



ASSESSMENT OF SPACE NEEDS PROJECT

Forecasting Juvenile Correctional Populations in Texas

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research for safer communities

RESEARCH REPORT July 2002

PROGRAM ON
youth justice



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Report design by David Williams

About the Assessment of Space Needs Project

This report was prepared as part of the *Assessment of Space Needs Project*, conducted by the Urban Institute of Washington, D.C. The project began with a request from the U.S. Congress. In a November 13, 1997 Conference Report for Public Law 105-119, Congress requested that the U.S. Department of Justice conduct a “national assessment of the supply and demand for juvenile detention space,” including an assessment of detention and corrections space needs in 10 States. In particular, Congress expressed this concern:

The conferees are concerned that little data exists on the capacity of juvenile detention and corrections facilities to handle both existing and future needs and direct the Office of Justice Programs to conduct a national assessment of the supply of and demand for juvenile detention space with particular emphasis on capacity requirements in New Hampshire, Mississippi, Alaska, Wisconsin, California, Montana, West Virginia, Kentucky, Louisiana, and South Carolina, and to provide a report to the Committees on Appropriations of the House and the Senate by July 15, 1998 (U.S. House of Representatives 1997).

The U.S. Department of Justice’s Office of Justice Programs (OJJDP) responded to this request by taking two actions. The first action was to submit the required report to Congress in July 1998 (see DOJ 1998). The report was prepared by OJJDP with assistance from the Urban Institute, the National Center for Juvenile Justice, the National Council on Crime and Delinquency, and the American University in Washington, D.C.

The second action taken by OJJDP was to fund a more extensive investigation of the issues raised by the report as part of the Juvenile Accountability Incentive Block Grants program. The investigation, known as the Assessment of Space Needs in Juvenile Detention and Corrections, was conducted by the Program on Youth Justice within the Urban Institute’s Justice Policy Center. The project analyzed the factors that contribute to the demand for detention and corrections space in the states and the methods used by states to anticipate future demand. Products of the work included an Internet-based decisionmaking tool that state and local juvenile justice agencies may employ to forecast future detention and corrections populations (<http://jf.urban.org>). The *Assessment of Space Needs Project* was completed in March 2002.

The Urban Institute’s approach to conducting the *Assessment of Space Needs Project* was guided by the comments and criticisms received from the project’s advisors and consultants:

Advisory Committee

- Dr. Arnold Irvin Barnett, Massachusetts Institute of Technology
- Dr. Donna M. Bishop, Northeastern University
- Mr. Edward J. Loughran, Council of Juvenile Correctional Administrators
- Dr. James P. Lynch, American University
- Dr. Samuel L. Myers Jr., University of Minnesota
- Ms. Patricia Puritz, American Bar Association

Consultants

- Mr. Paul DeMuro, Independent Consultant, Montclair, New Jersey
- Dr. William J. Sabol, Case Western Reserve University
- Dr. Howard N. Snyder, National Center for Juvenile Justice
- Mr. David J. Steinhart, Independent Consultant, Mill Valley, California

For more information about the *Assessment of Space Needs Project*, see the web site of the Urban Institute’s Program on Youth Justice at <http://youth.urban.org> or telephone the Urban Institute at 202-833-7200 or OJJDP at 202-307-5929.

About the Author

Dr. Daniel P. Mears is a research associate in the Justice Policy Center at the Urban Institute in Washington, D.C. Before joining the Urban Institute in 2001, he was a postdoctoral research fellow with the Center for Criminology and Criminal Justice Research at the University of Texas-Austin. Dr. Mears has published research on a range of juvenile and criminal justice issues, including screening and assessment, sentencing, juvenile justice reforms, drug treatment, mental health treatment, immigration and crime, gender and delinquency, domestic violence, and prison programming. He is a graduate of Haverford College and holds a Master's degree and Ph.D. in sociology from the University of Texas-Austin.

About the Urban Institute

The Urban Institute is a nonprofit nonpartisan policy research and educational organization established in 1968 to examine the social, economic, and governance problems facing the nation. It provides information and analysis to public and private decisionmakers to help them address these challenges and strives to raise citizen understanding of these issues and tradeoffs in policy making.

About the Justice Policy Center

One of nine policy centers within the Urban Institute, the Justice Policy Center carries out nonpartisan research to inform the national dialogue on crime, justice, and community safety. Researchers in the Justice Policy Center collaborate with practitioners, public officials, and community groups to make the Center's research useful to not only decisionmakers and agencies in the justice system, but also to the neighborhoods and communities harmed by crime and disorder.

About the Program on Youth Justice

This report was developed by the Urban Institute's Program on Youth Justice, which identifies and evaluates programs and strategies for reducing youth crime, enhancing youth development, and strengthening communities. The Program on Youth Justice was established by the Urban Institute in 2002 to help policymakers and community leaders develop and test more effective, research-based strategies for combating youth crime and encouraging positive youth development.

Researchers associated with the Program on Youth Justice work to transcend traditional approaches to youth justice research by

- studying all youth, not just those legally defined as juveniles;
- considering outcomes for families, organizations, and communities as well as individuals;
- sharing insights across the justice system, including prevention programs, police, courts, corrections, and community organizations; and
- drawing upon the expertise of multiple disciplines, including the social and behavioral sciences as well as professional fields such as medicine, public health, policy studies, and the law.

Acknowledgments

This report was prepared for the *Assessment of Space Needs Project*, which was funded by the Office of Juvenile Justice and Delinquency Prevention (OJJDP) and is housed within the Urban Institute's Justice Policy Center and the Center's Program on Youth Justice. Development of the report benefited from significant contributions by Dr. Jeffrey Butts, director of the *Assessment of Space Needs Project* and director of the Program on Youth Justice. The original conceptualization of this and other reports from the *Assessment of Space Needs Project* was informed by discussions with members of the project's Advisory Committee and consultants, especially William Sabol, formerly of the Urban Institute, and Howard Snyder of the National Center for Juvenile Justice.

The Urban Institute is grateful for the considerable assistance provided by the many Texas officials who made this report possible. Particularly helpful assistance was provided by several people who agreed to be interviewed and/or to provide the background information, reports, and studies that helped to shape this report. These officials included Dr. Tony Fabelo, Dr. Pablo Martinez, Nancy Arrigona, and Lisa Riechers of the Texas Criminal Justice Policy Council; Lisa Capers and Bill Bryan of the Texas Juvenile Probation Commission; Garron Guszak of the Texas Legislative Budget Board; and Dr. Charles C. Jeffords, Dr. Eric Fredlund, and Don McCullough of the Texas Youth Commission.

