

# Technical Notes

## 1. Interpreting Information in National Tracing Center Records from YCGII Jurisdictions

This note discusses limitations in using this information to compare one YCGII jurisdiction with another and comparing the same jurisdiction from one year to the next.

The Youth Crime Gun Interdiction Initiative began in 1996. It is an emerging collaboration among Federal, State and local law enforcement officials, ATF field offices, the ATF National Tracing Center, and the academic community to improve enforcement of the Federal firearms laws, especially those relating to illegal firearms transfers.

This is the second report published by ATF which uses information from trace requests submitted from YCGII jurisdictions to describe the nature of crime guns recovered by law enforcement agencies in those jurisdictions. This information improves the knowledge base for the enforcement of Federal and State firearm regulations, however, it is subject to several limitations. These arise out of three basic factors.

First, the program is undergoing constant change. The effort to achieve comprehensive tracing has not been fully institutionalized. In 17 jurisdictions, this is only the second year of this program; in 10 jurisdictions, this is the first full year of participation.

Second, the extent of program implementation varies from one jurisdiction to another based on each one's size, extent of agency computerization, and the nature of its crime gun problem. At this stage of development, it is not appropriate to attempt to impose a single program on all participating jurisdictions.

Third, the program is still developing. ATF and local law enforcement agencies are still learning from each other how to best implement this program and to utilize the information obtained. This report and others to be produced by the Crime Gun Analysis Branch of the National Tracing Center are part of that developing process.

These factors result in data limitations, among them the following:

The crime gun traces from the first year in any jurisdiction may include many crime guns recovered in previous years. These weapons, or records of them, have been maintained by law enforcement agencies and they are included in the program's efforts to obtain comprehensive tracing and a usable initial set of trace data. ATF refers to this phenomenon as "vaulting," since some departments keep old firearms in vaults. This is generally a one-time phenomenon, which generates an unusually high number of crime guns in each jurisdiction's initial report.

Some jurisdictions have not yet reported all the firearms for the past year. Changing law enforcement procedures to obtain all crime guns from all agencies does not happen immediately or consistently throughout a particular agency. In such jurisdictions, the lag in reporting recovered firearms to ATF will generate data on fewer firearms than law enforcement agencies actually recovered in that jurisdiction.

The data reported here reflects the behavior of law enforcement agencies whose policies and practices, including when and how firearms are recovered and how those recoveries are recorded, are changing in response to local attention to firearms crimes. These changes could increase or decrease the number of firearms trace requests made to the National Tracing Center.

The basic underlying criminal behavior may also be changing. In some jurisdictions, like New York City and Boston, the number of firearms related homicides and other crimes has dropped dramatically between 1996 and 1998. Changes in the number of trace requests could reflect changes in the number of crime guns that come to the attention of law enforcement agencies.

While the 27 participating jurisdictions provide a wide spectrum of American life, they do not in any way represent a national sample of law

enforcement agencies or crime guns recovered by law enforcement agencies. Participation in this program is voluntary, and jurisdictions were not selected to be a representation of large cities or of the nation as a whole.

For these and other reasons, the available data from the Youth Crime Gun Interdiction Initiative does not constitute a fully developed statistical series from which reliable comparisons can be made from one reporting period to the next or from one participating jurisdiction to another. The data is used in this report as descriptive of the trace requests of particular jurisdictions during the past year. The nature of these limitations is similar to those initially encountered by the FBI's Uniform Crime Reports (UCR). Begun in the 1930's as a voluntary program by a few large jurisdictions, the UCR program has been developed over the past 70 years to include consistent definitions and standards detailed reporting procedures and nearly uniform participation by law enforcement agencies. The purpose of YCGII is to assist law enforcement by providing a detailed description of crime guns recovered in a given jurisdiction during the past year, and that is the most appropriate use of the data in this report.

