# THE EFFECTS OF DEINSTITUTIONALIZATION ON URBAN POLICING: IMPLICATIONS FOR TRAINING

Ву

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A thesis submitted in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

In

LEADERSHIP AND TRAINING

ROYAL ROADS UNIVERSITY
September 2003

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## **ACKNOWLEDGEMENTS**

An undertaking of this nature cannot be completed without the assistance of many and to these people I am eternally grateful. Ms. Margaret Oldfield, my editor, who became my trusted colleague. Rita Vigna, from the Records Bureau (the unit, currently known by another name, but it will always be the Records Bureau to me) who served as my information guide. Constable Scott Maywood, the source of all knowledge. Sergeant Scott Weidmark, a true principled leader. Inspector Frank Trovato, soon to be embarking on a new life, thank you for your encouragement, enthusiasm and time. Dr. Hazel McBride, Ph.D., OISE/UT, simply - the best teacher I have ever had. Teresa Lloyd, my mother, a source of constant inspiration to me. Finally, to my wife Linda, thank you for making everything possible.

#### **CHAPTER 1: THE PROBLEM**

## The Research question

Policing and dealing with emotionally disturbed individuals is a complex multidimensional problem; a variety of stakeholders exist. The stakeholders include the governing board of the police agency (usually under civilian control), the police officers, consumers/clients, the families of consumers/clients, mental health practitioners, various levels of government and the community at large. With each group comes a unique perspective on what constitutes success.

To maintain the confidentiality of the police service, neither the province nor the city will be mentioned in this document. This research questions how police have dealt with the increase in the numbers of calls for service to deal with emotionally disturbed or mentally ill individuals. Each year, police officers have thousands of contacts with people in crisis. In the year 2000 police officers in a Canadian city dealt with almost 5200 calls for service requesting police involvement with a person in crisis or mentally ill. (This number does not include situations where officers determined on scene that a person may be mentally ill; for example, a shoplifter acting in a bizarre manner.) In 1998, officers of a major urban police force responded to 3642 calls dealing with emotionally disturbed people. The number increased in 1999 to 4116 calls. Many times, the individual is directed to an agency that can provide the necessary assistance to that person. However, on rare occasions the contact turns violent and results in injury or

death to the individual or the police officer. In a 10-year study of officer-involved shootings (1987-1997) conducted by the police force, a total of 52 such incidents took place. Fifteen percent of the shootings involved mentally ill individuals (unpublished material). The police force has established a standing committee mandated to identify, develop and coordinate suitable resources and responses to help the Service effectively intervene when dealing with emotionally disturbed people.

Deinstitutionalization resulted in large numbers of severely emotionally disturbed persons being discharged into the community with no active supervision and little medical support. This created a population of mentally ill people who displayed socially inappropriate behaviours which frequently led to the police being called, either because they were "acting strangely" (i.e., haranguing in a delusional way) or else committing offences (i.e., trespassing and shoplifting). Therefore, the number of contacts between the police and EDPs increased dramatically. Of the many types of interactions between police and EDPs, the most harmful and costly are those involving the use of force resulting in injury or death to the EDP and/or innocent persons. This study focuses on the use of force in dealing with EDPs and methods of avoiding force or de-escalating situations.

The aim of this project is to investigate and evaluate what responses might be implemented to reduce the incidence of violence when police encounter mentally ill persons.

General topic

Specific topic

 Policing and dealing with the emotionally disturbed persons (EDPs).

 What has the impact of deinstitutionalization been on urban policing?

Research question

How has deinstitutionalization
 impacted daily police activities?

## Significance of the problem

The cost of any incident ending in the death of an emotionally disturbed person at the hand of a police officer is extremely high. For example, the public's confidence in the police is shaken. The public is left asking, "Are the police not equipped to deal with these individuals in a safe, effective manner?" The public becomes distrustful of police officers and reluctant to cooperate with them. This public resentment is difficult to deal with and results in further isolation of the police from the community they are entrusted to serve and protect. This action places a strain on the mental health community and, in tangible ways, on the surviving family of the victim. The family may potentially look for justice through the courts. Large police agencies have the means to defend members with top quality litigators. Defending the rights of the police officers may thwart attempts of the family and the public to properly come to terms with the incident (Brown, 2000).

