UNTREATED MENTAL DISORDERS:
THE HIDDEN BURDEN IN GREATER PHOENIX

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The “hidden burden” of untreated mental disorders has an impact well beyond the afflicted person and his or her family and friends. For this reason, the issues examined here are more than a question of Greater Phoenix’s collective moral responsibility towards its ill residents. Untreated mental disorders also have negative consequences for the Greater Phoenix community as a whole. These can include increased crime and homelessness, increased public costs in areas of acute treatment and/or emergency services, lost production from ill individuals unable to work and from family members needing to care for them, costs associated with untreated persons attempting to self-medicate with drugs and alcohol, the emotional and economic impacts on the children of untreated persons with mental disorders, strains on the already strained resources of the courts, law enforcement, and other social institutions serving the Greater Phoenix community, and a general degradation of the community’s quality of life. The burden is truly community-wide.

In 1999, the Surgeon General of the United States called for public discussion about mental-health and service-capacity issues. Although mental health has always impacted the functioning and well-being of individuals and communities, the stigma associated with mental disorders has been a major barrier to having open discussions about mental health services. This chapter examines the changing demographic structure of mental and behavioral health populations and other factors expected to influence the need for and availability of service professionals in Greater Phoenix. It also notes gaps in data collection that impede efforts to address important treatment concerns in the Greater Phoenix community:

- The growing mental-health needs of the Mexican/Latino population
- The looming crisis surrounding the aging of the mental-health workforce
- Social and economic burdens shifted from the mental-health to the criminal-justice system

Prevalence Rates

Psychiatric epidemiologists examine the presence of mental disorders in specific groups. Since 1980, the National Institute of Mental Health has sponsored several national epidemiological studies that will guide our examination of mental disorders in Greater Phoenix. Prevalence is an epidemiological measure of how widespread a specific disorder is within a population during a specified period of time. Common points in time studied in prevalence-rate research are one year (the proportion of participants in the survey with symptoms within 12
months preceding the completion of the survey) and lifetime (proportion of survey participants who have had symptoms of a mental disorder at sometime during their life).

**U.S. Adult Prevalence Rates**

A mental disorder is defined as any clinically significant behavior, condition, or personality trait that results in subjective distress or in impairment in one or more important areas of an individual’s functioning. Comorbidity is defined as the co-occurrence of more than one disorder. According to the most recent estimates from the National Comorbidity Survey Replication, about one in four adults (26.2% of Americans) over 18 are suffering from a diagnosable mental disorder in any given year. This overall rate is lower than the 30% rate found in the National Institute of Mental Health Epidemiologic Catchment Area program and the initial National Comorbidity Survey.

The three individual disorders with the highest prevalence rates in the National Comorbidity Survey Replication were specific phobia (8.7%), social phobia (6.8%), and major depressive disorder (6.7%). However, the classes of disorders in this survey with the highest 12-month prevalence rates were anxiety disorders (18.2%), mood disorders (9.5%), impulse-control disorders (8.9%), and substance-abuse disorders (3.8%). Table 1 provides a summary of 12-month U.S. prevalence rates for DSM-IV disorders by sex and cohort age groups. There are limitations in the estimates for serious disorders described below because the sample excludes persons who were hospitalized or in other types of institutions such as correctional facilities. The data displayed in this table reflects updates of prevalence as of July 17, 2007.

The data in the National Comorbidity Survey Replication also showed that 60% of individuals with an active mental disorder within the past 12 months sought no treatment. Inasmuch as 60% is a very high percentage, we must be cautious in our interpretations of this finding. As Kessler and his colleagues have written, the assessment of the prevalence of serious mental disorders is probably more important, because not every one of these cases needs treatment; that is, many of the diagnosable disorders are mild or self-limiting mental disorders. For this reason, Kessler and his colleagues have recommended that the prevalence and correlates of serious mental illness “is in some ways more important for most policy planning purposes than the assessment of all mental illness.” With these caveats in mind, “young adults and those living in non-rural areas were more likely to have unmet needs for treatment” (Kessler, et al. 2001, p. 987). When participants recognized that they needed treatment but did not seek it, they identified situational barriers (52%), financial barriers (46%), and lack of effectiveness (45%) as reasons.