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Several current and former employees of the Urban Institute played critical roles in the project, notably Dr. Adele Harrell, director of the Justice Policy Center at the Urban Institute. Emily Busse and Alexa Hirst helped to organize the information gathered during the project's visits to juvenile justice agencies throughout the country, and they contributed to the initial drafts of several project reports. Ojmarrh Mitchell provided important criticisms of the research design as it was being developed, and Nicole Brewer, Dionne Davis, and Erika Jackson played other key roles in ensuring the success of the project. David Williams was responsible for the graphic design of the project's various reports.

Finally, the Urban Institute gratefully acknowledges the patience and efforts of the many state and local officials who hosted the project's site visits and assisted in the collection of data and other information. In particular, the study could not have been conducted without the support of the following agencies:

- California Youth Authority
- California Board of Corrections
- Florida Department of Juvenile Justice
- Florida Legislative Office of Economic and Demographic Research
- Kentucky Department of Juvenile Justice
- New Hampshire Department of Youth Development Services
- Oregon Office of Economic Analysis
- Oregon Youth Authority
- Texas Juvenile Probation Commission
- Texas Youth Commission
- Texas Criminal Justice Policy Council
- West Virginia Division of Juvenile Services
- Wisconsin Department of Corrections, Division of Juvenile Corrections
- Wisconsin Office of Justice Assistance
- Wisconsin—Dane County Juvenile Court Program
- Wisconsin—Milwaukee County Department of Human Services, Delinquency & Court Services Division

Forecasting Juvenile Correctional Populations in Texas

SUMMARY

In Texas, juvenile dispositional and correctional projections are developed by the Texas Criminal Justice Policy Council for the governor's office and the Texas legislature, as well as for the Texas Juvenile Probation Commission, the Texas Youth Commission, and the Texas Legislative Budget Board. The projections are generated from a disaggregated flow model that identifies rates of flow between stages of the juvenile justice system (e.g., referral, commitment, release) for different subpopulations (e.g., types of offenders). It thus allows TCJPC to monitor current capacity, make correctional projections, and conduct impact assessments of recent or proposed laws.

The process used by TCJPC to generate, monitor, and revise projections is as important if not more so than the technical aspects of their forecasting approach. This process, which focuses on the goal of generating credible projections, is grounded both in the independence of TCJPC as a research organization and in the involvement of practitioners and policymakers in identifying and agreeing upon critical assumptions. It also depends on several additional factors that establish the credibility of the resulting projections and impact assessments. The most critical ones include the following:

- sophisticated yet flexible forecasting models
- data that are accurate and relatively easy to access
- responsiveness to practitioner and legislative needs
- organizational autonomy of the agency providing population projections
- effective leadership that can balance and address research and political challenges
- education and involvement of key practitioners and policymakers
- monitoring and revision of trends and assumptions
- institutionalizing the projections process
- maintaining and enhancing credibility as a central goal.

These factors provide pragmatic and feasible building blocks that can be adapted to particular social and policy contexts in other states. When combined, their use can contribute to the development of improved and credible projections and more effective policies.

INTRODUCTION

The State of Texas handles between 80,000 and 100,000 delinquency referrals to the juvenile justice system annually. Recent years have witnessed a dramatic expansion of its juvenile correctional population and the funds needed for incarcerating the increased population of youths (Fabelo 2001c). Because of these and other changes, Texas has developed a highly effective process for anticipating and addressing correctional bed-space needs. This process combines empirical modeling, monitoring of trends, and inclusion of and responsiveness to key practitioners and policymakers.

Responsibility for generating juvenile correctional forecasts rests with the Texas Criminal Justice Policy Council (TCJPC). The TCJPC operates as an autonomous agency, directly accountable to but independent of the governor's office. Its projections are used by the governor, the legislature, the Texas Legislative Budget Board (TLBB), the Texas Juvenile Probation Commission (TJPC), and the Texas Youth Commission (TYC). Although TCJPC is responsible for official projections, it relies heavily on a leadership group, comprised of members of the governor's office and these different agencies, for developing the assumptions on which the projections are premised.

The Criminal Justice Policy Council's goal is to develop timely and credible projections that speak directly to the needs of a wide range of policymakers, state officials, and local jurisdictions and counties, as shown in figure 1 (Fabelo 2001b). The credibility comes largely from

TCJPC’s coupling of sophisticated empirical analysis with a process for promoting interactive model building and a shared understanding of projection limitations and uses.

This process encourages policymakers and officials to take responsibility for generating the assumptions upon which forecasts are based. It also promotes greater understanding of important nuances, including the impact of key assumptions relevant to interpreting, evaluating, and using forecasts. These nuances are important because if projections are based on inaccurate assumptions—concerning such factors as arrest rates, processing of offenders, lengths of confinement, existing correctional or parole policies, or new legislation—then the resulting projections are likely to be flawed. Indeed, the best empirical models will be misleading if they do not account for such events as a new policy aimed at lengthening the sentences given to drug offenders.

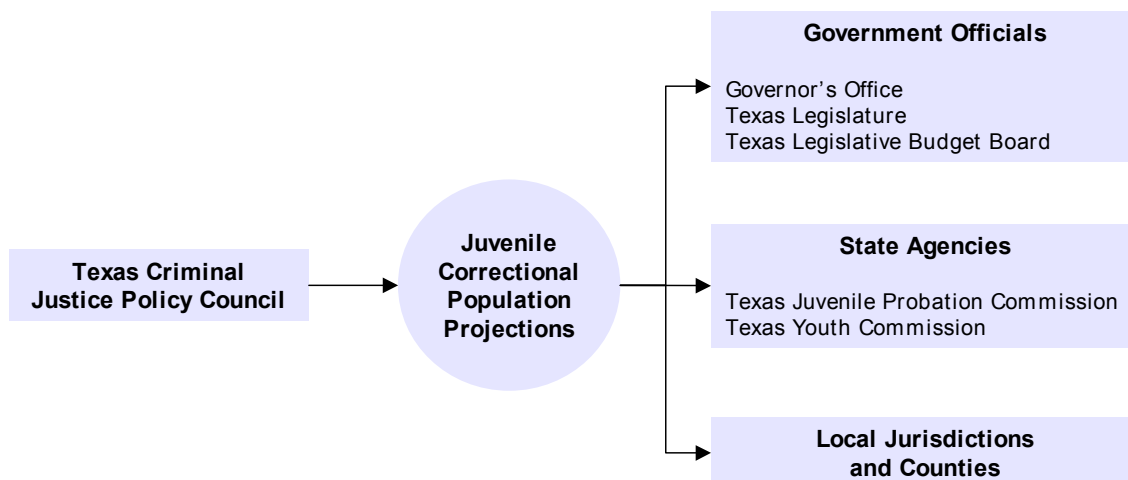
The Texas forecasting process, as described below, illustrates the idea that credible projections require an interactive process, one that incorporates both the views and the assumptions of practitioners and policymakers. An interactive process produces forecasts that are more likely to be understood and to be viewed as legitimate. As a result, they are more likely to be trusted