Economic costs can also arise from the death of an individual at the hands of police. Contemporary North American society is highly litigious. Following any tragedy, there is the inevitable parade of lawyers preparing lawsuits. As a result of these suits, the costs of insuring the police agency and the municipality increase. The municipality typically passes these costs on to its residents. For some residents, this may prove to be economically devastating. In surrounding municipalities, regional governments are grappling with tax hikes to deal with increased police budgets. In 2001, the average property tax increase in the metropolitan area was 5%, due entirely to increases in police operating budgets (Chung, 2001).

Furthermore, the financial cost of inquests into police-caused deaths is high. As an example, the inquest into the death of a person identified as Y. (a mentally ill man killed by police), which ran for a period of three months, cost an estimated \$10,000 per day (Capponi, 2000). This one inquest cost the taxpayers of that province \$750,000. As a comparison, the estimated cost to create a 5-day crisis-resolution training course for front-line police officers was \$816,800.00 at the time (unpublished material). This course serves approximately 3500 police officers, providing them with techniques to defuse and de-escalate situations, information on dealing with mentally ill persons in crisis and alternatives to criminalization.

Another associated cost after a critical incident such as a shooting is that, within 5 years, nearly 75% of the officers involved in shootings resign from the police service (Mashburn, 1993). Organizations have significant investment in their employees. With

employee retention being a major concern, every organization must ensure that people are not disillusioned and subsequently leave the profession.

## Potential causes of the problem

A confluence of events took place, beginning in the late 1950s. First, powerful new psychotropic drugs became available for the treatment of mental illness. Second, a shift toward community-based care took place. Third, a change occurred in the way health-care spending was allotted. As a result, more and more mentally ill individuals were being released from institutions, provided with medications and turned out into the community. This process is referred to as *deinstitutionalization* -- sending people back to the community where, in theory, the necessary care will be available through a network of community agencies.

This process was conducted not only in Canada but around the world. Unfortunately, necessary community supports were not in place and many individuals became the homeless that are seen on the streets of many urban centres today. Over one third (35%) of the homeless population in a large Canadian city is estimated to suffer from mental illness (confidential information).

As a result of this societal change, police have reluctantly taken on the role of front-line mental health worker in dealing with people in crisis and the mentally ill. Unfortunately, police have very few tools to deal with emotionally disturbed people. Historically, officers

had three methods to deal with members of the community whose behaviour brought into question their mental stability:

- 1. Officers could arrest and/or jail the individual on charges of disturbing the peace.
- 2. The person could be held in custody overnight and released unconditionally the next day (for the safety of the person).
- 3. The individual may have been committed to a facility for the mentally ill (Cordner, 2000).

Over time, the former two options have fallen out of favour. Courts have taken a dim view of the seemingly arbitrary practice of arresting and detaining individuals. Similarly, deinstitutionalization, moving treatment of the mentally ill from hospitals into the community, has raised standards of admission to facilities, so it is difficult to get the person committed. Further, deinstitutionalization has sent more individuals into the community that at one time had asylum in a facility. As a result, police, while expected to keep order in the streets, are presented with fewer options to deal with mentally ill people.

## Organizational Profile

The police service is a municipal police agency employing sworn members (constables up to the Chief) and civilian personnel (including court security, parking enforcement, support and administrative staff positions) (see Appendix A). The Service received over 1.8 million telephone calls through its Communications Centre in 2001, which resulted in

864,095 calls to dispatch officers. Patrolling a large geographic area, police vehicles logged over 33 million kilometres in 2000 (unpublished material). The Police Services Board, a civilian oversight body, is responsible for general management and policy providing strategic direction to the agency. Daily policing issues and other operational matters are the responsibility of the Chief of Police.