The definition of “serious mental illness” in the Alcohol, Drug Abuse, and Mental Health Administration Reorganization Act (ARA, PL 102-321) requires an individual to have at least one Diagnostic and Statistical Manual disorder that is not a substance-use disorder and evidence of serious impairment for this condition. While the results of the National Comorbidity Survey Replication showed that one in four individuals had a diagnosable mental illness, only about one in 17 of adults surveyed (about 6.2%) were suffering from a serious mental disorder. Serious mental disorders were differentiated from less serious disorders based on an assessment of the disability experienced by the respondents. Survey

**TABLE 1 | 12-Month U.S. Prevalence | BY SEX AND AGE COHORT (N=9,282)**

<table>
<thead>
<tr>
<th>Disorders</th>
<th>Total %</th>
<th>Female%</th>
<th>Male%</th>
<th>18-29%</th>
<th>30-44%</th>
<th>45-59%</th>
<th>60+%</th>
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<tbody>
<tr>
<td><strong>Anxiety Disorders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panic Disorder</td>
<td>2.7</td>
<td>3.8</td>
<td>1.6</td>
<td>2.8</td>
<td>3.7</td>
<td>3.1</td>
<td>0.8</td>
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<tr>
<td>Agoraphobia without Panic</td>
<td>0.9</td>
<td>0.9</td>
<td>0.8</td>
<td>1.0</td>
<td>0.8</td>
<td>1.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Specific Phobia</td>
<td>9.1</td>
<td>12.2</td>
<td>5.8</td>
<td>10.3</td>
<td>9.7</td>
<td>10.3</td>
<td>5.6</td>
</tr>
<tr>
<td>Social Phobia</td>
<td>7.1</td>
<td>8.0</td>
<td>6.1</td>
<td>9.1</td>
<td>8.7</td>
<td>6.8</td>
<td>3.1</td>
</tr>
<tr>
<td>Generalized Anxiety Disorder</td>
<td>2.7</td>
<td>3.4</td>
<td>1.9</td>
<td>2.0</td>
<td>3.5</td>
<td>3.4</td>
<td>1.5</td>
</tr>
<tr>
<td>PTSD</td>
<td>3.6</td>
<td>5.2</td>
<td>1.8</td>
<td>4.0</td>
<td>3.5</td>
<td>5.3</td>
<td>1.0</td>
</tr>
<tr>
<td>OCD</td>
<td>1.2</td>
<td>1.8</td>
<td>1.5</td>
<td>1.4</td>
<td>1.1</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Adult Separation Anxiety Disorder</td>
<td>1.9</td>
<td>2.1</td>
<td>1.7</td>
<td>4.0</td>
<td>2.2</td>
<td>1.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Any Anxiety Disorder</td>
<td>19.1</td>
<td>23.4</td>
<td>14.3</td>
<td>22.3</td>
<td>22.7</td>
<td>20.6</td>
<td>9.0</td>
</tr>
<tr>
<td><strong>Mood Disorders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Depressive Disorder</td>
<td>6.8</td>
<td>8.6</td>
<td>4.9</td>
<td>8.3</td>
<td>8.4</td>
<td>7.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Dysthymia</td>
<td>1.5</td>
<td>1.9</td>
<td>1.0</td>
<td>1.1</td>
<td>1.7</td>
<td>2.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Bipolar I-II Sub Disorders</td>
<td>2.8</td>
<td>2.8</td>
<td>2.9</td>
<td>4.7</td>
<td>3.5</td>
<td>2.2</td>
<td>0.7</td>
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<tr>
<td>Any Mood Disorders</td>
<td>9.7</td>
<td>11.6</td>
<td>7.7</td>
<td>12.9</td>
<td>11.9</td>
<td>9.4</td>
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<td><strong>Impulse Control Disorders</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oppositional-Defiant Disorder</td>
<td>1.0</td>
<td>1.1</td>
<td>0.9</td>
<td>1.2</td>
<td>0.8</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Conduct Disorder</td>
<td>1.0</td>
<td>0.4</td>
<td>1.7</td>
<td>1.4</td>
<td>0.8</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ADHD</td>
<td>4.1</td>
<td>3.9</td>
<td>4.3</td>
<td>3.9</td>
<td>4.2</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Intermittent Explosive Disorder</td>
<td>4.1</td>
<td>3.4</td>
<td>4.8</td>
<td>8.3</td>
<td>4.6</td>
<td>2.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Any Impulse Control Disorder</td>
<td>10.5</td>
<td>9.3</td>
<td>11.7</td>
<td>11.9</td>
<td>9.2</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Substance Disorders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol Abuse w/without Dep.</td>
<td>3.1</td>
<td>1.8</td>
<td>4.5</td>
<td>7.1</td>
<td>3.3</td>
<td>1.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Drug Abuse w/without Dep.</td>
<td>1.4</td>
<td>0.7</td>
<td>2.2</td>
<td>3.9</td>
<td>1.2 0.4</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Nicotine Dependence</td>
<td>11.0</td>
<td>10.5</td>
<td>11.6</td>
<td>16.7</td>
<td>11.2</td>
<td>10.0</td>
<td>5.6</td>
</tr>
<tr>
<td>Any Substance-Abuse Disorder</td>
<td>13.4</td>
<td>11.6</td>
<td>15.4</td>
<td>22.0</td>
<td>13.8</td>
<td>11.2</td>
<td>5.9</td>
</tr>
<tr>
<td>Any Disorders</td>
<td>32.4</td>
<td>34.7</td>
<td>29.9</td>
<td>43.8</td>
<td>36.9</td>
<td>31.1</td>
<td>15.5</td>
</tr>
</tbody>
</table>

