

EXECUTIVE SUMMARY

Beginning in 2006, the Wells County Probation Department began studying a different technology for drug testing involving persons on probation. Prompting the study was various challenges in the urine collection process for the Probation Department and any new test had to be proven against the trusted standard set by the existing urine sample tests. Several probation departments in Indiana had been using saliva tests due to their convenience and reliability. For these reasons, a study was initiated in August 2006 and completed in December 2006 to compare saliva tests with urine tests, and using a grant from the Wells County Citizens Against Drug Abuse (CADA) a side-by-side study of urine sample drug testing against saliva sample drug testing was completed. The results indicated that in most cases the tests matched each other in findings, but urine detected drugs, particularly marijuana, slightly more often than saliva. The difference between the two tests was not in accuracy or reliability, but different “windows” of detection. Marijuana in urine has a longer detection period than saliva; the detection periods in most other substances is similar.

Despite the longer detection period of urine, the Court’s probation officers advocate continuing the use of saliva testing. A probation supervision strategy that includes in its arsenal both urine and saliva testing is an advantage when encountering individuals attempting to adulterate the testing process, and when certain conditions exist that prohibit urine sample testing (in homes or schools, probation officer of same sex of probationer is unavailable, time constraints exist).



REPORT

History: Wells County Probation has been submitting urine samples to Witham Memorial Hospital for drug testing since 1992. The testing procedure and reports have garnered a reliability that is nearly unquestioned in the Wells County Courts: a test finding, either positive or negative, is nearly always accepted as accurate. A toxicologist from Witham was always available for questions or testimony. The

costs were slightly higher than other urine testing, but the need for accuracy, reliability, and expert testimony outweighed arguments to go to less expensive tests. For these reasons, changing the probation department's drug testing protocol was not considered for many years.

Witham tested the urine samples probation submit for the following drugs:

- THC
- Amphetamines
- Cocaine metabolite
- Phencyclidine
- Barbiturates
- Opiates
- Benzodiazepines
- Alcohol

The Probation Department received monthly invoices for tests submitted, and used the Probation Department's "Urinalysis Fund" to satisfy debts. Probationers contribute to the fund as tests are administered them and must be paid in full prior to the completion of their probation supervision.

Cumulative results of the past fourteen years of drug testing are listed in a table in the appendix of this report.

Challenges: The Probation Department encounters several common challenges to the urine sample drug tests. The following represent the most common:

1. A well-known challenge for the Probation Department is probationers "tampering" and "adulterating" their urine samples with tools and tactics available for interfering with a urine drug test. Devices and chemicals are available on-line to interfere with urine drug testing (see <http://hightimes.com/ht/home/> for examples). This problem is minimized by observing the collection of urine samples. The Indiana General Assembly has also enacted law that sanctions individuals found tampering or adulterating their drug tests (IC 35-43-5-19).

2. The probation population is about 80% male. However, for the nearly 410 male adult and juvenile active probationers there are only two male probation officers that can collect urine samples from offenders (compared to the 140 female offenders that the four female probation officers may collect sample from). Environmental constraints require "observed" collection therefore, only males can

collect urine samples from male offenders, and females from females. Caseloads and administrative duties often keep probation officers occupied and unable to take drug samples at any moment. Consideration was made for developing a urine collection area that negate the need for same sex drug testing, but costs and space in the Courthouse prohibit further consideration.

3. Another challenge to probation resources is failure to provide valid urine samples by physiological, psychological, or intentional means. Generally viewed by probation officers as stalling tactics by the probationers in hopes of delaying their drug tests, considerable time is consumed by probation officers making multiple trips to the rest rooms in these cases of dry bladders, “stage fright”, or obviously over-hydrated samples. In some cases, multiple days are required to collect a single urine sample.

4. In the past several years, there have been complaints from probationers (or their families) of violation of privacy due to being watched by a probation officer in a public restroom. These complaints were addressed with an investigation of more private testing procedures, the investigation concluded that the testing protocol was the best that could be provided in the provided environment and with limited resources. Considerations were given to space available in the Courthouse, costs to refurbish a “testing” room, and even out-sourcing the department’s drug testing.

Considerations: Department drug testing procedures have been developed within the previously mentioned barriers. Additionally, procedures have considered factors of tests’ costs, windows of detection for drugs, and individual case plans. A final factor is the workload to the probation staff of conducting drug tests. When possible, drug tests administered by treatment programs and other corrections agencies substituted drug testing by the probation department when possible. Using drug tests of the other agencies saved time and money.