The Texas Criminal Justice Policy Council

The TCJPC was created in 1983 as an independent agency by the Texas legislature. It is charged with assessing a wide range of policy-relevant concerns bearing on juvenile and criminal justice matters. In 1995, the legislature required TCJPC to provide all official juvenile correctional projections. Currently, the Executive Director and 22 research and support staff operate independently of the state juvenile and criminal justice agencies as well as the legislature. However, TCJPC responds directly to the governor’s office and actively addresses requests from the legislature to focus on particular ongoing issues (e.g., projections) and specialized studies (e.g., evaluations of specific policies).

and to facilitate and guide decisionmaking on an ongoing basis. This approach stands in marked contrast to the idea of providing a one-time, fixed prediction of exactly where correctional bed-space capacity will be in the coming years, an effort that can result in not only inaccurate forecasts, but also misunderstanding about the appropriate uses of forecasts (Butts and Adams 2001; Sabol 1999).

FIGURE 1. Who Produces and Uses Juvenile Correctional Projections in Texas



TRENDS IN JUVENILE REFERRALS, DETENTION, CORRECTIONS, AND EXPENDITURES IN TEXAS

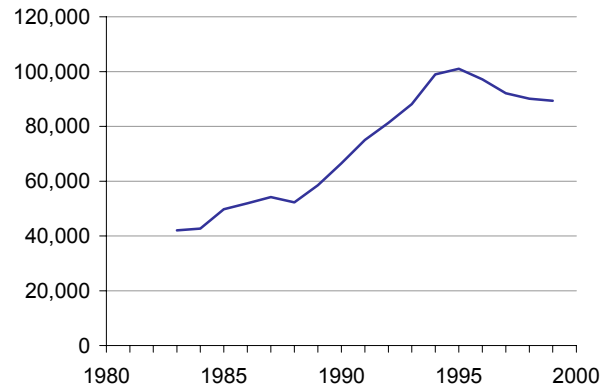
In the past two decades, the Texas juvenile justice system experienced a dramatic increase in delinquency referrals. As figure 2 shows, between 1983 and 1995, misdemeanor and felony referrals increased by more than 140 percent, from 41,000 to 100,000. Then, between 1996 and 1999, they declined to approximately 90,000. Figure 3 reveals that the increase in delinquency referrals was driven primarily by lower-level offenses, including less serious felonies, misdemeanors, violations of probation orders, and contempt of magistrate orders. The increase was not driven by property offenses, which declined significantly. Because violent and drug offense referrals remained stable, they do not appear to be linked to the upward trend in referrals.

The increase in delinquency referrals was paralleled by a similar increase, beginning in 1990, in the formal processing of youths, as shown in figure 4. The percentage of all referrals formally processed more than doubled, from 14 percent in 1990 to 29 percent in 1999. A similar increase can be observed in the percentage of referrals resulting in detention. Figure 5 shows that between 1983 and 1993, the percentage detained remained at around 35 percent but increased to 52 percent by 1999.

Sources for this report

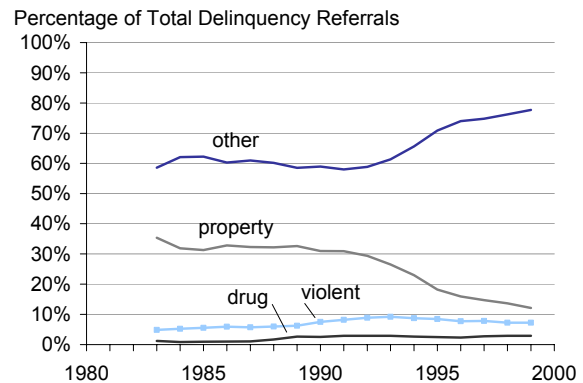
Two primary sources were used for this report: (1) review of the relevant forecasting literature and TCJPC publications; and (2) interviews with key juvenile justice practitioners and policymakers, including representatives from TCJPC, TLBB, TJPC, and TYC. The interviews focused on how juvenile correctional projections are made in Texas (e.g., what kind of data are used and how are they analyzed? what assumptions are made? who is involved in the projections process?). They also focused on practitioner and policymaker views of the credibility, uses, and limitations of the projections.

FIGURE 2. Juvenile (Ages 10-16) Felony and Misdemeanor Delinquency Referrals, Texas, 1983-1999



Sources: Fabelo (1996b), TCJPC (1999), Riechers (2000), and TJPC (1983-1999).

Figure 3. Juvenile (Ages 10-16) Delinquency Referrals by Offense Type, Texas, 1983-1999



Sources: Fabelo (1996b), TCJPC (1999), Riechers (2000), and TJPC (1983-1999).

Notes: Violent includes homicide, sexual assault/rape, robbery, and aggravated assault; property includes burglary, theft, and motor vehicle theft; drug refers to felony drug offenses; other refers to other (nonviolent, property, or drug) felonies, weapons violations, class A and B misdemeanors, violations of probation orders, and contempt of magistrate orders.

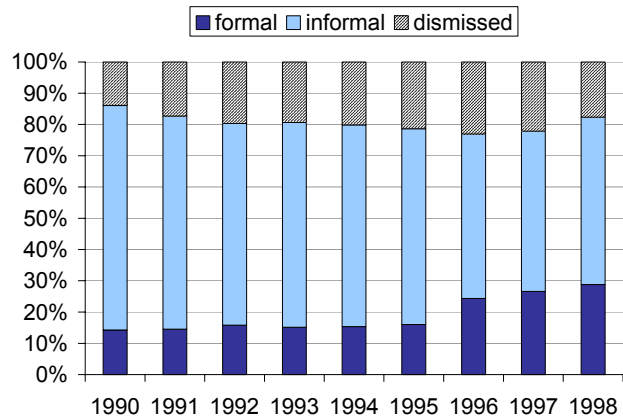
The increase in referrals and detentions is reflected in commitments to TYC. Throughout the 1980s and early 1990s, the correctional population was stable, with approximately 2,000 youths in confinement in any given year. But between 1994 and 2000, the number of youths confined to TYC increased by 133 percent to over 5,600 youths (see figure 6).

What drove this increase? One explanation is that Texas dramatically changed its juvenile code in 1995. Changes included a more punishment-oriented approach to addressing juvenile crime through (1) enhancing the options for transfer to adult court; (2) expanding the use of determinate sentencing, a sanctioning option available to prosecutors allowing them to obtain potentially lengthier terms of juvenile commitments and eventual transfer to the adult system; and (3) implementing the progressive sanctions guidelines, a graduated sanctions approach in which the type of sanction a youth receives is determined by the type and severity of the instant offense and the youth's prior record (Dawson 1996; Fabelo 2001b, c).