respondents were classified severe if they reported any of the following:

- A 12-month suicide attempt with serious lethality intent; work disability or substantial limitation due to a mental or substance-abuse disorder; positive screen results for non-affective psychosis; bipolar I or bipolar II disorder; substance dependence with serious role impairment (as defined by disorder specific impairment questions); an impulse control disorder with repeated serious violence; or any disorder that resulted in 30 or more days out of role in the year. (Kessler, Chiu, Demler, & Walters, 2005)

The severity of a respondent’s condition was found to be strongly correlated with measures of comorbidity. Kessler and colleagues found that 45% of the individuals in the National Comorbidity Survey Replication who met the criteria for a single mental disorder also met the criteria for two more mental disorders. In addition, the researchers found that mood disorders had the highest percentage of disorders (45%) than any of the other class of serious mental disorders.

For lifetime disorders, anxiety disorders were the most prevalent (29%) found in the National Comorbidity Survey Replication. The other three most prevalent lifetime disorders were mood disorders (21%), impulse-control disorders (25%), and substance-abuse disorders (15%). Data on impulse-control disorders were collected for the first time in the National Comorbidity Survey Replication. When seriousness was taken into account, the impulse-control disorders had a higher prevalence rate than either anxiety disorders or substance-use disorders.

U.S. Prevalence Rates for Latinos

Few epidemiological studies have considered race, culture, and ethnicity in assessing the prevalence of mental disorders. The National Latino and Asian American Study (NLASS) was conducted from May 2002 through December 2003 and contains some of the best available national data on Latinos. The Latino sample (n=2,554), which had a response rate of 75.5%, consisted of four major U.S. sub-ethnic group classifications: Mexican (n=868), Puerto Rican (n=495), Cuban (n=614), and other (n=614). The NLASS showed 12-month prevalence rates for each of the Latino subgroups: Puerto Ricans (22.9%); Cubans (15.9%); Mexicans (14.5%); and other Latinos (14.4%). However, it is important to note that this study only focused on four diagnostic classes of mental disorders that covered 11 different disorders: “depressive disorders (dysthymia, major depressive disorder), anxiety disorders (agoraphobia, social phobia, generalized anxiety disorder, posttraumatic stress disorder, and panic disorder), substance-use disorders (drug abuse, drug dependence, alcohol abuse, alcohol dependence) and overall psychiatric disorders (any depressive, anxiety, or substance-use disorders)” (Alegria et al., 2007a, p. 69). The NLASS did not include schizophrenia or bipolar disorders because of their low prevalence rates in community samples.

