Methodology for the Analysis of Civil Commitment Detention Times and Costs

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The authors expand their methodology for quantifying and comparing civil commitment processes by developing new formulas for the determination of the average commitment detention time and cost. They also examine the effects of specific changes in commitment procedures on the average detention time and cost. Using data from Oregon's civil commitment process, the authors present several examples of the practical application of their methodology and conclude with a discussion of its major administrative and research implications.

In previous reports we have described a methodology for quantifying and comparing civil commitment across jurisdictions[1] and for predicting the effects of changes in commitment decision making on the overall probability of release.[2] The basis of our methodology is the model that divides the entire commitment process into three separate steps and outlines the important and distinct decisions that must be made at each step. Using this model it is possible to develop formulas that quantify the manner in which these decisions are made. This methodology can be used to summarize the status of civil commitment for an entire population; monitor a commitment process over time; study only the formal, legalistic steps in civil commitment; compare civil commitment processes in different populations; examine the effects of changes in a mental health system on commitment processes; and predict the effects of changes in decision making at each step on the overall outcome (probability of release or commitment).[1,2] We believe that this level of analysis is applicable to most states and that it provides a rational means for comparing commitment processes despite the variations in specific procedures that exist from one jurisdiction to another.[3–5]

One important way to study civil commitment is to compare the length of detention in different jurisdictions. It is essential to remember that this is not merely a comparison of the length of commitment. The length of detention

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before commitment must also be included to yield meaningful comparisons because these periods may vary widely according to different statutes.[5] Once the average detention times are calculated, then the average costs of detention can also be determined and compared. In addition, one can also quantify and compare the effects of specific changes in commitment procedures on the average detention time and cost. Currently there are no objective ways of making these comparisons across jurisdictions.

The purpose of this paper is to expand our civil commitment methodology by developing a means to quantify and compare commitment detention times and costs. We begin with a review of our formulas for calculating the probability of release and commitment and then develop new formulas that determine the average detention time and cost. We then examine the effects of changing the length of time periods between the various steps in the process as well as the effects of changing the performance of the mental health professionals who attempt to divert people out of the commitment process. We present several practical examples of the application of our methodology and conclude with a discussion of its administrative and research implications.

Calculating the Length and Cost of Civil Commitment Detention

We have previously described how it is possible to use our three-step commitment model as a basis for estimating the probability of being released (or committed) from the commitment proces and to calculate the relative importance of the three steps in determining the outcome.[1] We have shown that the overall probability of release is determined by the rates at which people are released from the three separate steps. These three release rates are defined by the following formulas:

ds = screening release rate

$$= \frac{\text{no. of people released at screenings}}{\text{no. of screenings}}$$

di = investigation release rate

$$= \frac{\text{no. of people released at investigations}}{\text{no. of investigations}}$$

dh = hearing release rate

$$= \frac{\text{no. of people released at hearings}}{\text{no. of hearings}}$$

The probability that a person will be released at a screening is ds. However, to be released at an investigation a person must first be referred from a screening and the probability of being referred is $(1 - ds)$. Thus, the probability that a person will be released at an investigation is $(1 - ds)(di)$. Finally, to be released at a hearing a person must first be referred from both a screening and an investigation. The probability of being released at a hearing then becomes $(1 - ds)(1 - di)(dh)$. Therefore, the overall probability that a person will be released from the civil commitment process is:

$$p = ds + (1 - ds)(di) + (1 - ds)(1 - di)(dh)$$

$$= \frac{\text{no. of screenings} - \text{no. of commitments}}{\text{no. of screenings}}$$

The probability that a person will actually be committed is:

$$p^* = (1 - ds)(1 - di)(1 - dh)$$

$$= \frac{\text{no. of commitments}}{\text{no. of screenings}}$$

It should also be apparent that:

$$p + p^* = 1.0$$

We can also use our three-step model as a framework to determine the average time that people are detained once they enter the commitment process. To do so it is important to recognize that the total detention time consists of the following components:

ts = time until screening
ti = time between screening and investigation
th = time between investigation and hearing
tc = time between hearing and termination of commitment

For convenience at this stage we can think of ts, ti, th, and tc as fixed constants. Some of these time periods may actually be specified in state statutes. Later, as noted below, we will relax this assumption. Using this information and the probabilities of release from each commitment step yields the following formula for the average time in detention:

$$t = tsds + (ts + ti)(1 - ds)di + (ts + ti + th)(1 - ds)(1 - di)dh + (ts + ti + th + tc)(1 - ds)(1 - di)(1 - dh)$$

Notice that this equation consists of four terms. Each term is the product of a factor related to time and a factor related to release rates. For example, the first term is the product of ts (time until screening) and ds (screening release rate). Actually, t is simply the weighted average of the four possible lengths of time people are detained within the civil commitment process.