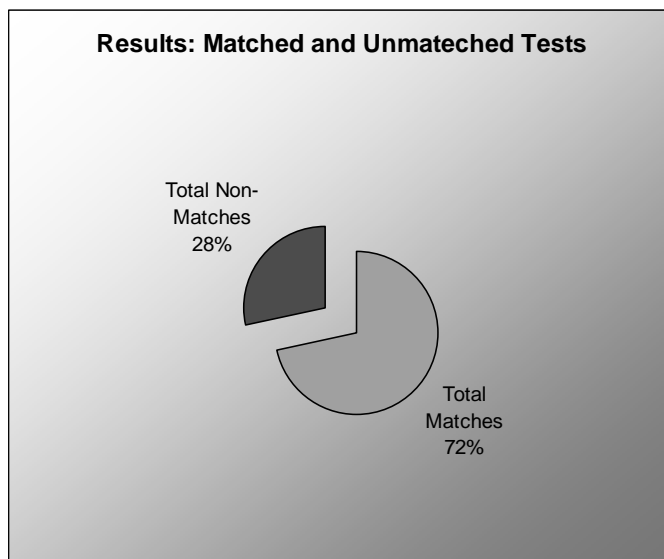
The drug detection period of urine tests has also been a factor in drug testing procedures. Urine testing may test for some substances for up to two months. As a practical matter, drug testing in the first two months of probation would be useful only for the purpose of initial assessments, and could not be used to determine compliance of probation rules, therefore, probation officers could not determine if drug use was before or after the defendant’s sentencing hearing. Once the first two months of probation had lapsed urine tests permitted probation officers to determine drug use for this community’s second most popular drug of choice (marijuana) between most risk level contacts.

Recognizing the challenges and benefits of urine tests, consideration of alternative testing tools was considered. Saliva tests had appeal several years ago due to their reliability. However, saliva testing has a much shorter window of detection for this marijuana: a drug this department must watch for. Saliva tests are recognized by the Indiana Code as a chemical test for determining the presence of a controlled substance under IC 12-7-2-26.5.

Since first learning about saliva testing, strides have been made to lengthen the detection period of marijuana. Many studies were reviewed and several vendors were considered. One vendor was finally selected that offered solid credentials of service to probation departments.

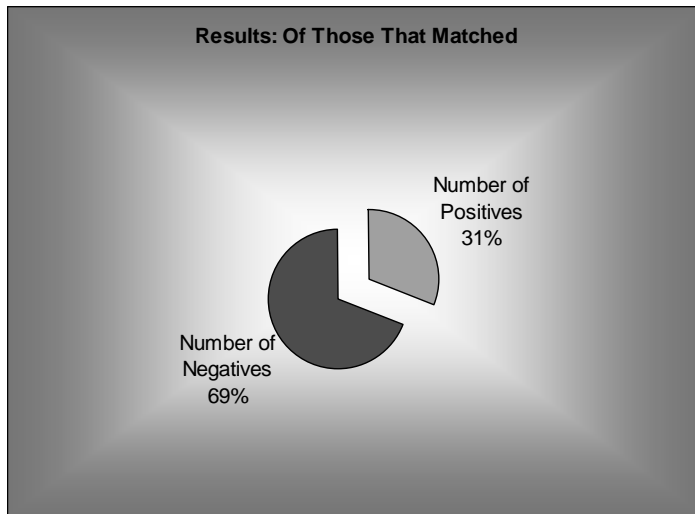
The Side-by-Side Test: Beginning in August 2006, a simple side-by-side study was performed to determine the results of each testing tool, and the side-by-side test was concluded in December 2006. It was expected beforehand that the tests results would not mirror each other perfectly, and the purpose of the side-by-side comparison was to determine under what circumstances each test might best be used. We were especially interested to determine if, as in other jurisdictions, many other substances would be found (such as cocaine). Probation officers were also going to attempt to determine when a person used the substances found in the drug tests for learning detection periods.

Using grant money from CADA, 80 saliva tests were purchased to run at the same time as the urine sample for each probationer: thus, each person tested in the trial period provided a urine sample and a saliva sample. The probationer was not charged for a saliva test, but they were charged the standard fee for a urine test. The results of each test were recorded in the probation department's caseload management system. The following results were obtained from the tests.



