8.0 hours. Emerging young adults report the fewest hours of sedentary activity with 5.4 hours for males and 5.7 for females.

Figure 9.3C
Individuals Receiving the Flu Shot or Spray in the Past Year, U.S. and California, 2010
Influenza: In the U.S., 25% of emerging young adults received the flu shot or spray in the past year compared to 31% of young adults. Fewer Californians were vaccinated with just 21% in both emerging young adults and young adults.

Figure 9.3D
Percent of Individuals Reporting Receiving the Pertussis Vaccination in the Past 5 Years by Age Group, U.S. and California, 2010
Pertussis: A similarly low percentage of emerging young adults and young adults receive the pertussis vaccine. In the U.S. and California immunization rates range from 12% to 16%.
Screening

Figure 9.4A
Percent of Women That Have Had a Pap Test in the Past 3 Years by Age Group, U.S. and California, 2010
Pap Smear: The percent of women who received a Pap test in the past three years increases with age and is consistently higher in the U.S. compared to California. The highest percent is in young adult women in the U.S. at 89%.

Figure 9.4B
Percent of Individuals Ever Having an HIV Test by Age Group and Gender, U.S., 2006-2010
HIV: The percent of individuals ever having an HIV test increases with age and is consistently higher among females than males.

Sleep

Figure 9.5A
Percent Reporting the Number of Days in the Past 30 Days You Did Not Get Enough Sleep or Rest by Gender and Age Group, U.S., 2010
Sleep: The percent of individuals not getting enough sleep on 15+ days per month is higher in young adults compared to emerging young adults and higher in females in both age groups.

Seatbelts

Figure 9.6A
Percent of Individuals That Always or Almost Always Wear a Seatbelt by Gender and Age Group, U.S. and California, 2010
Seatbelts: Emerging young adult males have the lowest percents of always or almost always wearing a seat belt in both the U.S. and California (85% and 86%, respectively).
Preventative Health Care Guidelines

Consistency of Preventive Health Care Recommendations for Young Adults

Preventive Health Guidelines: Preventive health care recommendations for young adults are outlined in Table 9.7A. These guidelines come from a range of sources and address everything from immunizations to suicide screening. Preventive health care guidelines for emerging young adults are not consistent among medical and health organizations.

<table>
<thead>
<tr>
<th>USPSTF</th>
<th>Bright Futures</th>
<th>ACOG</th>
<th>AAP</th>
<th>ACP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescent, Aged 11-17 y</td>
<td>Young Adult, Aged 18-26 y</td>
<td>Adolescent, Aged 11-21 y</td>
<td>Young Adult, Aged 18-26 y</td>
<td>Young Adult, Aged 18-26 y</td>
</tr>
<tr>
<td>Substance use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol (screening and counseling)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Tobacco (screening and counseling)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Other illicit drugs (screening and counseling)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Reproductive health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STI screening and counseling</td>
<td>+</td>
<td>+</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HIV</td>
<td>+</td>
<td>+</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Chlamydia (female)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Chlamydia (male)</td>
<td>+</td>
<td>+</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Syphilis</td>
<td>+</td>
<td>+</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>+</td>
<td>+</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Birth control methods</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Mental health/depression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suicide screening</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Depression</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Nutrition/exercise/obesity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cholesterol level</td>
<td>+</td>
<td>+</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Healthy diet</td>
<td>+</td>
<td>+</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hypertension/blood pressure</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Obesity/BMI</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Physical activity counseling</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Infectious disease/immunization (CDC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Td/Tdap</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Human papillomavirus</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Varicella</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Measles, mumps, rubella</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Influenza</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pneumococcal (polysaccharide)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Meningococcal</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Polio</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Safety/violence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family/partner violence</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Fighting</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Helmets</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Seat belts</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Alcohol while driving</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Guns</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Bullying</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Abbreviations: AAFP, American Academy of Family Physicians; ACOG, American Congress of Obstetricians and Gynecologists; ACP, American College of Physicians; BMI, body mass index; CDC, Centers for Disease Control and Prevention; HIV, human immunodeficiency virus; STI, sexually transmitted infection; Td/Tdap, tetanus, diphtheria/tetanus, diphtheria, pertussis; USPSTF, US Preventive Services Task Force.