**CHAPTER 2: INFORMATION REVIEW** 

Review of Organizational Documents

The documents in the following review provide some insight into the complexity and scope of the

issues facing not only the police but other organizations and agencies -- organizations and

agencies that deal also with mentally ill people on a constant basis. This review shows that police,

while on the front-line, are merely one facet of as issue that has multiple stakeholders and

encompasses multiple government ministries. Organizational documents of the police force and

other agencies reviewed include:

Legislation

Police Services Act (Ministry of Public Safety and Security),

Coroner's Act (Ministry of Public Safety and Security), and

Mental Health Act (Ministry of Health and Long-Term care).

**Internal Reports and Policies** 

Arrest and release policy

Emotionally disturbed person policy

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Elopees and Community Treatment Orders Policy

Use of Force policy

Use of Force Committee, Final Report

Mobile Crisis Intervention Team, Operational Report and Overview

Vision Statement

Core Values

## **Inquest Recommendations and Responses**

For reasons of confidentiality, the identities of the deceased have been altered.

- Inquest into the death of A.;
- Inquest into the death of L.;
- Inquest into the death of W.;
- Inquest into the death of D.;
- Inquest into the death of Y.;
- Inquest into the death of B.; and
- Inquest into the death of P.

## Legislation

#### **Police Services Act**

The Police Services Act governs the actions, duties and activities of police officers throughout the province. The Declaration of Principles frames how policing activities will be provided.

 Police services are provided throughout the Province in according to the following principles:

Ensuring the safety and security of all persons and property in the Province.

Safeguarding the fundamental rights guaranteed by the Canadian Charter of Rights and Freedoms and the Human Rights Code.

Guaranteeing co-operation between the providers of police services and the communities they serve.

Respect for victims of crime and understanding of their needs.

Sensitivity to the pluralistic, multiracial and multicultural character of society.

Ensuring that police forces are representative of the communities they serve.

Within the body of the Act the duties of police officers in the Province are described:

The duties of a police officer include,

- (a) preserving the peace;
- (b) preventing crimes and other offences and providing assistance and encouragement to other persons in their prevention;
- (c) assisting victims of crime;
- (d) apprehending criminals and other offenders and others who may lawfully be taken into custody;
- (e) laying charges and participating in prosecutions;
- (f) executing warrants that are to be executed by police officers and performing related duties;
- (g) performing the lawful duties that the chief of police assigns;
- (h) in the case of a municipal police force and in the case of an agreement under section 10 (agreement for provision of police services by the provincial police), enforcing municipal by-laws;
- (i) completing the prescribed training.

#### **Coroner's Act**

The Coroner's Act provides that inquests shall inquire into the circumstances of a death, determining who the deceased was and how, when, where and by what means death occurred. The Act does not provide for the finding of fault.

What coroner shall consider and have regard to

When making a determination whether an inquest is necessary or unnecessary, the coroner shall have regard to whether the holding of an inquest would serve the public interest and, without restricting the generality of the foregoing, shall consider,

- (a) whether the matters described in clauses 31 (1) (a) to (e) are known;
- (b) the desirability of the public being fully informed of the circumstances of the death through an inquest and
- (c) the likelihood that the jury on an inquest might make useful recommendations directed to the avoidance of death in similar circumstances. (R.S.O. 1990, C. 37, s. 20)

Satisfied with the necessity for the inquest the Coroner shall ensure that the inquest meets the standards which are presented in the purpose.

#### Purposes of inquest

- (1) Where an inquest is held, it shall inquire into the circumstances of the death and determine,
- (a) who the deceased was;
- (b) how the deceased came to his or her death;
- (c) when the deceased came to his or her death;

- (d) where the deceased came to his or her death; and
- (e) by what means the deceased came to his or her death (R.S.O. 1990, C. 37, s. 37(1)).