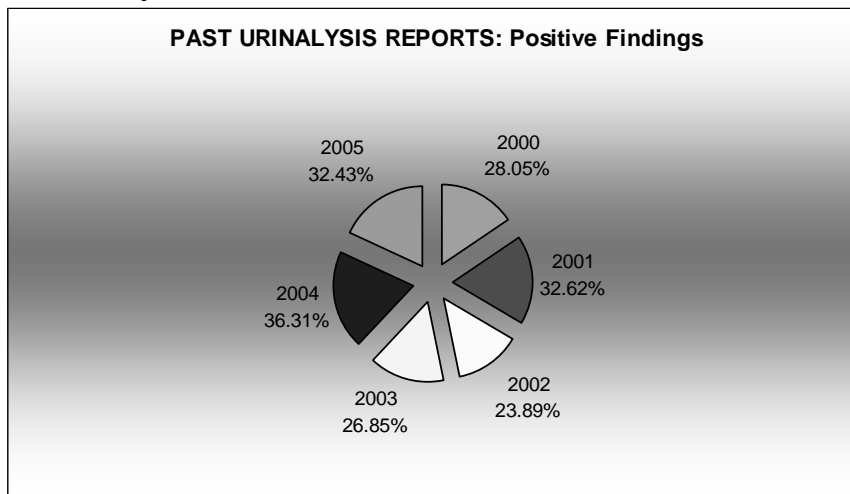
Results: In the *Results: Matched and Unmatched Tests* graph, we learn that over seventy-two percent of the time a urine sample and the corresponding saliva sample indicated the same results. We found this encouraging because we anticipated differences, but did not know whether the differing windows of detection would cause us to find less use of drugs. Our

supervision practices often require up to sixty days between appointments and determining drug use between appointments is a significant part of our enforcement of probation conditions. We did not include in the study the frequency of probationer appointments with the results of the tests.



The chart to the side entitled *Results: Of Those That Matched*, summarizes the results of those tests where both urine and saliva tests matched. These results indicated 69% of the matched tests both detected no illicit substances. Conversely, both drug testing tools confirmed illegal drug use 31% of the time. These results are encouraging because the positive findings fall into the historical

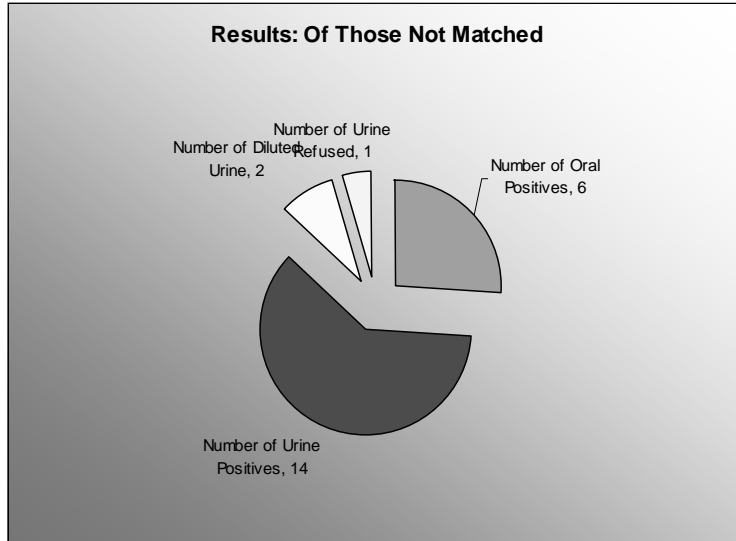
range of positive drug tests findings. A separate chart, *Past Urinalysis Reports: Positive Findings*, has been provided to indicate the positive drug test findings since the year 2000.



Historically, positive drug tests are found in probationers about 30% of the time. Since we altered our drug testing practices very little during this time period, this finding suggests that saliva testing may be an acceptable alternative to urine testings in the

probation populations.