One of the more significant changes introduced by the legislature was longer minimum length of terms for determinately sentenced offenders (e.g., 10 years for a capital felony, 3 years for a first-degree or aggravated controlled substance abuse felony, 2 years for a second-degree felony, and 1 year for a third-degree felony). In addition, TYC increased the minimum terms of confinement for non-determinately sentenced youths: nine months for general offenders and longer terms for other types of offenders. TYC can and does hold youths longer than the minimum length of stay if the agency determines it is necessary or appropriate.

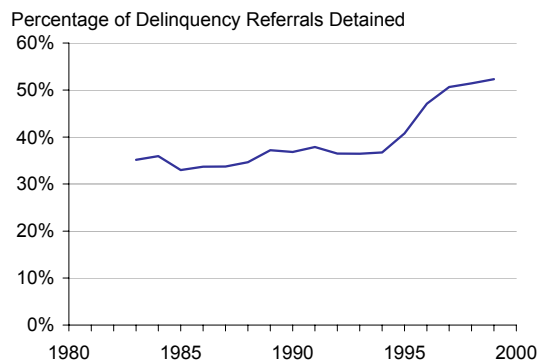
These legislative and agency changes appear to have increased the average length of stay of incarcerated youths. Between 1995 and 2000, aver-

FIGURE 4. Percentage of Juvenile Dispositions Dismissed or Informally or Formally Processed, Texas, 1990-1998



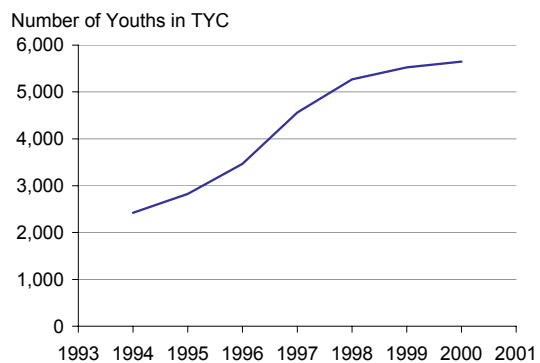
Source: TCJPC (1999).

FIGURE 5. Percentage of Felony and Misdemeanor Delinquency Referrals Detained, Texas, 1983-1999



Sources: Fabelo (1996b), TCJPC (1999), Riechers (2000), and TJPC (1983-1999).

FIGURE 6. Number of Juveniles in Confinement at the Texas Youth Commission, 1994-2000



Sources: Riechers (2000) and Texas Youth Commission (2001).

age lengths of stay increased from 12.1 to 18.7 months (Texas Youth Commission 2001), while the length of stay for violent offenders increased from 15.3 months to 23.1 months (Riechers 2000, 7). As of 1998, the vast majority of youths placed in TYC served at least one year for their initial commitment (Fabelo 2001b, 19).

An alternative explanation for the increased commitments is that there has been a net-widening effect of the new laws. For example, between 1995 and 1999, the percentage of new commitments incarcerated for misdemeanors rose from 20 percent to 30 percent. In actual numbers, the increase represents more than a doubling of the number of nonfelony offenders committed to TYC: 410 nonfelony offenders were committed to TYC in 1995, compared with 882 in 1999 (Texas Youth Commission 2000). Greater attention to youths on probation also fueled the increase in commitments, with the percentage of new commitments on probation when incarcerated increasing from 50 percent to 70 percent from 1995 to 1999. In addition, more youths with no prior felony adjudications or referrals were incarcerated: Between 1995 and 1999, the percentage of new commitments to TYC with no prior adjudications rose from 7 percent to 23 percent, and the percentage with no prior referrals rose from 3 percent to 15 percent (Texas Youth Commission 2000).

In keeping with the increases in referral and commitment populations, juvenile probation and correctional expenditures in Texas have increased dramatically in recent years. For example, between 1985 and 1998, appropriations for TJPC and TYC combined rose nearly 400 percent, from \$60 million in 1985 to \$293 million in 1998 (Fabelo 1999b).

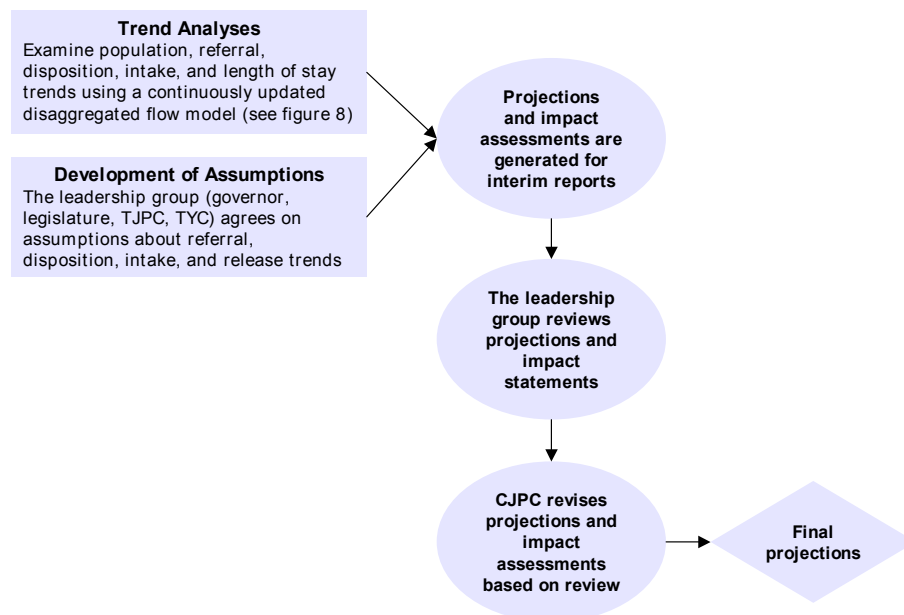
The dramatic changes in juvenile justice incarceration and expenditures constituted a particular concern to

the Texas legislature. There was a perceived need to identify these trends in a more timely manner and to plan better for future correctional space needs. In addition, the legislature wanted the ability to anticipate the potential impacts of proposed legislation. TCJPC represented a logical choice, leading the legislature to assign to the agency the responsibility for conducting all juvenile correctional forecasts and impact assessments.

CORRECTIONAL FORECASTING: AN OVERVIEW OF THE TEXAS APPROACH

The Texas Criminal Justice Policy Council's juvenile correctional projections are built on two foundations. First, a disaggregated flow model is used to monitor current correctional capacity, develop projections, and make impact assessments of recent or proposed policies based on the movements of groups of offenders into correctional facilities and their respective lengths of stay while incarcerated. Second, a process, outlined in figure 7 and described in detail below, is used to ensure that projections are credible and widely understood.