At the conclusion of the inquest a jury will not make a determination of guilt only make recommendations based on the evidence to attempt to ensure that a death odes not occur in a similar fashion in the future.

#### Idem

- (2) The jury shall not make any finding of legal responsibility or express any conclusion of law on any matter referred to in subsection (1).
- (3) Subject to subsection (2), the jury may make recommendations directed to the avoidance of death in similar circumstances or respecting any other matter arising out of the inquest (R.S.O 1990, C. 37, s. 31 (23)).

#### **Mental Health Act**

The Mental Health Act contains specific direction for police officers when dealing with an emotionally disturbed person. The Act allows officers to apprehend a person and transport that individual directly to a facility.

## **Section 17 (Police officers power of apprehension)**

Where a police officer has reasonable and probable grounds to believe that a person is acting or has acted in a manner that in a normal person would be disorderly and has reasonable cause to believe that the person,

(a)

has threatened to cause bodily harm to him/herself, or is threatening to cause bodily harm to him/herself, or has attempted to cause bodily harm to him/herself, or; Is attempting to cause bodily harm to him/herself, or

(b)

has behaved violently towards another person, or
is behaving violently towards another person, or
has caused another person to fear bodily harm from him or her, or
is causing another person to fear bodily harm from him or her, or

(c)

has shown a lack of competence to care for him/herself, or is showing a lack of competence to care for him/herself

And in addition the police officer is of the opinion that the person is apparently suffering from mental disorder of a nature or quality that likely will result in

- (d) serious bodily harm to the person, or
- (e) serious bodily harm to another person, or
- (f) serious physical impairment of the person,

And that it would be dangerous to proceed under Section 16 (Justice of the Peace order for examination, Form 2), the police officer may take the person in custody to an appropriate place for examination by a physician (R.S.O. 1990 c. M.7 s. 17).

## **Internal reports and policies**

In addition to the provincial legislation, the police force has in place internal policies to assist officers when dealing with arrests or apprehensions of EDPs. Dealing with people who leave psychiatric facilities without authorization or violate community treatment orders (CTO). Finally, there is the policy on use of force by members of the Police Service. While the actual policies are confidential, the rationale of each policy is provided below, as well as relevant definitions.

## **Arrest and Release Policy**

This procedure is to ensure that arrests made by police are conducted and reported in a manner consistent with all legal principles and best practices.

**Key terms** 

Arrest: The act of restraining the liberty of a person with the intent to detain.

**Emotionally Disturbed Person Policy** 

The Mental Health Act (MHA) provides for the control, apprehension, detention and treatment of

emotionally disturbed persons. This procedure addresses situations where officers observe verbal

cues, behavioural cues or other actions that provide them with reasonable cause to believe a

person is suffering from a mental disorder.

**Key terms** 

Emotionally Disturbed Person (EDP): Any person who appears to be in a state of crisis and any

person that is mentally disordered.

Crisis: A loss of the ability to cope for a temporary period, the person may reach out for

assistance.

Mental Disorder: Any disease or disability of the mind.

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## **Elopees and Community Treatment Order Policy**

The Mental Health Act (MHA) authorizes police officers to apprehend persons absent without leave from psychiatric facilities (elopee) or persons who have failed to comply with Community Treatment Orders (CTO), provided that specific criteria are met under the MHA.

## **Key terms**

Apprehension: a non-criminal arrest (detention) which allows an officer to transport a person to a psychiatric facility.

Community Treatment Order: An Order with conditions issued by a physician to a person, which requires that person to comply with psychiatric treatment in the community (including drug treatment) that is less restrictive than being detained in a facility.

Elopee: A person who has been detained in a psychiatric facility and leaves without permission.

Form 9 MHA: An 'Order for Return' of an elopee issued by a psychiatric facility that authorizes a police officer to return the person without their consent to the facility. A Form 9 is valid for a period of 1 month after the person is absent without leave.