Lifetime prevalence rates for psychiatric disorders were highest in the Puerto Rican group (39%). Lifetime rates for the other groups were: Cuban (28.4%); Mexican (28.4%); and other Latino (27.3%). “Overall psychiatric disorder prevalence rates were higher among those who had migrated before the age of 13 years or after the age of 34 years than among those who had migrated at other ages (Alegria et al., 2007a, p. 70). However, no significant gender differences were noted for lifetime prevalence rates between males (28.1%) and females (30.2%). In addition, U.S. born, English-language-proficient and third-generation Latinos had higher rates of psychiatric disorders than foreign-born or first- and second-generation Latinos (Alegria et al., 2007a).

Further, “cultural factors such as nativity, language, age at migration, years of residence in the United States, and generational status were associated with whether or not Latinos had used mental health services”(Alegria, Mulvaney-Day, Woo, Torres, Gao, & Oddo, 2007, p. 76). Once again, Puerto Ricans were the ethnic subgroup that had the highest use (10.4%) of specialty mental-health services, while Mexicans had the lowest use (4.4%).

Prevalence Rates for Greater Phoenix

The number of adults with serious mental disorders served by Maricopa County’s Value Options as of June 30, 2006, was 18,586. The breakdown for this total was: Title XIX individuals (11,115); Title XXI (30); and non-Title XIX (7,441). The total number of children served by the Arizona Department of Health Services Division of Behavioral Health Services as of June 2006 was 19,448; the breakdown by funding program...
was Title XIX (15,635), Title XXI (1,401), and non-Title XIX (1,412). The number of adult consumers with serious mental illnesses that were served by Value Options as of August 30, 2007, is 19,587.

**Services for Serious Mental Disorders in Greater Phoenix**

In Maricopa County, mental-health services were managed by Value Options during the years examined in this analysis. This Regional Behavioral Health Authority (RBHA) provided services to 18,500 seriously mentally ill in 2005, 18,586 seriously mentally ill in 2006, and 19,587 seriously mentally ill as of August 21, 2007. Data from the 2006 annual audit by the Maricopa County Court Monitor were used to assess the demographics of the seriously mentally ill population served by the RBHA in 2006.

In 2006, the RBHA served 3,784 priority-class members in the *Arnold v. Arizona Department of Health Services* lawsuit. A priority-class member is defined “as including any individual enrolled in the mental health system with a serious mental disorder who: (1) Is or has been an inpatient in the Arizona State Hospital since July 1, 1993; (2) Is or has been a resident of a Supervisory Care Home since July 1, 1995; (3) Is or has been an inmate in jail since July 1, 1995, who has a major biological mental illness” (Ashford & FitzHarris, 2007, p. 5). The Court Monitor for the Superior Court in Maricopa County generated separate sampling fractions to guide the proportional random selection of class members at target (1,514) and non-target sites (2,270) (n=281). State authorities were obligated to meet different outcomes at priority and non-priority service sites. For this reason, the audit required the Court Monitor to draw a representative sample of priority-class members at both target and non-target sites. In addition, the Court Monitor randomly sampled the non-priority population of seriously mentally ill (n=141).

The data from the combined random samples selected by the Court Monitor showed that 71% of the sample of priority and non-priority seriously mentally ill (n=429) were a participant in either Title XIX or Title XXI. In addition, these samples showed that

- 14% of the seriously mentally ill did not have a psychiatrist or psychiatric nurse at the time of the sample;
- 5% were not prescribed a behavioral health medication;
- 9% of the sample reported that they were using alcohol or drugs at the time of the survey;
- 12% were not living in satisfactory housing;
- 73% were unemployed;
- 82% were receiving supportive case-management services and about 14% were receiving Assertive Community Treatment Services.

Table 2 displays demographic information for the total population of class members and the Court Monitor’s sample of priority class members that were examined in her 2006 annual report. The results showed that the Latino population is grossly under-represented in the rates of priority class members that were being served by the RBHA. However, the rates served were similar to the rates obtained for Mexicans in the National Latino and Asian Study. In addition, the data show that the Court Monitor’s sample is representative of the overall population of priority class members.
Ashford and FitzHarris (2007) resurveyed the priority class members (n = 281) who participated in the Court Monitor’s 2006 annual audit. They achieved a response rate of 69.7% in this resurvey of the Court Monitor’s initial proportional random samples (n = 167). Table 3 provides a description of the demographics for the participants in this survey. The results show that the sample is representative of the class population for priority class members who are seriously mentally ill in Maricopa County and for the proportional random sample selected by the Court Monitor of Maricopa County.