FIGURE 7. The Texas Criminal Justice Policy Council's Process for Generating Juvenile Correctional Projections



TCJPC attempts to combine the two to generate more accurate and credible projections than one or the other alone could produce. According to the executive director of TCJPC,

The process of developing projections is a science and an art. The science part includes the analysis by expert staff of the trends and operations of the correctional system and how these trends affect population growth. The art includes careful consideration of the views and judgments of correctional administrators and policy makers whose actions can impact the growth of correctional populations (Fabelo 2001b, i).

The credibility of TCJPC's projections also stems from the fact that it operates as an autonomous agency, reporting directly to the governor but operating independently of that and other agencies. TCJPC distributes its projections before the legislature and state agencies convene. The legislature uses the projections, along with requested impact assessments, to determine funding levels for TJPC and TYC. When the house Appropriations Committee, the senate Finance Committee, and legislators are evaluating budget requests and proposed legislation, they pay particularly close attention to TCJPC projections, impact assessments, and recommendations.

TJPC and TYC, which are the state's two juvenile justice agencies, use the projections to request "exceptional items" appropriations—that is, expenses exceeding the baseline operating budget, including more secure or nonsecure residential facilities, probation officers, and higher staff salaries (Fabelo 2001a, 43, 48).

TYC also uses the projections to anticipate future capacity and fluctuations in demand for bed space throughout the year. The bed-space estimates are used to determine what expansion needs, if any, will arise in the next three to four years, which represents the time needed to build and staff new facilities. Average daily population (ADP) estimates are used to determine how much fluctuation in bed-space needs there has been and will be on any given day. It takes very little fluctuation (e.g., a few percentage points) to place TYC in a position of potential over-

Timing of Juvenile Correctional Projections

When the Texas legislature created the TCJPC, they envisioned an agency that would bring a coherent and empirically informed approach to juvenile and criminal justice policy formation, including development of official correctional projections. TCJPC provides these projections to the legislature in September of the year preceding every biennial legislative session. Several months later, in January, just prior to the start of the sessions, updated projections are produced. Historically, TCJPC was required to provide official projections only for the criminal justice system. But since 1995, it has assumed responsibility, as a mandate from the Texas legislature, for generating official projections for the juvenile justice system.

crowding. The ADP estimates are used to justify arrangements for a predetermined number of contract beds (currently 1,168), which can be accessed as needed. The availability of the contract beds provides considerable and needed flexibility in handling fluctuations in the ADP.

Under the leadership of the executive director, TCJPC has ensured that practitioners and policymakers are actively involved in developing the assumptions underlying any projections (Fabelo 1996a, 2001b). The assumptions used in TCJPC's projections are formally agreed upon and developed by a leadership group comprised of policymakers and agency representatives, including staff from the governor's office, the lieutenant governor, the speaker of the house, chairs of the senate Finance and Criminal Justice Committees and house Appropriations and Corrections Committees, as well as TJPC and TYC administrators (Fabelo 2001b, 18).

The projections process is itself an interactive one that recognizes the role policy actions can have in affecting assumptions and how these in turn can affect future projections (Butts and Adams 2001; Sabol 1999). This point has been strongly emphasized by Dr. Fabelo during his presentations about factors that affect forecasts of correctional needs:

[The TCJPC's] projections are monitored routinely and are changed when changes in

trends or policies are expected to impact population changes. Projections change because the policies that impact correctional populations are in constant flux. . . . Moreover, the projection itself is directed at triggering policy responses to address capacity needs. When policies are adopted based on the projections, then the projections have to be changed to account for the impact of these policies. (Fabelo 2001b, i)

The revisions to TCJPC’s projections are evident in the official biennial juvenile correctional forecasts. These changes reflect empirical modeling of actual trends as well as changes to the assumptions upon which the empirical models were built.

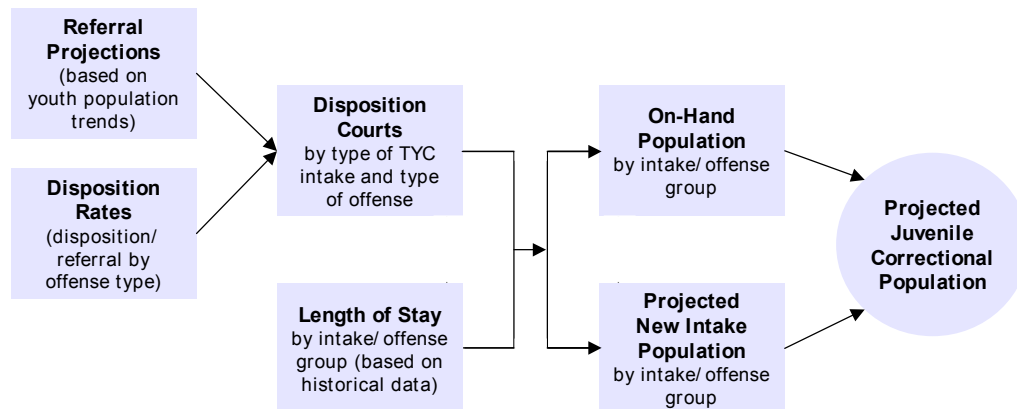
TCJPC emphasizes not only the “science” but also the “art” of generating credible correctional population projections (Fabelo 1996a, 2001b). The dual emphases, discussed in detail below, reflect an awareness that the best approaches to forecasting balance empirical analysis of processing trends, monitoring and assessment of recent and proposed policy changes, and active involvement and education of key agency leaders and policymakers (Butts and Adams 2001; Sabol 1999).

THE NUTS AND BOLTS OF THE TEXAS DISAGGREGATED FLOW MODEL

TCJPC’s empirical approach to generating juvenile correctional projections provides three benefits: trends can be easily monitored and updated; bed-space needs can be projected; and the potential impacts of proposed laws targeting certain types of offenders can be assessed. Like any forecasting methodology, the TCJPC model—outlined in figure 8 and discussed below—includes assumptions about factors such as arrest/referral rates, probation and parole revocations, the composition of the TYC population, the use of post-adjudication facilities as an alternative to TYC commitment, and whether new policies will be enacted that affect these or other dimensions. Because of the critical importance of using accurate assumptions, TCJPC relies on the leadership group to identify and agree on core assumptions underlying the projections (see figure 7).

TCJPC relies on a disaggregated flow model similar but not identical to the one it uses for the criminal justice system (Sabol 1999, 51). The flow model generates projections of future TYC bed-space needs by modeling movements of groups of offenders through the justice system, including referral, disposition, commitment to TYC, and length of stay (Fabelo 1998).