Form 47 MHA: An 'Order for Examination' issued by the physician who issued the person a CTO and

- (a) has reasonable cause to believe the person has failed to comply with the conditions of the CTO;
- (b) the person to whom the CTO was issued or the substitute decision-maker has withdrawn consent to the CTO and the person fails to permit the physician to review their condition within 72 hours, and
- (c) the physician believes the person may cause harm or suffer deterioration.

A Form 47 authorizes a police officer to take that person into custody and return them to the physician promptly and is valid for a period of 30 days.

Psychiatric Facility: A facility for the observation, care and treatment of persons suffering from a mental disorder and designated as such by the regulation contained in the Mental Health Act.

## **Use of Force Policy**

Police officers, during the lawful execution of their duties, are granted licence to apply force to control individuals. This action is governed by policies set out by police agencies. Officers have a responsibility to use only force that is reasonably necessary to effectively and safely bring an incident under control.

## **Use of Force Committee, Final Report**

The use of lethal force by police has become the target of much scrutiny by the media, the public, government and police agencies. In 1997, a committee was established by the police force with a mandate "to examine if there are ways to reduce the necessity for the application of deadly force, without compromising officer safety, and to communicate findings to the public" (unpublished material). The Committee generated 31 recommendations, grouped within six categories. Following each of the categories is a brief explanation of the rationale for inclusion.

1. Development of and compliance with rules and directives.

Clear policies assist officers in the process of making decisions while engaged in the execution of their duties, as well serving to make individual officers more accountable for the actions taken. When policies are ambiguous or do not exist, officers can at times justify extreme behaviour, for example, shooting at a suspect who is no longer an immediate threat (a fleeing felon).

#### 2. Supervision

Effective supervisory personnel provide support, guidance and can enhance officers' confidence when resolving situations. Supervisors may, at times, be needed to intervene in situations that require de-escalation.

#### 3. Development and implementation of appropriate training

Appropriate training serves to properly prepare officers for situations that may be encountered. Officers need development in problem-solving skills. In this way officers will have the ability to analyze situations and evaluate potential solutions. Furthermore, officers will respond to the situation in an appropriate fashion.

#### 4. Identification of less lethal force options

Many tools have been created to assist police while dealing with potentially violent situations. This field is experiencing a great deal of growth in response to the perceived need for intermediate-force options. These tools can help officers control a situation without resorting to lethal force (i.e., firearms). Alternative weapons, such as the TASER and oleoresin capsicum (pepper spray), fall in this area. As well, manufacturers are continually developing new products, which have to be tested to determine applicability to actual policing.

#### 5. Dealing with emotionally disturbed persons

Police are increasingly coming into contact with mentally ill or emotionally disturbed persons as a result of deinstitutionalization. With the increased emphasis on community-based treatment combined with the increasing costs of health-care, deinstitutionalization has changed how officers deal with emotionally disturbed people. Officers need to have more resources at their disposal to deal with such people in the community.

#### 6. Expansion of Special Weapons and Tactics Team (SWAT)

The tactical unit or SWAT is a specially trained supportive unit, designed to assist front-line (General Patrol) officers in situations that require special weapons expertise not generally available to front-line personnel. By expanding the unit, more members will be able to assist with the increased volume of calls to deal with emotionally disturbed people.

## Mobile Crisis Intervention team, Operational Report and Overview

The Mobile Crisis Intervention Team (MCIT) represents a unique partnership between the police agency and a local hospital. It was created in 2000 and funded by the Ministry of Health and Long-Term Care for 2 years. Several inquests have called for greater cooperation between the police and the mental health system. The objectives of this program are:

- a) increased level and quality of service provided to Emotional Disturbed Persons (EDPs) in crisis,
- b) better response to community needs, and
- c) better utilization of resources.

The project pairs one constable and one psychiatric nurse. The unit operates 7 days a week from 1:00 p.m. until 11:00 p.m. and is mobile in the community. Referrals come through the police dispatch centre (unpublished material).