The formula for t depends on factors of the form $(1 - d)$, where d is a release rate. Actually these factors are the rates of referral from one commitment step to another. If we call these factors R, then in our model we have:

Rs = referral rate from screenings = $1 - ds$
Ri = referral rate from investigations = $1 - di$
Rh = referral rate from hearings = $1 - dh$

Naturally, Rh is also the judge's commitment rate.

By rearranging terms, cancelling, and substituting for $1 - d$, the formula for t becomes:

$$t = ts + tiRs + thRsRi + tcRsRiRh$$

The average cost of a civil commitment detention can be determined from:

$$c = Csts + CitiRs + ChthRsRi + CctcRsRiRh$$

In this formula, Cs, Ci, Ch, and Cc are the costs of units of detention time (e.g., hour or day) pending a screening, investigation, hearing, and commitment termination respectively. Again, for convenience, we will consider Cs, Ci, Ch, and Cc to be fixed constants at the present time.

If one wants to focus only on the length of detention before a formal commitment (steps 1 and 2), merely replace tc by 0. The formulas then become:

$$t^* = ts + tiRs + thRsRi$$

$$c^* = Csts + CitiRs + ChthRsRi$$

If one is only interested in studying the more legalistic aspects of civil commitment processes beginning at the point of an investigation (steps 2 and 3),

merely replace *ts* by 0 and *ds* by 0 (*Rs* by 1) which yields:

$$t^{**} = ti + thRi + tcRiRh$$

$$c^{**} = Citi + ChthRi + CctcRiRh$$

These formulas also make it possible to divide the average cost of detention (c) into precommitment (c') and commitment (c'') costs so that:

$$c = c' + c'', \text{ where}$$

$$c' = c^{*} = Csts + CitiRs + ChthRsRi \text{ and}$$

$$c'' = CctcRsRiRh$$

It now becomes possible to calculate the percentages of the average cost of detention due to precommitment and commitment costs as follows:

$$\% \text{ due to precommitment costs} = (c'/c)(100\%)$$

$$\% \text{ due to commitment costs} = (c''/c)(100\%)$$

Effects of Changing Commitment Procedures on Detention Time and Cost

Our methodology also provides us with an opportunity to examine the effects of changing specific civil commitment procedures on the average detention time and cost. Of particular interest are the effects of changing the performance of the mental health professionals who work with people at each commitment step in an attempt to divert them out of the commitment process as well as the effects of changing the length of the time periods between each commitment step. One approach is to study just the effect of improving mental health professional performance by decreasing the referral rates (*Ri* and *Rh*) between the commitment steps by the desired amounts and using our formulas to calculate the average detention time (t) and cost (c) that result. Naturally, we would expect that improved mental health professional performance would result in a lowered average detention cost.

A more sophisticated analysis recognizes that many states have very specific limitations on the amount of time that may lapse between a screening and an investigation (*ti*) and between an investigation and a hearing (*th*).[5] Using our equations, we can explore how altering these precommitment detention times might affect the cost of operating the involuntary treatment system. For example, suppose these periods of time (*ti* and *th*) were increased in our formulas for the average detention time (t) and cost (c). However, suppose mental health professionals were able to use the extra time to increase the number of people diverted out of the commitment process. This would result in larger release rates (*di* and *dh*), smaller referral rates (*Ri* and *Rh*), and perhaps a decrease in the average detention time and cost. In other words, the increased time between screenings and investigations or between investigations and hearings can "pay off" provided the performance of the mental health professionals improves beyond certain "break-even points." These break-even points may be calculated by using modifications of our formula for the average cost of detention which relates performance (*Ri* and *Rh*) to detention time (*ti* and *th*). The break-even point between screenings and investigations is given by:

$$Ri = (c - Csts - CitiRs)/(ChthRs + CctcRsRh)$$

The break-even point between investigations and hearings is given by:

$$Rh = (c - Csts - CitiRs - ChthRsRi)/CctcRsRi$$

Relaxing the Fixed-Components Assumption

To this point we have assumed that the components of the detention time and cost are fixed constants. This assumption is simply a convenience and is not necessary to our argument. Our methodology is used to describe *average* detention times and costs where the averaging is done over an entire population. To make use of our formulas we need values for the various detention times and costs. These values may themselves be averages, but now the averaging is done only over subsets of the population. For example, the averaging done to compute *tc* is not performed over the entire population, but just the subset of people who were actually committed. For the sake of simplicity, we will continue to use the term "average" to refer to the entire population and eliminate any notation of averaging over subsets.