Table 4 displays the service-use characteristics of the resurveyed participants in the class-action lawsuit. The results show that the majority of the participants live independently (45%) or at home with their spouse, family, or friends (24.6%). They also indicate that most of the participants were receiving supportive case management services (77.2%). The other major type of case management service was Assertive Community Treatment services (22%). Assertive case management teams emphasize outreach, relationship building, and individualization of services. They assign a maximum of 12 clients to one staff member, and are much more intensive than Supportive case management teams.

The number of seriously mentally ill adults served by the Maricopa County RBHA of August 30, 2007, is 19,587. The number of priority subjects in this population of seriously mentally ill is 3,983 (20%). The breakdowns for the priority groups are: Arizona State Hospital, 579 consumers (14.5%); Supervisory Care Homes, 652 consumers (16%); and jail, 2,752 consumers (69.1%). These percentages indicate that the jail group of priority clients has witnessed about a 3% increase since the data was gathered for the 2006 audit.

**Hospital Services**

Table 5 displays the number of emergency room visits in Maricopa County by first listed diagnosis and year. Table 6 displays the number of discharges by diagnosis and by year for the first listed psychiatric diagnosis. These tables show that the number of emergency visits increased in 2006 for all categories tracked with the exception of visits for drug psychoses. The numbers within the Drug Psychosis category increased for emergency-room visits between 2004 and 2006 (8%), but decreased for inpatient discharges (8%) between 2004 and 2006. In addition, the data showed that while persons with a diagnosis of schizophrenia and manic-depressive disorders (Bipolar Disorders) had fewer emergency visits than drug psychoses in 2006, schizophrenic and manic-depressive disorders were the conditions that resulted in more numbers of discharges from inpatient-care facilities in that same year.

A report to the Maricopa County Board of Directors meeting of April 10, 2007, on the number of psychiatric admissions to the Maricopa County Medical Center for FY 2006 indicated there were 2,618 admissions, and that admissions were projected to increase to 2,892 (9%) by 2008. The Arizona State Hospital (ASH) also provides hospital services for persons diagnosed with serious and persistent mental disorders. The state hospital has a total of 141 beds that service adults who are civilly committed as a danger to self, danger to others, gravely disabled, and/or persistently and acutely disabled. Typically, these adults have completed a mandatory 25 days of treatment in a community setting prior to admission.
The state hospital also has a forensic program that has 180 beds for persons under court-ordered commitments from the criminal-justice process. The persons hospitalized in the forensic program are there for pre-trial evaluation, psychiatric treatment, restoration to competency (53 beds), and post-trial treatment for guilty but insane (91 beds), not guilty by reason of insanity (24 beds), and evaluations for guilty but insane (7 beds) for non-violent offenses. The hospital also has a 16-bed adolescent treatment program. The total hospital capacity is 338 beds. For 2006, the state funded the hospital at 41% capacity for civil patients; 54% of capacity for forensic patients, and 5% of capacity for adolescent patients. One medical bed was reserved for infectious control.

The state hospital had 275 patients who were admitted during 2006 and 263 who were discharged. Overall, the census in the state hospital decreased from 2004 through 2006. This reduction in admissions was due to a reduced number of Maricopa County referrals for competency-to-stand-trial evaluations. In addition, ASH discharged 268 patients during FY 2006. The average monthly discharge rate was 22.3 patients, a 23% decrease from the FY 2005 rate of 29 patients. Overall, Maricopa County accounted for 20.4% of the admissions to the state hospital and 30.3% of the discharges from the state hospital. The discharges from ASH were predominantly to either a correctional facility (58.7%) or to a group home (19%).

**Justice System Services**

During 2005, the Maricopa County Probation Department supervised 650 individuals on probation with special mental-health terms. In addition, the Maricopa County Mental Health courts heard cases on 1,200 individuals petitioned for civil commitment. For that same year, the Mental Health Courts had 2,466 status-review hearings. Figure 1 displays the number of mental-health cases filed from 1935 to 2005 with the probate court. The results show a steady increase of cases over time.