## **Vision statement**

The police agency's statement says,

Our Service is committed to being a world leader in policing through excellence, innovation, continuous learning, quality leadership and management.

We are committed to deliver police services which are sensitive to the needs of the community, involving collaborative partnerships and teamwork to overcome all challenges.

We take pride in what we do and measure our success by the satisfaction of our members and our communities.

## **Core values of the Police Service**

Consistent with other police agencies throughout the English-speaking world, this police service has adopted the following values as the essential tenets under which the organization operates:

- Honesty
- Integrity
- Fairness
- Reliability
- Respect
- Teamwork
- Positive attitude

## Inquests

The Coroner's Office will, at times, investigate deaths that have occurred within the province. The investigation, or inquest, is held to determine the causal factors of the deaths. Inquest recommendations serve as a useful barometer, indicating what members of the public see as potential cause(s) of the death and remedies. These inquests serve the public interest; at the conclusion of an inquest juries render recommendations. These recommendations may serve to assist in preventing deaths under similar circumstances in the future. After reviewing recommendations from different inquests across the province, common themes seem to resonate from their juries.

## **Recommendations of Ministry to the Solicitor General:**

- 1. Training in crisis resolution techniques for police officers.
- 2. Increased alternatives in use of force (less-lethal-force options).
- 3. Training in cultural diversity for police officers.

## **Recommendations to Ministry of Health:**

- 1. Improve psychiatric assessment procedure.
- 2. Improve apprehension abilities under Mental Health Act.
- 3. Establish crisis response teams.

## **Recommendations to Ministry of Community and Social Services:**

Improve housing opportunities for mentally ill persons.

This section highlights the circumstances of death and key recommendations from various inquests.

## A. Inquest

## Background

A., aged 2 1/2 years, was stabbed to death by a neighbour. The neighbour, aged 58 years was mentally ill with paranoid schizophrenia.

## **Key recommendation**

All Police Services in the province should adopt and implement Crisis Outreach and Support Team (COAST).

## L. Inquest

## **Background**

L. aged 41, died as a result of a self-inflicted gunshot wound. L. committed suicide. He requested that police come to his home. When officers arrived, they found L. holding a gun to his chin. After several hours of negotiation, L. took his own life in the early morning hours.

## **Key recommendation**

The former Ministry of the Solicitor General and Correctional Services should provide more seminars, courses and training for negotiators with a qualified mental health professional and provide funding for same.

## W. Inquest

## **Background**

W., 24, died from multiple gunshot wounds sustained during a confrontation with police. W. was observed walking in a residential area of a large metropolitan city smashing windshields of parked

cars. According to witnesses, W. was armed with either a baseball bat or tire iron. When confronted by police, he produced two knives and then advanced on officers. With firearms trained on W., who still refused to drop the knives, he was shot.

#### **Key recommendations**

- 1. The Ministry of Health and Long-Term Care should appoint a coordinator to facilitate current ad-hoc efforts to integrate responses of the various mobile crisis teams of the police service.
- 2. It is recognized that the civilian oversight board and the Chief of Police have made the Crisis Resolution Course mandatory for all officers since March of 1999 and that officers have continued to be trained since that time. We suggest that the Board and the Chief assign a high priority to the continued delivery of this course until all officers have been trained. We also recommend the implementation of an ongoing, mandatory refresher course.

## D. Inquest

## **Background**

D., 44, died after being shot in the chest and abdomen by police. D. had a long history with the police. His arrests for drug possession and violence are a matter of public record. On the day in question, police went to D.'s address responding to a complaint. D. produced a knife during the confrontation and was shot.

## **Key recommendations**

All Regional Plans should include a requirement that District Health Councils work with their local police agency to establish a Mobile Crisis Unit tailored to local needs that must ensure 24 hour response capacity.

The Ministry of Community and Social Services should maintain and broaden as required supportive housing programs such as Habitat and Hostel Outreach, allowing for flexible support.