Methods

Oregon's community mental health programs (CMHPs) are organized along county lines. Since 1977, each CMHP has been required to compile certain civil commitment statistics and to submit quarterly reports to the State Mental Health Division. The forms used for reporting are uniform from county to county and include detailed definitions of all information requested. The data reported here were obtained from these forms for the fiscal years (July 1 to June 30) 1977 to 1978 (FY77) to 1983 to 1984 (FY83). From the data it is possible to calculate the number of screenings by CMHP staff, investigations, hearings, and commitments that took place in each Oregon county during this time period and to determine the outcome of each step in our commitment model. It then also becomes possible to solve the above formulas for average detention time and cost. In Oregon, essentially all detentions occur in a hospital, so the average detention time and cost refer to the length of hospitalization and its cost.

In general, the data on the steps in Oregon's commitment process are very complete. The exception, however, is in the total number of screenings (step 1). Data are only available on the number of screenings performed by CMHP staff. People may enter Oregon's commitment process by way of a citizen petition, physician (MD) hold, or peace officer (PO) hold.[1,2] CMHP staff screen most potential citizen petitions. In some counties they also screen potential MD or PO holds, and in others they may not. Therefore, values reported by CMHPs for the number of screenings and the number of people released as a result of screenings may be smaller than the true numbers. To illustrate our methodology in the following examples, we use the numbers reported by CMHPs. This results in a conservative estimate for the release probability and the relative importance of the screening step in the overall commitment process. It also results in liberal estimates for the commitment probability, screening referral rate, and average detention times and costs.

Results

In the state of Oregon during FY77 through FY80, there were 27,601 screenings, 14,273 investigations, 7,248 hearings, and 4,514 commitments.[1] Substituting these values in our formulas yields: $ds = .48$, $di = .49$, $dh = .38$, $p = .84$, $p^* = .16$, $Rs = .52$, $Ri = .51$, and $Rh = .62$. Therefore, during FY77 through FY80, 84 percent of the people who were screened by CMHP staff for possible entrance into the commitment process were ultimately released and 16 percent were committed.

Table 1 contains data from the first six examples of the applicability of our methodology. In example 1, the methodology is used to calculate the average detention time and cost for an entire population over a particular time period. In the state of Oregon during FY77 to FY80, we estimate that the average detention time was about 15.0 days and the average detention cost was about $1,800.

To make these calculations we need to know the referral rates from each commitment step (*Rs*, *Ri*, and *Rh*), the detention time in each step (*ts*, *ti*, *th*, and *tc*), and the cost of a unit of detention time (e.g., hour or day) at each step (*Cs*, *Ci*, *Ch*, and *Cc*). The referral rates

Table 1
Examples of the Use of the Methodology

Examples	Oregon Civil Commitment Data									Average Total Detention Time (Days)‡	Average Total Detention Cost ($)§
	Referral Rates			Detention Times (Days)‡			Detention Costs ($)§				
	Rs	*Ri*	*Rh*	*ts*	*ti* and *th*	*tc*	*Cs*	*Ci* and *Ch*	*Cc*		
1. Entire state (FY77–FY80)	.52	.51	.62	0	2.375	80	0	233	105	14.9	$1806
2. Entire state (FY77–FY80) (steps 1 and 2 only)	.52	.51		0	2.375	0	0	233	0	1.9	$ 431
3. Entire state (FY77–FY80) (steps 2 and 3 only)	1.00	.51	.62	0	2.375	80	0	233	105	28.9	$3497
4. Entire state (FY77)	.54	.48	.36	0	2.310	80	0	200	100	13.9	$1556
v.											
entire state (FY80)	.43	.51	.33	0	2.440	80	0	270	110	16.8	$2178
5. Urban counties (FY77–FY80)*	.45	.48	.60	0	2.175	80	0	233	105	12.0	$1472
v.											
rural counties (FY77–FY80)†	.57	.71	.80	0	1.725	80	0	233	105	23.4	$2654
6. County X (FY79)	.90	.51	.77	0	2.260	80	0	246	110	31.6	$3889
v.											
county X (FY81)	.97	.55	.87	0	1.970	80	0	294	110	39.9	$4933
v.											
county X (FY83)	.73	.53	.79	0	2.725	80	0	346	130	27.3	$4198