FIGURE 8. The Criminal Justice Policy Council’s Disaggregated Flow Model



Referrals and Dispositions

Referral rates are forecast using statistical projections linked to historical referral and population levels (see inset box). The projected referral counts then are partitioned proportionately into referral categories, including (a) violent, property, and drug felonies, (b) misdemeanor violent, property, drug, and other felonies, (c) violations of court orders, and (d) conduct in need of supervision. The partitioning is based on the proportion of referrals fitting each of these categories from the previous year and is adjusted upward or downward if clear trends in these proportions are evident.

The next step involves identifying the percentage of each of the referral categories resulting in a disposition. These percentages are not obtained by tracking the outcome of specific past referrals, but by examining the previous year's aggregate dispositions and referrals. For example, using data from the previous year, the number of dispositions for violent felonies is divided by the number of felony referrals to identify the proportion of felony referrals resulting in a disposition. (The proportions can be greater than 1.0. For example, many violent felony referrals are disposed of as violent misdemeanors. In such cases, there will be more felony referrals than felony dispositions.) These proportions then are applied to the projected referral counts to determine how many dispositions are expected to occur in the coming year.

The final step involves partitioning the projected dispositions into specific outcome categories, including counsel and release, probation,

commitment to TYC, and transfer to the adult system. TCJPC relies on data from the previous year to identify the percentage of dispositions in each category. The percentages then are applied to the projected disposition count to generate expected counts of specific types of dispositions within offense categories.

TCJPC does not always use the previous year as the basis for generating projected disposition counts. For example, if it is evident that the percentage of violent felony referrals resulting in a commitment to TYC has been steadily increasing or decreasing for several years, the percentage applied in the projections may be increased or decreased to adjust for this trend.

Intakes

TCJPC uses the disposition projections to determine how many youths are anticipated to enter TYC in the coming year. The projected disposition counts are for specific categories of offenses (felony and misdemeanor violent, drug, and property offenses, violations of court orders, conduct in need of supervision). These are then aggregated to specific categories used by TYC to determine minimum terms of confinement. (TYC's classification categories include determinate sentence, Violent A or B, chronic serious, controlled substance dealer, firearms, and general.) This projection is repeated within each of three intake categories: direct court or probation revocation commitment; parole revocation or recommitment; or TYC return, a category for youths admitted from TYC-administered halfway houses or nonsecure facilities.

Projecting Future Referrals

To obtain estimates of future delinquency referrals, TCJPC employs a statistical approach referred to as regression analysis. This approach allows TCJPC to quantify how changes in different factors, such as the juvenile (age 10-16) population, are linked to changes in referrals. However, it requires assumptions about whether past trends are likely to continue or change. If these assumptions are incorrect, then the empirical model—no matter how accurately it captures past trends—will generate inaccurate estimates about the future. For example, the analysis may show that in the past, every increase of 1,000 youths in the general population resulted in 200 additional referrals. The questions researchers and policymakers must ask are: What will the population trend actually be? Will it continue, stabilize, or reverse direction? Unfortunately, even the best statistical models cannot adequately answer such questions. But they can provide guidance. Indeed, the best empirical forecasts couple analyses about what has happened with informed assumptions about what will happen.

Disposition Practices

Counts and percentages for referral and disposition offense categories may differ from one another because the initial referral classification may change from the time of referral to the time a disposition is determined. When the differences between the two are dramatic, TCJPC investigates whether there is a particular pattern, such as county-level variation, that can account for them. For example, County X may go from reporting that 80 percent of its violent felonies result in a disposition to 50 percent. TCJPC determines whether this information should be used to inform the development of assumptions about aggregate (state-level) referral and disposition trends or whether it represents a one-time anomaly.

Lengths of Stay

As described above, TCJPC forecasts referral counts and links these to previous dispositional trends to produce counts of youths who are anticipated to enter TYC within each of three intake groups, disaggregated into TYC's offense categories. The next step is to determine how long youths within these intake/offense categories are expected to stay in TYC before being released.

The lengths of stay are determined empirically by examining 10 years of historical data on length of confinement for previous intake/offense cohorts. TCJPC uses a modified life table approach to identify the probabilities of release for each possible intake/offense cohort. For example, incarcerated violent felony offenders from the previous 10 years are tracked until their release. Then probabilities are developed for determining the likelihood that offenders of this type were released in one month, two months, three months, and so on.

The probabilities can be applied both to the on-hand and intake populations, showing the likelihood of release for each month after admission. For both populations, TCJPC determines the month-by-month probability of release for youths in specific intake/offense groups.

Projecting Population Capacity Needs

TCJPC applies information about lengths of stay for specific intake/offense groups to the on-hand population and to the anticipated (forecast) intake population. The resulting model is then weighted according to the numbers of youths in each intake/offense group to estimate the needed bed space at TYC for the coming year. Projections for each subsequent year can be generated simply by applying the same model to each previous year's on-hand population and projected intake population. By modifying assumptions about these factors, as well as the anticipated length of stay for certain populations, TCJPC can also generate impact assessments of proposed legislation targeting certain types of offenders.

BEYOND NUMBERS: FOUNDATIONS FOR GENERATING CREDIBLE CORRECTIONAL PROJECTIONS

Although empirical modeling is central to generating credible correctional projections, there are other, equally important factors. The most critical foundations of the forecasting process often include non-empirical factors, such as actions state policymakers or correc-

Foundations for Generating Credible Correctional Projections

- Sophisticated Quantitative Analysis
- Data Quality
- Organizational Autonomy
- Leadership
- Responsiveness to Practitioner and Legislative Needs
- Practitioner and Policymaker Education and Involvement
- Developing, Monitoring, and Revising Trends and Assumptions
- Institutionalizing the Projections and Assessment Process
- Perceived Credibility

tional officials may undertake. When the two are linked, an effective process can emerge for creating more credible and useful projections than otherwise would occur. Texas provides an illustration of one such process, the elements of which are outlined below.

Sophisticated Quantitative Analysis

Credible projections must rely on quantitative analyses that are flexible enough to allow for tracking certain kinds of offenders while not requiring a prohibitive investment in data management. To this end, Texas has invested in a centralized database that tracks groups of offenders through various stages of the juvenile justice system. As a result, TCJPC has been able to develop a highly flexible disaggregated flow model that can be continuously updated. The model allows TJPC to provide up-to-the-minute projections as well as impact assessments of recent or proposed legislation. In addition, because TCJPC constantly monitors trends and updates its projections, they are able to identify quickly potential policy concerns.

Data Quality

According to TCJPC, juvenile justice data in Texas generally are quite accurate, especially when compared with criminal justice data. However, data quality is reported to be considerably better—more accurate and more complete—for certain kinds of information, such as type of intake, referral and disposition offense, and TYC classification. By contrast, information such as level of supervision or parental marital status frequently is inaccurate or incomplete.