**Jail System Services**

Correctional Health Care also provides hospital services for persons with serious mental disorders who are in the Maricopa County jail system. Hintze et al. (2006) reviewed data at the National GAINS conference that examined persons diagnosed with a serious mental illness who were being provided services in the justice system. In 2005, 3,160 individuals who were seriously mentally ill were booked into the Maricopa County Jail. Eighty percent of these seriously mentally ill had a co-occurring substance-abuse disorder. The Maricopa County Jail booked on average from 250 to 300 persons monthly who were seriously mentally ill. This county jail program has about 190 beds allocated for psychiatric patients. This is a larger number of psychiatric beds than the number of beds available for civil patients at the Arizona State Hospital.

**TABLE 5 | Numbers of Emergency Visits**

<table>
<thead>
<tr>
<th>Mental Disorders</th>
<th>2006</th>
<th>2005</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychoses</td>
<td>3,495</td>
<td>3,436</td>
<td>3,085</td>
</tr>
<tr>
<td>Alcoholic psychoses</td>
<td>604</td>
<td>521</td>
<td>450</td>
</tr>
<tr>
<td>Drug psychoses</td>
<td>804</td>
<td>808</td>
<td>664</td>
</tr>
<tr>
<td>Schizophrenic disorders</td>
<td>364</td>
<td>345</td>
<td>292</td>
</tr>
<tr>
<td>Manic depressive disorders</td>
<td>620</td>
<td>592</td>
<td>600</td>
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</tbody>
</table>

Source: Derived from data collected by ADHS and reported on its Web site.

**TABLE 6 | Numbers of Discharges From Inpatient Stays**

<table>
<thead>
<tr>
<th>Mental Disorders</th>
<th>2006</th>
<th>2005</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychoses</td>
<td>8,330</td>
<td>8,064</td>
<td>8,054</td>
</tr>
<tr>
<td>Alcoholic psychoses</td>
<td>974</td>
<td>891</td>
<td>823</td>
</tr>
<tr>
<td>Drug psychoses</td>
<td>436</td>
<td>507</td>
<td>516</td>
</tr>
<tr>
<td>Schizophrenic disorders</td>
<td>1,532</td>
<td>1,289</td>
<td>1,336</td>
</tr>
<tr>
<td>Manic depressive disorders</td>
<td>4,155</td>
<td>4,044</td>
<td>4,064</td>
</tr>
</tbody>
</table>

Source: Derived from data collected by ADHS and reported on its Web site.

**FIGURE 1 | Probate Cases | 1935-2005**
Forecasting For Service Planning

An important age-related mental health concern in Greater Phoenix is the fact that the second-largest age group for the county is that between 5 and 14 years of age. Given this fact, we might start to see marked increases in enrollments to the RBHA for persons with a diagnosis of schizophrenia, and increases in hospitalization and in bookings in the Maricopa County Jail system, when these children reach their late teens and early 20s. Research has demonstrated that the marked increase in this country of mental-health hospitalizations occurred when the baby boomer cohort began moving into theirlate teens and early adult years. Service planners clearly need to take this issue into account when planning for acute-care services for the seriously mentally ill.

The current agedistributions in Greater Phoenix also help explain why the numbers of hospitalizations were higher for the manic-depressive disorders than for the schizophrenic disorders between 2004 and 2006. During these years, a larger proportion of the population was at the ages between 25 and 34, the period that we are most likely to see the onset of serious mood disorders. The National Institute of Mental Health reported that the median age that we typically see the onset of manic-depressive disorders is around 25 and that the prevalence rate for bipolar disorders (manic-depressive illness) is higher (2.6% of the population) than for schizophrenia (1.1%). The median age for the onset of mood disorders is also around 30 (9.5% of the U.S. population).

Adolescents and young adults are at the greatest risk of being involved in crime. This relationship between age and crime also has implications for persons diagnosed with mental disorders who are involved in the justice system. Members of the 5-14 age cohort will begin reaching the late teens within the next 15 years, which can affect demands for use of mental-health courts, jail health services, and specialized severely mentally ill caseloads provided by the Maricopa County Probation Department.

However, it is unclear how the marked increases in the Latino/Hispanic population in Greater Phoenix will impact demands for services for persons with serious mental disorders. Demographic data show that between 1990 and 2005, Hispanics went from 20% of the population in Phoenix to 41.8%. However, a sizeable proportion of this population were foreign-born, and we know from the National Latino and Asian Study that foreign-born individuals are much less likely to demand mental-health services than native-born or third-generation Latinos. On the other hand, we know little about the age of these individuals in Phoenix; the age is important because foreign-born individuals who migrated before the age of 13 had higher rates of mental disorders than individuals who migrated at other ages.