* Urban counties = six counties with population > 100,000.
† Rural counties = 14 counties with population < 25,000.
‡ Statistical analyses of average detention times. Example 4: t-test = 5.35, df = 13762, $p < .0001$; example 5: t-test = 10.28, df = 24082, $p < .0001$; example 6: $F_{[2,324]} = 3.11$, $p < .05$.
§ Statistical analyses of average detention costs. Example 4: t-test = 10.30, df = 13762, $p < .0001$; Example 5: t-test = 9.74, df = 24082, $p < .0001$; example 6: $F_{[2,324]} = 1.40$, p = not significant.

are calculated from available data. If we assume that the commitment process begins at the point of a screening, then $ts = 0$ and $Cs = 0$. The duration of commitment (tc) during both FY83 and FY84 is known to have been about 80 days.[6] It is reasonable to assume that this value has been stable over the last few years. Therefore we estimate that the length of a commitment during FY77 to FY80 was also about 80 days. The cost of a day of commitment (Cc) during FY77 to FY80 is known to have been about $105.[6] These estimates for tc and Cc are actually only pertinent to those commitments that were made to a state hospital. Because they represent about 90 percent of all commitments during this time period, for the purposes of our example we will also assume that all commitments were made to a state hospital.

Because no data are currently available concerning ti and th, their values must be estimated. Assuming $ts = 0$, then $ti + th$ is the detention time before a commitment hearing. Individuals that might possibly be detained are those who have been the subject of either a citizen petition, PO hold, or MD hold. In Oregon during FY77 to FY80 there were 14,273 of these individuals, 25 percent as a result of citizen petitions, 50 percent as a result of PO holds, and 25 percent as a result of MD holds.[1,7] Based on our knowledge of Oregon's commitment system, it is reasonable to assume that none of the people with citizen petitions were detained (actually a few are apprehended by POs and taken to a hospital for detention) and that people with PO and MD holds were detained close to the maximal time allowed before their formal commitment hearing (7 days and 5 days, respectively). Therefore, the detention time before a commitment hearing becomes: $(ti + th) = (0 \text{ days})(.25) + (7 \text{ days})(.50) + (5 \text{ days})(.25) = 4.75$ days. If we also assume that investigations occur at about the midpoint of the detention period before a commitment hearing, then $ti = th = 2.375$ days.

Data are also not available concerning the exact values for Ci and Ch, the costs of units of detention before an investigation and between an investigation and a hearing respectively. Because people are usually detained in the same location during both of these time periods, we can assume that $Ci = Ch$. From our knowledge of Oregon's commitment system, it is also reasonable to assume that about 80 percent of these detentions take place in community hospitals and that about 20 percent take place in a state hospital. From available data, we know that the costs of a day of detention during the time period of example 1 were about $265 in a community hospital and about $105 in a state hospital.[6,8] Therefore, the cost of a day of detention before a commitment hearing becomes: $Ci = Ch = (\$265/\text{day})(.80) + (\$105/\text{day})(.20) = \$233/\text{day}$.

In examples 2 to 6, available estimates and straightforward assumptions yield the values for Rs, Ri, Rh, tc, Cc, ts, and Cs. We calculated ti, th, Ci, and Ch using the same assumptions as those used in example 1; the percentages of citizen petitions, PO holds and MD holds that are pertinent to each example; and the

estimated costs of a day of detention in community and state hospitals during the time period of each example. Our assumptions and estimates are acceptable because our primary purpose in this paper is to illustrate the applications of our methodology rather than to determine exact results.