The overall data quality results primarily from ongoing efforts to centralize the data collection conducted among local probation departments and to enhance the consistency and accuracy of these data. Almost all jurisdictions in Texas use a common software program, CASEWORKER, created by the Texas Juvenile Probation Commission for collecting and organizing

juvenile, offense, and processing information. This information in turn is transferred to TJPC. Counties that use a different program still must submit the same information. To ensure that the reported data are consistent and accurate, TJPC and TCJPC have worked to educate local counties about proper reporting procedures.

There are, however, some problems with the juvenile justice database. For example, some counties do not report paper referrals to TJPC, while others do. (A paper referral is one in which a police officer picks up a youth engaged in minor delinquent activity, counsels and releases the youth, and then submits paperwork to the local juvenile probation department regarding the youth.) As a result, aggregate, state-level referral counts may obscure significant county-level variation in reporting practices.

Such differences can present potentially serious problems for interpreting trends, especially if a jurisdiction changes the way it classifies types of referrals. For example, some larger counties in Texas recently changed the way they defined categories of referrals (e.g., paper referrals) and whether they included these as part of their total referral counts. The result was the appearance of a decline in referrals at the state level, when in reality the decline was due to changes in how categories of referrals were classified and reported. Such changes may be due to a range of factors. One possibility is that counties do not want to appear to be providing lesser dispositions than recommended by the progressive sanctions guidelines, even though compliance with the guidelines is voluntary. Another is that databases may be restructured or updated to more accurately reflect existing classification procedures.

These examples illustrate the need for careful monitoring and evaluation of referral and processing trends to assess the quality of the data being used and, by extension, any resulting projections. Monitoring can include analyses of referral and disposition trends, but it also can include analyses linking these trends to policy or data reporting changes. For example, a state-

level assessment of the recently enacted progressive sanctions guidelines would need to take into account that some urban counties have changed how they report certain referrals. Although there is no simple way to avoid such issues, they can be identified more quickly with careful and ongoing monitoring. In turn, data quality issues can be addressed to improve the accuracy, utility, and ultimately the credibility of projections.

Organizational Autonomy

The TCJPC originally was created in 1983 to help address the overcrowding in Texas prisons. However, under Dr. Tony Fabelo it has been transformed into an agency that the Texas legislature and the TLBB increasingly have come to view as essential to policymaking. As of 1997, the Texas legislature made TCJPC directly accountable to the governor's office and not an agency board. Thus, while TCJPC is highly responsive to requests from the legislature and justice agencies, organizationally it is accountable only to the governor. The result is an agency that is autonomous from the two juvenile justice agencies (TJPC and TYC) and the legislature. Consequently, it is able to produce projections and impact assessments that are protected from the kinds of political pressures (e.g., reduced funding) that frequently can affect analyses conducted by nonindependent agencies.

Leadership

Effective leadership is essential for any agency. Dr. Tony Fabelo, the current executive director of TCJPC, began work with the agency when it was first created in 1983 and then was appointed to his current position in 1991. As a result, he has a long-standing familiarity with justice trends and policy in Texas. Respected for his ability to present complex material in an accessible yet accurate and useful manner, Dr. Fabelo also is reported to be an effective leader in motivating and retaining skilled staff.

In recent years, Dr. Fabelo has positioned the agency to play a central and respected role in justice policy formation. The TCJPC's biennial "big picture" reports (Fabelo 1997, 1999a, 2001a) reflect this role. These reports include a comprehensive range of summaries of TCJPC analyses addressing particular policy issues of concern to legislators. For each policy issue, the report presents findings about what has happened, what may happen, and what the policy implications and solutions may be.

Finally, under Dr. Fabelo, the TCJPC has focused on developing collaborative relationships with state agencies and legislators, while also maintaining a nonpartisan role in policy formation. This dual focus has been essential to ensuring the credibility of the TCJPC's forecasts. The agency's credibility also has been enhanced through its direct involvement of practitioners and policymakers both in generating and in taking responsibility for the assumptions underlying TCJPC's projections and assessments.

Responsiveness to Practitioner and Legislative Needs

One key to the effectiveness of TCJPC is its responsiveness to diverse stakeholders, including legislators and state agencies. The TLBB, TJPC, and TYC all report relying heavily on TCJPC's analyses, especially during legislative sessions. They also report requesting many specific analyses, provided by TCJPC in a timely manner. In addition, the active involvement of these diverse stakeholders in the projections process means that they rarely are surprised by information in annual or topical analyses of justice-related issues.

TCJPC's perceived legitimacy results in part from its record of presenting facts with which the different justice agencies do not always agree. In addition, to address concerns that legislators may have about why some projections may change, TCJPC produces many interim reports documenting specific modifications to assumptions that were developed by the

leadership group (see, e.g., Fabelo 1997, 1998, 1999a, 2001a). Finally, TCJPC is highly responsive to legislative requests for assessments of the potential impacts of proposed legislation.

A recent example comes from the 77th Texas legislative session, in 2001. A bill (House Bill 53) was submitted mandating that all youths released from TYC reach an educational skill level equivalent to his/her age level. TCJPC was able to use pre- and post-educational scores for youths, broken down by TYC classification categories, to calculate the time needed for these category-specific youths to reach an age-appropriate educational level. (Offenders with high school diplomas or graduate equivalency degrees were removed from each classification.) They then were able to show that under the proposed legislation, TYC would need approximately 2,000 more beds over the next four years. TCJPC conducted a similar impact assessment of legislation passed in 1999 (H.B. 2947) that limited the ability of jurisdictions to commit misdemeanor offenders to TYC. This assessment showed that the law would have “an impact initially then stabilize as local officials commit juveniles to TYC for other types of offenses” (Fabelo 2001c, 10).

Practitioner and Policymaker Education and Involvement

For projections and assessments to be understood, trusted, and used, it helps to have active involvement from those most interested in or affected by them. As noted earlier, projections and assessments require numerous assumptions; consequently, mistaken assumptions can affect the accuracy and utility of any resulting analyses. The challenge lies in educating non-researchers about how to interpret the analyses and to assume responsibility for the assumptions on which they are grounded.

TCJPC has developed a process that involves continuous education of agency and legislative staff, as well as the governor’s office, about the intricacies of the projections process. The

process depends on their involvement in developing the assumptions on which projections are made and then assuming responsibility for changes to the assumptions. For example, during legislative sessions, TCJPC schedules monthly meetings with the governor’s office and the TLBB about revisions to projections and explanations for these revisions. These revisions are reviewed with TJPC and TYC staff. If new assumptions need to be made, these are reviewed and, if agreed upon by the leadership group, adopted as the basis for revised projections. This process results not only in improved assumptions, but also in educating state policymakers and justice officials about the forecasting process and how projections can and should be used.