The police force should make available to all serving Officers pepper spray as an alternative to deadly force, pending results of the current pilot program and study by police. Ensure adequate training and monitoring procedures are in place.

The police force should expand the Crisis Resolution Course by one-half day to ensure 16 hours of training in police response to the mentally ill.

## Y. Inquest

## Background

Y., 35, assaulted a woman at a bus stop in the city. Police were called to investigate the assault.

Y., when confronted, produced a small hammer, raised it over his head and advanced towards officers. Officers drew their firearms and shot him. He died as a result of gunshot wounds to the head and neck.

## **Key recommendations**

The Crisis Resolution Course should have the input of mental health professionals, consumer survivor and multicultural groups, and should include, but not be limited to, the following issues:

Every opportunity should be taken to convert an unplanned operation into a planned operation.

Unless impractical to do so, a "cordon and containment" approach should be adopted.

The aim of crisis resolution should be de-escalation and the resolution of situations without physical force.

That the "first contact" and time talk and tactics" approach be used by police whenever possible and that "active listening" be stressed as a skill that officers must develop.

The fear and apprehension experienced by officers as a result of previous experiences, stereotyping or lack of knowledge, whether about mental illness, race, culture or other factors.

The fear and apprehension which persons involved with the police may feel as a result of previous experiences, stereotyping or lack of knowledge, particularly due to mental illness, racial or cultural background.

That police officers, whenever possible, should maintain a sufficient reactionary gap to give them the time to disengage, tactically reposition themselves and or react in such a way which prevents a situation from escalating from verbal to the violent.

The Board should direct the Chief of Police to ensure that the police service assembles a list of available crisis teams with telephone numbers according to police division. Such information should be available to front line officers through their dispatchers.

The Ministries of Health and Community and Social Services should continue funding for the purchase and construction of new housing for consumer survivors. Such housing should include short-term "safe-house" facilities.

## **B.** Inquest

## **Background**

After a stand-off with police that lasted more than 24 hours, B., 21, died from a self-inflicted gunshot wound.

## **Key recommendations**

The Crisis Response System should have the capability to respond to threatened suicide situations and to be mobile within the city for this purpose for at least 12 hours per day and that this service be funded by the Ministry of Health to appropriate levels.

This Crisis Response System should develop linkages and protocols with community agencies to allow them to assist one another in dealing with individuals who present with an emotional disturbance.

# P. Inquest

## Background

P., 26, died from cardiopulmonary arrest and stress due to the use of pepper spray. He was sprayed while police officers assisted nursing staff in applying restraining devices to him. P., who was violently struggling at the time, suffered a heart attack.

## **Key recommendation**

Police services should continue to utilize pepper spray as a non-lethal use of force option.

### Review of the Literature

## **Deinstitutionalization of mentally ill people**

Deinstitutionalization, the practice of moving mentally ill people back into the community to receive treatment, has had a major effect on the delivery of police services. The deinstitutionalization process, which was widely undertaken in the 1950s across North America and around the world, has significantly raised the standards for admission to psychiatric institutions. Historically, a mentally ill person would have received treatment within the confines of a hospital. As a result of deinstitutionalization, more individuals suffering from mental illness are on the streets of large urban centres. With so many untreated and sometimes highly visible, seriously mentally ill individuals out in the community, the public increasingly demands that police attend and "do something." This is a result of the public's widely held perception of the mentally ill individual as that of a dangerous person.

In Canada, the process of deinstitutionalization began with moving psychiatric care from provincial psychiatric hospitals to psychiatric units in general hospitals. The Royal Commission on Health Services in 1964 made sweeping recommendations: "... henceforth all discrimination in the distinction between physical and mental illness and the organization and provision of services for their treatment be disavowed for all time as unworthy and unscientific." The Commission further stated, "We believe that provinces should move with all due speed to remove all patients receiving or capable of receiving active care from mental hospitals and transfer them to general hospitals" (Richman, 1983, cited in Goering, Wasylenki & Grisonich, 1990). As a result of this change in philosophy, between the years 1960 and 1976 capacity in Canadian psychiatric hospitals

decreased from 47,633 beds to 15,011 while capacity in general hospital psychiatric units increased from 844 beds to 5,836 (Goering, Wasylenki & Grisonich, 1990).