The Availability of Mental-Health Professionals

We cannot continue to ignore the availability of mental-health professionals as an issue when we design services for individuals with serious mental disorders. A major challenge is the dramatic increase in the percentages of mental-health professionals over 55. Indeed, the current workforce data show insufficient numbers of middle-aged persons to replace the psychiatrists about to retire. This has significant implications for how systems will establish supervisory ladders and other forms of management needed to provide quality services.

The national ratio of psychiatric physicians per 100,000 populations was 16.5/100,000 in 2000. In Arizona, the ratio was 11.8/100,000. Our greatest shortages are in the areas of child psychiatry and geriatric psychiatry. There were three residency training programs in Arizona in 2004 with 53 residents in training. This is insufficient to cope with the present demands for psychiatrists in Greater Phoenix and Arizona. The percentage of international medical graduates in psychiatry in the U.S. grew from 23% in the 1990s to 40% in 2000-2001. Most of these are not coming from either Mexico or Latin America.

Data from the National Association of Social Workers (NASW) (2004) showed that the median age of behavioral-health social workers is 50. NASW is projecting that there will be an increase in younger practitioners in the next five years, but that the numbers of social workers between 40 and 54 will decline substantially. Like psychiatry, this profession is aging—which has important implications for designing and planning of publicly-funded service systems.
Psychology is growing faster than many other mental-health professions. Indeed, the ratio of clinical psychologists to the population is much better than for any of the others. Some scholars are even arguing that there might be a need to “right-size” the workforce of psychologists because there is an excess in some communities. However, the introduction of managed care has reduced the need for psychologists, as there is less need for psychological testing; this has reduced pay for psychologists and threatened their value in the marketplace. Psychologists form one of the few groups in Arizona that is not threatened by aging or other workforce challenges. For this reason, some psychologists are advocating for psychologists to obtain prescriptive privileges to offset the shortage of psychiatrists.

The Future: Issues and Challenges

Single men and foreign-born individuals will continue to be the least likely to access mental health services in Greater Phoenix because they will be less likely to enroll in the services provided by the RBHA. Further research is needed to determine why foreign-born and native-born Mexicans access services much less than either Anglos or Puerto Ricans. We do not know why the prevalence rates for Mexicans in Arizona are much lower than the rates found among Anglos and African Americans in Greater Phoenix. We know that about 10% of Latinos with serious mental illness are enrolled in the RBHA, but we know little about their immigration status or how this is influencing Mexicans’ access to services. Further research can enable planners to design programs to target beliefs, personnel shortages, or other barriers to service use.

Recent research has shown that some aspects of an individual’s immigration status can be protective for the development of substance abuse (see Marsiglia et al., Chapter 8). However, we cannot determine whether this is also true in Arizona for persons with serious mental illnesses without access to reliable data on the immigration status of persons enrolled in the system. Namely, we cannot determine the extent to which the lack of use of the system reflects a trend towards foreign status serving as a protective factor against the development of serious mental illnesses. Most service providers in Greater Phoenix do not systematically collect data on immigration status. Clearly, the evidence reviewed in this paper suggests that the system is doing a poor job of service penetration within the Latino/Mexican population. For this reason, the current system of care needs to identify specific barriers to the use of services by the Latino/Mexican population.

We also have little information on how the lack of parity in mental-health insurance in Arizona contributes to other healthcare costs and burdens. While national estimates indicate that about one in four individuals have a diagnosable mental disorder, few individuals with these diagnoses are accessing specialty mental-health care in Arizona. Policymakers must consider studying under-utilization of mental-health care to get a better handle on specific barriers in Greater Phoenix. These data can also help planners understand how the burdens associated with untreated mental-health concerns are being shifted to other systems of care.

The World Health Organization considers mental-health problems to be hidden or undefined social or economic burdens on families, communities and countries. Mental-health problems are also an undefined burden in Greater Phoenix. That is, the community has not defined how untreated mental-health disorders are influencing productivity and quality-of-life considerations. Some costs are associated with lost production from ill individuals unable to work, or from family members needing to care for ill relatives. Such losses have other consequences for members of the community, including emotional burdens that diminish their quality of life.