*+* = Indicates a recommendation; “+” = at risk.

TAKE HOME MESSAGE:

Accessibility
Emerging young adults have the highest uninsured rates in both the U.S. and California with males more likely to be uninsured than females. Although the Affordable Health Care Act has helped this situation, the recent Gallup-Healthway poll estimated a small decline of uninsured emerging young adults from 28% uninsured 18 to 25 year olds in fall 2010 to 24.2% in the second quarter of 2011 (Mendes E, 2012). Delaying or not getting necessary medical care increases with age in the U.S. and California.

Utilization
Emerging young adults have the lowest number of outpatient healthcare visits per person per year and the highest number of emergency room visits. Young adults aged 18–24 are most likely to report no health care visits in the past 12 months. Among emerging young adults, the most common outpatient and inpatient claims for emerging young adults involve gynecology and obstetrics and the most common ER claim deals with musculoskeletal and connective tissue disorders. The number of prescription medications per year increases with age for females and is lowest among emerging young adult males in the U.S. Contraceptives are the top drug class used by emerging young adults.

Cost
Emerging young adults had the highest prevalence of $0 spending per person per year (26%). Regardless of age group, uninsured individuals are more likely to spend $0 on annual health care expenditures. Emerging young adult males have the lowest annual health care expenditures; young adult females have the highest. Private insurance encompasses the greatest percentage of annual health care expenditures regardless of age group or gender. Annual prescription medication costs increase with age among females and are lowest in emerging young adult males.

Accessibility

Figure 10.1A
Percent of Uninsured Individuals by Gender and Age Group, U.S., 2009
Uninsured rates: Emerging young adults have the highest uninsured rates in both the U.S. and California, with males more likely to be uninsured than females (Figures 10.1A, 10.1B).

Figure 10.1B
Percent of Uninsured Individuals by Gender and Age Group, California, 2009

Figure 10.1C
Trends in Uninsured Rates by Age Group, U.S., 2008-2012
Although the Affordable Health Care Act has helped this situation, the recent Gallup-Healthway poll estimated a small decline of uninsured emerging young adults from 28% uninsured 18 to 25 year olds in fall 2010 to 24.2% in the second quarter of 2011.
Table 10.1A
Type of Insurance Coverage by Gender and Age Group, U.S., 2009

<table>
<thead>
<tr>
<th>Type of Coverage</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 to 17</td>
<td>9.0%</td>
<td>9.2%</td>
</tr>
<tr>
<td>18 to 25</td>
<td>30.3%</td>
<td>21.6%</td>
</tr>
<tr>
<td>26 to 34</td>
<td>30.0%</td>
<td>16.8%</td>
</tr>
<tr>
<td>Uninsured</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>63.5%</td>
<td>61.9%</td>
</tr>
<tr>
<td>Medicaid/SCHIP</td>
<td>29.9%</td>
<td>32.3%</td>
</tr>
<tr>
<td>Medicare</td>
<td>0.2%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Other Public</td>
<td>0.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Tricare</td>
<td>2.3%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

Source: Medical Expenditure Panel Survey 2009

Table 10.1B
Type of Insurance Coverage by Gender and Age Group, California, 2009

<table>
<thead>
<tr>
<th>Type of Coverage</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 to 17</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>18 to 25</td>
<td>31.6</td>
<td>35.8</td>
</tr>
<tr>
<td>26 to 34</td>
<td>30.1</td>
<td>50.9</td>
</tr>
<tr>
<td>Uninsured</td>
<td>6.9</td>
<td>55.4</td>
</tr>
<tr>
<td>Employment-based</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Privately purchased</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td>22.5</td>
<td>22.9</td>
</tr>
<tr>
<td>Healthy Families / CHIP</td>
<td>0.9%</td>
<td>8.3</td>
</tr>
<tr>
<td>Other public</td>
<td>2.3</td>
<td>1.9</td>
</tr>
</tbody>
</table>