Examples 2 and 3 show how the methodology can be used to study just steps 1 (screening) and 2 (investigation) or just steps 2 (investigation) and 3 (hearing) in the commitment process. Example 2 yields the average time that a person was detained in Oregon's civil commitment process before a commitment hearing during FY77 to FY80 and the average cost of that period of detention. This enables us to illustrate that the average cost of detention (c) of $1,806 consists of $431 (24 percent) of precommitment (c') costs and $1,375 (76 percent) of commitment (c'') costs. Example 3 eliminates the screening step (step 1) in which the data are the most difficult to collect and the least reliable. It also enables a study to be made of just the more formal, legalistic aspects of civil commitment beginning with an investigation. Because the maximal period of detention before a hearing in Oregon is relatively short, the average detention time and cost in example 2 are small compared with example 3.

Example 4 demonstrates that the methodology can monitor commitment processes in a population over time, in this case the entire state of Oregon between FY77 and FY80. Here we see that that average detention time and cost in Oregon increased significantly during this time period.

Example 5 uses the methodology to compare civil commitment in different populations, in this instance Oregon's urban and rural counties during FY77 to FY80.[9] Average detention times and costs were significantly greater in rural counties, reflecting the fact that smaller percentages of people were released at the screening and investigation steps.

Example 6 indicates that the methodology can also be used to monitor the effects of changes in a particular community mental health system on civil commitment.[10] In this example, major changes in the CMHP commitment procedures in County X occurred in FY81, which were then readjusted to resemble procedures in FY79. Specifically, less attention was given by CMHP staff to screening and diversion efforts in FY81 and then concerted efforts in this area were made in FY83. As might be expected, the average detention time increased in FY81 and then decreased in FY83. There were also similar changes in the average detention cost but they did not reach statistical significance.

Table 2 contains data that illustrates how our methodology might be used to examine the effects of specific changes in commitment procedures on the average detention time and cost. The same estimates and assumptions that were used in examples 1 to 6 are applied in examples 7 to 10, except that the values for Ri, Rh, ti, and th are varied as noted in the specific examples. The baseline example in Table 2 is merely a restatement of example 1, which calculates the average detention time and cost for the entire state of Oregon during FY77 through FY80.

Table 2
Effects of Changes in Precommitment Detetion Times and Mental Health Professional Performance on Average Civil Commitment Detention Time and Cost in Oregon (FY77–FY80)

Examples	Precommitment Detention Times (Days)		Mental Health Professional Performance				Average Detention Time (Days)	Average Detention Cost ($)
	ti	*th*	% Improvement	*Rs*	*Ri*	*Rh*		
Baseline	2.375	2.375	0	.52	.51	.62	14.94	1806
7	2.375	2.375	5	.52	.48	.62	14.27	1731
	2.375	2.375	10	.52	.46	.62	13.56	1653
	2.375	2.375	15	.52	.43	.62	12.89	1578
8	2.375	2.375	5	.52	.51	.59	14.29	1737
	2.375	2.375	10	.52	.51	.56	13.64	1669
	2.375	2.375	15	.52	.51	.53	12.99	1601
9	3.375	2.375	0	.52	.51	.62	15.46	1926
	3.375	2.375	5	.52	.48	.62	14.78	1852
	3.375	2.375	10	.52	.46	.62	14.08	1774
10	2.375	3.375	0	.52	.51	.62	15.20	1867
	2.375	3.375	5	.52	.51	.59	14.55	1799

Examples 7 and 8 demonstrate that the methodology can be used to examine the effects of changing the performance of the mental health professionals between a screening and an investigation (example 7) and between an investigation and a hearing (example 8) while keeping the precommitment detention times (*ti* and *th*) as they were in the baseline example. As we might expect, *t* and *c* decrease with each increment of improved performance. We also observe that the same percentage of improvement in mental health professional performance has a greater effect between a screening and an investigation than between an investigation and a hearing. This result reflects the fact that there are more people involved in the commitment process between a screening and an investigation than between an investigation and a hearing. Therefore, those who wish to decrease the average commitment detention time and cost by improving mental health professional performance would be well advised to concentrate their efforts early in the commitment process.

Examples 9 and 10 illustrate how the methodology can monitor the effects of changing both the mental health professional performance and the precommitment detention times as well as predict the change in mental health professional performance required to offset specific changes in precommitment detention times. Example 9 shows the effects on the average detention time and cost of changing the performance of the mental health professionals during the time between a screening and an investigation while increasing the length of time (*ti*) by one day. In the "worst case," the mental health professionals do not prevent any more people from being investigated (0 percent improvement), *Ri* remains unchanged at .51 despite the extra day between the screening and the investigation, and both *t* and *c* increase above baseline. If mental health profes-

sional performance improves by 10 percent (*Ri* decreases from .51 to .46), both *t* and *c* drop below baseline. Using our break-even point formula, we can calculate that mental health professional performance must improve by about 7.9 percent (*Ri* decrease to .47) in order to offset the one day increase in *ti*.