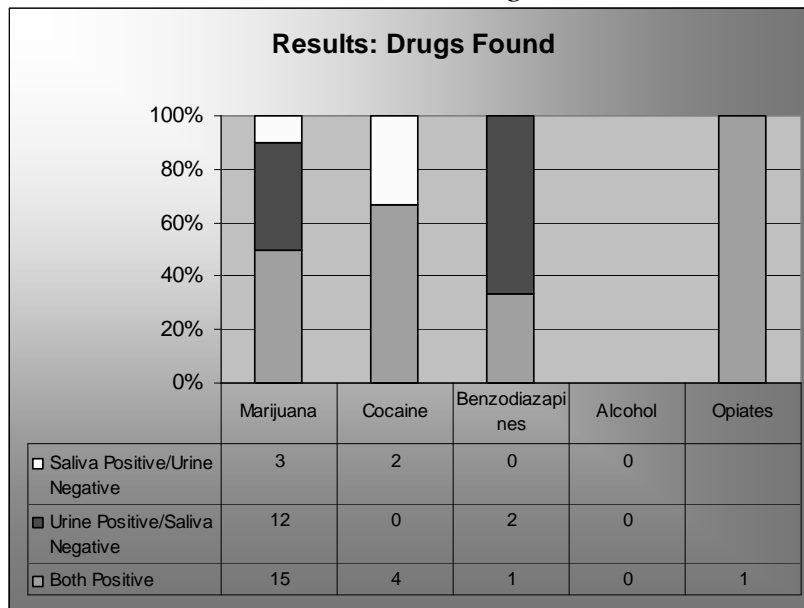
Addressing the test results where the tests differed in their findings (in 26% of the tests): we expected differences and the side-by-side comparison did not surprise us much. We anticipated that urine would pick up some substances more often than



saliva. National studies indicated that that the difference in windows of detection between saliva and urine would find fewer marijuana users from saliva testing. We had also hear that cocaine findings from saliva testing showed up more often than urine testing. The chart entitled *Results: Of Those Not Matched*, shows a summary of these findings.

Essentially, we learned that urine had an advantage to salvia in finding drugs in probationers approximately 84% of the time, to saliva’s 63% of the time. There were four occasions where urine was either diluted or refused: saliva found drug use in only one of these situations.

In the final chart, *Results: Drugs Found*, we confirmed what we anticipated:



marijuana remains Wells County’s drug of choice after alcohol (and tobacco if we are counting this substance). We also learned that marijuana is most detected by urine testing in the side-by-side tests.

The “Both Positive” category indicates that in about half the cases both tests revealed marijuana use. In cases where only one drug test revealed marijuana,

most were detected by urine alone. So of 28 findings of marijuana, 13 were found by both tests, 12 by only urine, and 3 by only saliva.

Cocaine was found in six tests: four were found in both tests; saliva located cocaine in the other tests alone. Based upon other jurisdiction’s findings, we

expected this result, but remain surprised by the findings of cocaine in the community. The other substances fit the previous year's findings, and remain low in total findings.

Implications to Probation Supervision: Supervision strategies are being adopted that account for greater use of risk and needs assessments. Drug testing is a fundamental part of supervision, and a part of each individual's case plans. Longer windows of detection work well for probationers checking in once a month, but for individuals who are suspected of having used drugs within a few hours, many drugs have not had time to be processed by the body to be manifested in urine. This is especially a problem when schools call juveniles' probation officers about suspected use on the way to school, or any probationer that exhibits intoxicated behavior during a probation contact. Probation officers have intoxicimeters to determine the immediate use of alcohol, but other ingested drugs cannot always be detected.

Due to these reasons in aggregate, probation officers consider the use of both urine and saliva drug testing for in their supervision plans. Both tests have advantages and disadvantages: the following outlines advantages for each drug test method.

Saliva -

- ✘ Cross-gender testing is not an issue.
- ✘ Issues of modesty (environmental privacy) are minimized.
- ✘ Saliva's shorter window of detection is advantage in situations where suspected use was very recent: i.e. just placed on probation; suspicion of being under the influence.
- ✘ Greater sensitivity to some drugs of abuse (e.g., cocaine).
- ✘ Fewer (if any) ability to adulterate tests.
- ✘ Fewer problems with failure to generate sufficient testing sample.
- ✘ Saliva is not a bio-hazard.

Urine -

- ✘ Testing for marijuana over a longer course of time.
- ✘ Urine tests are already trusted as reliable in Wells County.

Wells County Probation will benefit to utilizing both tests in its strategic plans for probation supervision. An arsenal that includes both tests permits the probation department to choose the best test in the immediate circumstances. Furthermore, probationers will find that they will not know which test will be administered and be frustrated plans to tamper or adulterate tests.

Appendix

URINALYSIS REPORTS

Year	No. Tests	No. Positive	%Positive
1992	73	15	20.55%
1993	76	17	22.37%
1994	180	38	21.11%
1995	141	36	25.53%
1996	217	33	15.21%
1997	329	72	21.88%
1998	218	58	26.61%
1999	179	39	21.79%
2000	246	69	28.05%
2001	187	61	32.62%
2002	180	43	23.89%
2003	149	40	26.85%
2004	179	65	36.31%
2005	148	48	32.43%
2006	180	82	45.56%