* Indicates statistically unstable data.
Source: 2009 California Health Interview Survey

Percent of Individuals Reporting Delayed or Unable to Get Necessary Medical Care by Gender and Age Group, U.S., 2009

Delay of care: Nationally, the percentage of individuals reporting “delayed or unable to get necessary medical care” increases with age and is higher in females than males except among adolescents.

Delay of care: The percentage of individuals reporting “delayed or unable to get necessary prescription medications” is highest in emerging young adult females at 3.8%.
Figure 10.1F
Delayed or Did Not Get Other Medical Care Needed in the Past 12 Months by Age Group and Gender, California, 2009

California: In California, the percentage of individuals that “delayed or did not get needed medical care” increases with age and is higher in females than in males.

Source: 2009 California Health Interview Survey

Figure 10.1G
Delayed or Did Not Get a Prescription Medication in the Past 12 Months by Age Group and Gender, California, 2009

For prescription medications, the delay was greatest in young adults.

Source: 2009 California Health Interview Survey

Figure 10.2A
Mean Number of Healthcare Visits per Person per Year by Type of Visit and Age Group, U.S., 2009

Healthcare visits: Emerging young adults have the lowest mean number of outpatient visits, but the highest number of ER visits. Inpatient visits increase with age.

Source: Medical Expenditure Panel Survey 2009

Figure 10.2B
Percent of Individuals Reporting no Health Care Visits in Past 12 Months by Age Group, U.S., 2009

Nearly a quarter of emerging young adults aged 18–24 reported no health care visits in the past 12 months compared to 12% of those aged 6–17 and 22% of those aged 25–44.

Source: National Center for Health Statistics. Health, United States, 2010
Table 10.2A
Top Ten Diagnostic Categories Based on a Percent of a Major U.S. Health Plan’s Members with at Least One Outpatient Claim for Diagnostic Group by Category and Age Group, U.S., 2010-2011

<table>
<thead>
<tr>
<th>Diagnostic categories</th>
<th>Ages 12 to 17</th>
<th>Ages 18 to 25</th>
<th>Ages 26 to 34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musculoskeletal and Connective Tissue Disorders</td>
<td>45.2%</td>
<td>40.5%</td>
<td>76.4%</td>
</tr>
<tr>
<td>Ear, Nose, and Throat Disorders</td>
<td>43.8%</td>
<td>25.0%</td>
<td>41.7%</td>
</tr>
<tr>
<td>Dermatologic Disorders</td>
<td>28.0%</td>
<td>21.2%</td>
<td>29.2%</td>
</tr>
<tr>
<td>Pulmonary Disorders</td>
<td>19.7%</td>
<td>18.9%</td>
<td>21.2%</td>
</tr>
<tr>
<td>Psychiatric Disorders</td>
<td>18.9%</td>
<td>17.0%</td>
<td>17.8%</td>
</tr>
<tr>
<td>Immunizations</td>
<td>15.8%</td>
<td>13.4%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Eye Disorders</td>
<td>14.0%</td>
<td>12.5%</td>
<td>16.2%</td>
</tr>
<tr>
<td>Gastrointestinal Disorders</td>
<td>8.9%</td>
<td>10.9%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Infectious Diseases</td>
<td>8.8%</td>
<td>10.3%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>7.5%</td>
<td>6.0%</td>
<td>12.9%</td>
</tr>
</tbody>
</table>


Table 10.2B
Top Ten Diagnostic Categories Based on a Percent of a Major U.S. Health Plan’s Members with at Least One Emergency Room Claim for Diagnostic Group by Category and Age Group, U.S., 2010-2011

For emergency room claims the most common diagnostic category is musculoskeletal and connective tissue disorders in all age groups.