Example 10 illustrates the effects of changing the performance of the mental health professionals during the time between an investigation and a hearing while increasing that length of time (*th*) by one day. In this example, however, we see that even a 5 percent improvement in mental health professional performance lowers the average detention cost to below the baseline level. Again, using our break-even point formula, we can calculate that mental health professional performance must improve by about 4.5 percent (*Rh* decrease to .60) to offset the one-day increase in *th*.

From examples 9 and 10 we see that the improvement in mental health professional performance required to offset the one-day increase in the value for *ti* is greater than that required to offset the one-day increase in the value for *th*. This is true because there are far fewer people in detention between an investigation and a hearing than between a screening and an investigation. There are fewer people whose detention will be increased by a lengthened *th* than by a lengthened *ti* and therefore less resources that have to be recouped by improved mental health professional performance. Therefore, if one wants to extend the maximal period of precommitment detention but is also concerned about the possible financial impact, it would be best to add days later rather than earlier in the commitment process.

Discussion

There are several implications of our methodology that merit discussion. The assumptions and estimates in our calculations suggest the type of data that are needed to evaluate civil commitment processes adequately. In addition to the numbers of screenings, investigations, hearings, and commitments, data are also needed pertaining to the detention time and cost at each commitment step. Obtaining these data will require relatively sophisticated research efforts. For example, this study includes only hospital charges in the cost estimates. A complete economic analysis of commitment costs must also include professional fees, police costs, court and attorney fees, and lost income.

The formula for the average detention time underscores the importance of documenting the overall length of detention and its components when comparing different jurisdictions. States that allow persons to be detained and treated for long periods before a commitment hearing might be expected to have fewer numbers of commitments and perhaps a shorter average commitment time than states requiring prompt commitment hearings after detention. Including data on the period of detention before a commitment would yield more meaningful comparisons. Similarly, data reflecting the periods of detention before an inves-

tigation and between an investigation and a hearing enable comparisons to be made of the way in which the timing of important commitment procedures might affect detention times and costs.

The formula for the average detention cost illustrates the importance of identifying the relative cost of detaining people in different locations (e.g., state hospital versus community hospital) and enables comparisons to be made of jurisdictions that use different combinations of detention facilities.

It is important to understand that our formulas for t and c pertain to the *average* detention time and cost for people involved in the civil commitment process and not to the total number of people involved or to the total cost of operating the civil commitment system. It is possible that improved mental health professional performance that results in larger numbers of people being diverted out of the commitment process could also result in more "recycling" of people through the system, an increase in the total number of people involved, and perhaps an increase in the total cost. This situation would depend, of course, on what was done with those diverted people to keep them out of the commitment process. Any system that attempts to control costs by increasing the number of people diverted out of the commitment process will need to monitor closely the number of people who are readmitted.

It is apparent from our methodology and examples that the total cost of a civil commitment system can be apportioned into its components such as precommitment and commitment costs. The exact costs in any commitment system will depend upon the specific nature of the system itself, including the procedures and decision makers involved, the allowable detention times, and the costs of hospital and alternative treatment. Once these variables have been quantified, our methodology can be used as a means to compare commitment processes across jurisdictions or to monitor changes in a single jurisdiction over time.

Finally, our methodology documents the specific effects of procedural changes in the commitment process, demonstrates the dynamic interplay that exists between different facets of the process, and suggests that certain combinations of procedural changes may be cost-effective. It is important to emphasize that no one knows what the "correct" values for these parameters are in any jurisdiction. Suffice it to say that neither "less" nor "more" may be necessarily better. The appropriate values will be determined by a combination of factors, including the characteristics of the people involved in the commitment process, the efforts of local CMHP staff to divert people out of the process, the availability and cost of community treatment, and the distance to a state hospital.

Many questions remain to be answered before we will adequately understand civil commitment. Combined with better data pertaining to detention times and costs and the interdependence of commitment processes, we believe the methodology we have described here can

be used as a framework to advance our understanding of this complex issue.

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