## 2. Time-to-Crime Estimation Procedure

To estimate the percentage of crime guns rapidly diverted from retail sale at federally licensed firearms dealers, ATF used the following method:

ATF arrived at a high end estimate of the proportion of guns rapidly diverted to crime gun status by comparing the number of crime guns with a time-to-crime of less than three years, with the number of crime guns with a time-to-crime of more than three years, among the subset of the crime guns submitted for tracing that were traced to a purchaser and for which the date of purchase and the age of possessor was available. These methods of estimation produce a high end estimate of the proportion of guns diverted from the retail market because they do not include in the estimate any data from guns that were not traced because they were manufactured prior to 1990. Guns manufactured and sold on the retail market prior to 1990 would clearly add to the number of guns with a time-to-crime of greater than 3 years. The analysis of time-to-crime by age of possessor using this estimation procedure is presented in the High End Estimate table below.

**Time-to-Crime: High End Estimates of  
The Percentage of Successfully Traced Crime Guns Rapidly Diverted  
From First Retail Sale at Federally Licensed Firearms Dealers**

Time-to-Crime	Adult		Youth		Juvenile		Row Totals	
	%	[guns]	%	[guns]	%	[guns]	%	[guns]
Less than three years	40.2	(2,968)	49.0	(2,354)	36.4	(516)	42.9	(5,838)
More than three years	59.8	(4,407)	51.0	(2,451)	63.6	(900)	57.1	(7,758)
Column Totals	100%	7,375	100%	4,805	100%	1,416	100%	13,596

Number of Missing Observations: 62,664

ATF used two sets of procedures to develop Low End time-to-crime estimates for crime guns for which the age of possessor was known but for which the date of purchase was missing. First, all traces terminated because the guns in question were manufactured before 1990 were assumed to have a time-to-crime of greater than three years. Second, crime guns manufactured (and sold) during the 36 months prior to the end of the YCGII reporting period (August 1995 to July 1998) must have had a time-to-crime of less than three years. ATF conservatively assumed that crime guns manufactured during the 67 months from January 1990 to July 1995 had a time-to-crime greater than three years. ATF assumed that the number of

guns with longer time-to-crime was proportional to the number of months in the earlier period while the number with short time-to-crime was proportional to the number of months in the later period. Using this method, 34.95% of the crime guns which were manufactured after 1989 and for which there was no date of purchase available were estimated to have a time-to-crime of three years or less, and 65.05% were estimated to have a time-to-crime of more than three years. The analysis of time-to-crime by age of possessor using these estimation procedures produces Low End estimates of time-to-crime. These estimates are presented below.

**Time-to-Crime: Low End Estimates of  
The Percentage of Successfully Traced Crime Guns Rapidly Diverted  
From First Retail Sale at Federally Licensed Firearms Dealers**

<b>Time-to-Crime</b>	<b>Adult</b>		<b>Youth</b>		<b>Juvenile</b>		<b>Row Totals</b>	
	<b>%</b>	<b>[guns]</b>	<b>%</b>	<b>[guns]</b>	<b>%</b>	<b>[guns]</b>	<b>%</b>	<b>[guns]</b>
Less than three years	27.1	(4,985)	32.3	(3,413)	25.1	(951)	28.6	(9,349)
More than three years	72.9	(13,385)	67.7	(7,169)	74.4	(2,841)	71.4	(23,395)
Column Totals	100%	(18,370)	100%	(10,582)	100%	(3,792)	100%	(32,744)

Number of Missing Observations: 43,516

**3. Calculation of Percentages.**

The tables and figures in this report were prepared using SPSS or Microsoft Excel software. We have chosen to report all percentages as they were calculated by these programs. It is occasionally possible, using a calculator or different software, to produce percentages that differ by as much as 0.1 percent from the reported percentages.

**4. Factors Affecting Trace Outcomes**

There is an additional factor affecting trace outcomes identified in Table F2. For investigative reasons, a small number of traces, between one and two percent for all 27 cities combined, were either deliberately not initiated at all, or were suspended before an FFL query. In the current Table F2, the outcomes of these traces are attributed to other factors that were also present.