<table>
<thead>
<tr>
<th>Diagnostic categories</th>
<th>Ages 12 to 17</th>
<th>Ages 18 to 25</th>
<th>Ages 26 to 34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musculoskeletal and Connective Tissue Disorders</td>
<td>7.44%</td>
<td>4.91%</td>
<td>4.88%</td>
</tr>
<tr>
<td>Injuries</td>
<td>4.76%</td>
<td>3.77%</td>
<td>3.94%</td>
</tr>
<tr>
<td>Gastrointestinal Disorders</td>
<td>2.57%</td>
<td>3.18%</td>
<td>2.72%</td>
</tr>
<tr>
<td>Neurologic Disorders</td>
<td>1.70%</td>
<td>2.11%</td>
<td>2.43%</td>
</tr>
<tr>
<td>Ear, Nose, and Throat Disorders</td>
<td>1.35%</td>
<td>1.79%</td>
<td>2.39%</td>
</tr>
<tr>
<td>Pulmonary Disorders</td>
<td>1.33%</td>
<td>1.76%</td>
<td>2.01%</td>
</tr>
<tr>
<td>Cardiovascular Disorders</td>
<td>1.23%</td>
<td>1.63%</td>
<td>1.80%</td>
</tr>
<tr>
<td>Psychiatric Disorders</td>
<td>0.91%</td>
<td>1.59%</td>
<td>1.48%</td>
</tr>
<tr>
<td>Infectious Diseases</td>
<td>0.88%</td>
<td>1.46%</td>
<td>1.39%</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>0.66%</td>
<td>1.03%</td>
<td>0.95%</td>
</tr>
</tbody>
</table>

Table 10.2C
Top Ten Diagnostic Categories Based on a Percent of a Major U.S. Health Plan’s Members with at Least One Inpatient Claim for Diagnostic Group by Category and Age Group, U.S., 2010-2011

For inpatient claims the most common diagnostic category is psychiatric disorders among adolescents and gynecology and obstetrics in emerging young adults and young adults.

<table>
<thead>
<tr>
<th>Category</th>
<th>Ages 12 to 17</th>
<th>Ages 18 to 25</th>
<th>Ages 26 to 34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatric Disorders</td>
<td>1.01%</td>
<td>4.16%</td>
<td>12.80%</td>
</tr>
<tr>
<td>Gastrointestinal Disorders</td>
<td>0.69%</td>
<td>0.87%</td>
<td>1.40%</td>
</tr>
<tr>
<td>Musculoskeletal and Connective Tissue Disorders</td>
<td>0.47%</td>
<td>0.63%</td>
<td>0.82%</td>
</tr>
<tr>
<td>Neurologic Disorders</td>
<td>0.36%</td>
<td>0.48%</td>
<td>0.66%</td>
</tr>
<tr>
<td>Pulmonary Disorders</td>
<td>0.35%</td>
<td>0.46%</td>
<td>0.63%</td>
</tr>
<tr>
<td>Gynecology and Obstetrics</td>
<td>0.30%</td>
<td>0.38%</td>
<td>0.57%</td>
</tr>
<tr>
<td>Cardiovascular Disorders</td>
<td>0.26%</td>
<td>0.36%</td>
<td>0.50%</td>
</tr>
<tr>
<td>Injuries</td>
<td>0.19%</td>
<td>0.35%</td>
<td>0.35%</td>
</tr>
<tr>
<td>Infectious Diseases</td>
<td>0.17%</td>
<td>0.24%</td>
<td>0.33%</td>
</tr>
<tr>
<td>Endocrine and Metabolic Disorders</td>
<td>0.16%</td>
<td>0.21%</td>
<td>0.31%</td>
</tr>
</tbody>
</table>


Figure 10.2C
Average Number of Prescription Medications (Including Refills) Per Person Per Year by Age Group and Gender, U.S. and Western States, 2009

Prescription medications: Except among adolescents, females report a higher average number of prescription medications per year nationally.