Developing, Monitoring, and Revising Trends and Assumptions

Projections are only as good as the assumptions on which they rest (Butts and Adams 2001; Sabol 1999). Thus, it is critical for assumptions to be reviewed constantly and to reflect the knowledge and insights of key juvenile justice practitioners and policymakers. If, for example, TYC temporarily changes its release policies, length of stay estimates will change. Without knowledge that the changes are due to a temporary policy, TCJPC might over- or underestimate capacity needs in future years.

Assumptions about a range of factors may affect projections, including referral and disposition trends, statutory changes, county-level variations in policy and practice, and fluctuations in TYC lengths of stay for specific types of offenders. For this reason, TCJPC constantly monitors assumptions about these factors. Careful monitoring ensures that changes to projections can be made if needed, with the changes based on observed changes in trends and/or changes in law or practice.

Figure 9 shows how TCJPC’s projections have been modified on a biennial basis as a result of changes in actual trends and assumptions about referrals, processing, and length of stays.

The 1997 projection slightly underestimated the TYC population for 1998 and 1999. Both the 1997 and 1999 forecasts overestimated the TYC population for 2000, with the overestimate even higher in 1999. In 2001, TCJPC adjusted its estimates downward to reflect the lower number of actual commitments and changes in assumptions about total referrals into the system, how those referrals would be handled, and how long TYC would hold youths in its facilities.

Institutionalizing the Projections and Assessment Process

TCJPC is well staffed as a research organization. However, ensuring the integrity of the projections process requires considerable investment in training and retaining employees. To address this issue, the agency has made employee salaries a priority. It also has emphasized staff participation in presentations and publications to show them the direct impacts of their work.

The larger difficulty confronting TCJPC is the central role of the current director. Dr. Fabelo has played a critical role in transforming TCJPC into a highly needed, respected, and powerful organization, and his skills and experience would be difficult to replace. As a result, although some aspects of the forecasting process have been institutionalized, others have not and perhaps cannot be institutionalized. That is one of the primary challenges facing any state attempting to replicate the approach Texas has taken for developing and using projections.

Perceived Credibility

For projections and impact assessments to be used effectively on a consistent and ongoing basis, they must be perceived as credible. That is, juvenile justice agencies and policymakers have to believe the numbers that are produced reflect fair and informed consideration of the relevant facts, and that recommendations reflect nonpartisan analysis. The

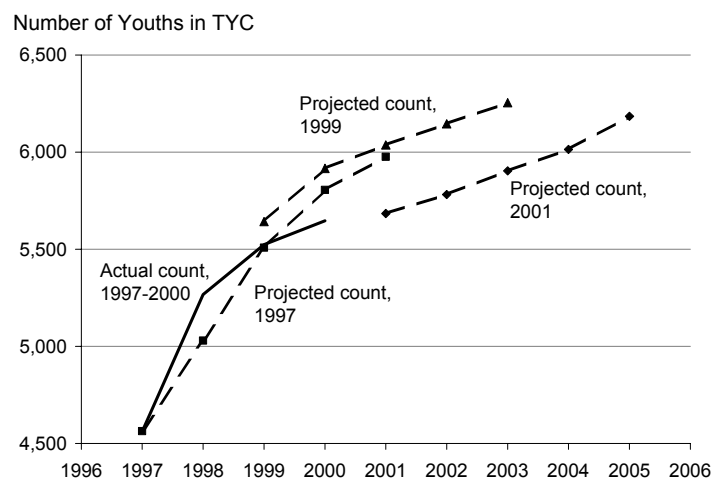
evidence clearly suggests that TCJPC is perceived as an agency that produces credible analyses. Garron Guszak, a senior planner from the Texas Legislative Budget Board, noted

TCJPC has been very accurate in their forecasting of the TYC population. . . . I have to give credit to [them] because prior to their forecasts, there didn't appear to be an official forecast of the TYC population, so we had no idea whether the TYC population remained constant, was on a sharp increase, etc.

But TCJPC's credibility stems less from the accuracy of its predictions, which change frequently, and more from its systematic, inclusive, and empirically based approach to juvenile justice policymaking. One result has been that planning for TYC bed space has improved and is reported to be conducted on less of an ad hoc basis. In addition, there has been less of a need to rely on unplanned changes in release policies to manage correctional population levels.

TCJPC's perceived credibility is central to the effective use of its projections in correctional

FIGURE 9. Projected and Actual Number of Juveniles in Confinement at the Texas Youth Commission, 1997-2005



Sources: Total on-hand TYC population preceding the years in which each of the projections were generated, Riechers (2000). Year 2000 count, Texas Youth Commission (2001). For 1997-2001 projections, Fabelo (1997). For 1999-2003 projections, Fabelo (1999a). For 2001-2005 projections, Fabelo (2001a).

planning. If either TJPC or TYC viewed the agency's projections as ill-informed or partisan, they would be unlikely to cooperate with TCJPC and the key assumptions used in projections would soon become invalid. Similarly, if legislators viewed TCJPC's projections as reflecting a particular bias, they would be unlikely to use the projections in their policymaking decisions and to withdraw from their involvement in shaping the assumptions on which the projections are based. As a result, projections in Texas would become less credible and less useful.

CONCLUSION

Effective forecasting is essential for anticipating the space needs of juvenile correctional systems. But more than sophisticated empirical analyses is needed. Effective forecasts also require the involvement of diverse stakeholders to develop the assumptions on which forecasts are based. This involvement can result in better and more accurate assumptions, shared responsibility for those assumptions, and increased understanding of the limitations and appropriate uses of forecasts. In turn, the resulting forecasts are likely to be more credible—that is, viewed as legitimate and as useful for developing correctional policies.

The Texas forecasting process is grounded in this notion of credibility and the importance of interactive processes. Forecasts are empirically based, but they also are informed by a multidimensional process for generating continuously updated projections of future correctional populations. For Texas, the credibility of projections, as well as impact assessments, depend on a wide range of factors. These include

- sophisticated yet flexible forecasting models;
- data that are accurate and relatively easy to access;
- responsiveness to practitioner and legislative needs;

- organizational autonomy of the agency providing population projections;
- effective leadership that can balance and address research and political challenges;
- education and involvement of key practitioners and policymakers;
- monitoring and revision of trends and assumptions;
- institutionalizing the projections process; and
- maintaining and enhancing credibility as a central goal.

These are pragmatic and feasible building blocks that can be implemented in and adapted to the particular social and policy contexts in other states. In turn, their use can contribute to the development of credible projections and ultimately to more effective policies.

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