While the prevalence of mood disorders is relatively high in community samples, we know that only a small percentage seek treatment for their depression. Untreated depression is known to lead to worse outcomes for persons with chronic illnesses. Planners thus need to confront the poor responses to mental-health concerns in our primary and other long-term care settings. Community leaders need to work with healthcare providers in promoting early identification and treatment of depression in primary-care and in long-term care settings. This way, the community can reduce health-care costs and the untoward social consequences associated with chronically ill persons whose immune systems are compromised by untreated depression or other disorders.

TABLE 7 | Projected Maricopa County RBHA Enrollment for Serious Mental Illness*

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<tbody>
<tr>
<td>SMI</td>
<td>22,370</td>
<td>23,041</td>
<td>23,732</td>
<td>24,444</td>
<td>25,178</td>
<td>25,933</td>
<td>26,711</td>
<td>27,512</td>
<td>28,338</td>
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* Projections assume a 3% yearly growth rate and use FY2007 enrollment as a starting point.
Source: Arizona Department of Health Services.
The data also show a high percentage of persons with serious mental illness who are being treated in our jails and forensic service systems. Yet Arizona has no formal training programs—besides the forensic residency program for psychiatrists—for training professionals to meet the growing demand for services at the interface of the criminal-justice and mental-health systems. While the Administrative Office of the Courts has taken steps to certify some forensic evaluators, the courts and mental-health providers have not established training programs specifically for addressing the treatment of forensic patients in institutional settings and under community supervision. Local authorities need to pursue relationships with universities to develop specialized programs to prepare mental-health professionals to work with the growing forensic population in Greater Phoenix.

State and local officials should also consider modifying some of their data collection processes. Local authorities do not systematically collect data on the prevalence of impulse-control disorders. The lifetime prevalence rate for this classification of mental disorders exceeded anxiety and substance-abuse disorders in the National Comorbidity Survey Replication. Because we do not collect information on these disorders, we cannot assess whether the failure to treat them is contributing to the increased demands for forensic and other types of mental-health services. Policymakers must ensure that this important category of disorders is not ignored in future planning processes.

In addition, there is no specific agency in Greater Phoenix responsible for systematically collecting and reporting data on persons with serious mental illnesses in the justice system. As a consequence, there is no real way to evaluate the effectiveness of the RBHA and the state in addressing the needs of such persons. Local planners should consider using the universities or other outside nonprofit agencies to collect justice-related statistics on this population. With this type of information, the system will be in a better position to determine if and how the mental-health system is shifting the care of persons with serious mental illnesses to the justice system. In addition, this data can help the system in managing care and costs for this growing service population in Maricopa County.

Greater Phoenix faces several demographic challenges that will affect planning for services for the seriously mentally ill. Our burgeoning population in the 5-14 age cohort will have a definite impact on acute care, community-based recovery services, and mental-health services provided by the courts and jail system. Meanwhile, the demographic shift in the availability of seasoned mental-health professionals will place additional burdens on the system. If this workforce deficit is not addressed, it is highly unlikely that the county and state will be able to successfully exit the Arnold v. Arizona Department of Behavioral Health lawsuit. More generally, Greater Phoenix is likely to witness marked increases in other types of burdens in health, welfare, and safety.

José B. Ashford, MSW, Ph.D, LCSW, is a Professor and Associate Director of the School of Social Work. He specializes in forensic and correctional mental health and is Director of the Office of Forensic Social Work. Ashford has received numerous honors for his work on developing risk and needs-assessment instruments, and for his research and writings on managing violence risk in mentally ill and other special-needs offenders.

NOTES
1 This act separated the mental health and substance abuse funds into two separate grants.
3 Title XIX refers to grants to the states for Medicaid assistance for payment of medical costs covered for eligible adults under the Social Security Act. Title XXI is the state’s children’s health insurance program that funds services for eligible children and youth covered by the Social Security Act.
4 ValueOptions was the Regional Behavioral Health Authority in Maricopa County when data was collected for inclusion in this report. The new Regional Behavioral Health Authority is Magellan.
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