Table 10.2D
Top 10 Drug Classes by Age Group and Percent of Rx, U.S., 2007-2008

Among emerging young adults, contraceptives are the most frequently prescribed drug (18.4%) followed by analgesics and psychotherapeutics.

<table>
<thead>
<tr>
<th>Category</th>
<th>Ages 12 to 17</th>
<th>Ages 18 to 25</th>
<th>Ages 26 to 34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>23.6</td>
<td>18.4</td>
<td>12.6</td>
</tr>
<tr>
<td>CNS Stimulants</td>
<td>11.8</td>
<td>11.0</td>
<td>9.8</td>
</tr>
<tr>
<td>Respiratory Agents</td>
<td>11.5</td>
<td>10.8</td>
<td>9.8</td>
</tr>
<tr>
<td>Psychotherapeutic</td>
<td>9.9</td>
<td>10.4</td>
<td>9.3</td>
</tr>
<tr>
<td>Anti-infectives</td>
<td>9.7</td>
<td>8.3</td>
<td>7.8</td>
</tr>
<tr>
<td>Analgesics</td>
<td>6.3</td>
<td>6.1</td>
<td>7.0</td>
</tr>
<tr>
<td>Dermatological Agents</td>
<td>5.0</td>
<td>5.2</td>
<td>5.6</td>
</tr>
<tr>
<td>Anticonvulsants</td>
<td>4.5</td>
<td>4.9</td>
<td>5.4</td>
</tr>
<tr>
<td>Hormones</td>
<td>3.7</td>
<td>4.6</td>
<td>5.4</td>
</tr>
<tr>
<td>Contraceptives</td>
<td>2.9</td>
<td>4.3</td>
<td>5.2</td>
</tr>
</tbody>
</table>

Source: NHANES 2007-2008
Cost of Services

**Figure 10.3A**
Total Annual Health Care Expenditures per Person by Age Group, U.S., 2009

Healthcare spending: Emerging young adults had the highest prevalence of $0 spending per person per year (26%).

**Figure 10.3B**
Total Annual Health Care Expenditures per Person by Insurance Status and Age Group, U.S., 2009

Uninsured status: Uninsured individuals in all age groups had a higher prevalence of spending $0 on health care.

**Figure 10.3C**
Annual Health Care Expenditures per Person by Age Group, Gender, and Source of Payment, U.S., 2009

Annual health care expenditures: Annual health care expenditures per person are lowest among emerging young adult males at $1,216. Among females, annual health care expenditures increase with age and peak at $3,167.

**Figure 10.3D**
Percent of Annual Health Care Expenditures Covered by Age Group, Gender, and Source of Payment, U.S., 2009

Type of insurance: Private insurance encompasses the greatest percentage of annual health care expenditures regardless of age group or gender.

**Figure 10.3E**
Total Average Annual Rx Costs by Age Group and Gender, U.S. and Western States, 2009

Prescription medications: In both the U.S. and western states, annual prescription medication costs are lowest in emerging young adult males. Costs increase with age among females.
Chapter 4:

References


"Emerging young adults are adrift in a perfect storm of health risks"

This report would not have been possible without the support and sponsorship of:

■ California Wellness Foundation

■ Leonard D. Schaeffer Center for Health Policy and Economics, University of Southern California

■ The Community, Health Outcomes & Intervention Research Program, The Saban Research Institute of Children’s Hospital Los Angeles

■ Division of College Health, Department of Pediatrics, Keck School of Medicine of USC and Division of Student Affairs, University of Southern California

© 2013 The New Adolescents: An Analysis of Health Status, Lawrence Neinstein MD