Shifting the care of mentally ill people to the community without proper consideration of the consequences created many unanticipated problems. Patients were discharged from facilities only to find that few supports were in position to assist them in their transition to the community. In one Canadian city, for example, with the closing of the provincially run psychiatric hospital, a psychiatric-patient ghetto was created in a nearby community. Boarding houses began to spring up catering exclusively to recently discharged patients who sought affordable accommodation. Expatients live in overcrowded conditions without benefit of properly trained staff to supervise the residents' activities (Capponi, 1984).

Deinstitutionalization resulted not only in psychiatric ghettos but also in a collection of patchwork programs working in opposition to other programs. The Putting People First report, presented to a provincial government in 1993, stated the mental health system wasn't really a system at all but, instead, "a collection of different services, developed at different times and managed in different ways" (Jones, 2000). Community-based programs tend to be small, having little influence in the health care system and be overburdened by demands for services (Goering, Wasylenki & Grisonich, 1990).

## Criminalization of mentally ill and homeless people

Teplin (1983) points to three major factors that can be linked to the apparent increase in criminalization of mentally ill people: (a) The "borderline" or unwanted clients, (b) the increase of mentally Ill persons residing within the community, and (c) police handling of mentally ill people.

The "borderline" client is especially problematic for police. This is the individual who has had repeated contact with the mental health system but is among its unwanted clientele. Perhaps the person suffers from a dual-diagnosis condition (e.g., mental illness and substance abuse) or is violent. Clearly, such persons fall into the "cracks" of the system in that they are thought to be too "dangerous" to be accepted for out patient treatment but not dangerous enough to be committed to hospital (Bowden, cited in Teplin, 1983). In this case, the police become the agency of last resort; the burden has shifted from the mental health system to the criminal justice system.

The increased number of mentally ill people residing in the community has been linked to deinstitutionalization. Pockets of discharged outpatients, some of whom are homeless, have appeared within communities. This presents new challenges to those involved in law enforcement. In addition, public attitudes towards homeless people have decidedly hardened. Recently, communities across Canada have passed by-laws to deal with the "visible or nuisance poor". The Safe Streets Act of 1999, allows police to arrest people in contravention of the Act. Engaging in unsolicited automobile-window washing (known as, squeegee kids) or persistent public begging can lead to potential charges. Under the Act, repeat offenders can face fines of up to \$1,000 or 6 months in jail.

In general, police interact with mentally ill people for minor, non-violent offences. For the most part, mentally ill people commit nuisance crimes, such as trespassing (rummaging for food), loitering in stores (for warmth or protection from the weather), indecent exposure (because they are denied access to public restrooms), theft of service (not paying for a cab ride), or a "dine and dash" (failing to pay a restaurant bill) (Janik, 1992). These "crimes" are committed to fill a particular need (such as food or warmth) and leads to conflict between the residents of the area (i.e. business owners, homeowners and tenants) and mentally ill people. Police are being called increasingly to intervene in disputes of this nature (confidential information).

How the police officers choose to handle interactions with emotionally disturbed people (EDPs) reflects directly on flaws in the mental health system. For example, by conducting a criminal arrest, an officer may ensure that the individual remains in custody. While the person is in custody, a judge may order that the individual be assessed by a psychiatrist (judicial order). This method is sometimes preferable for the officer. By arresting an EDP, the officer will endure less "downtime." This circumvents the traditional medical procedure whereby an officer may wait several hours with the individual at a hospital only to have the person released into the community shortly afterwards. Arrests, however, create additional problems. The act of arresting a person sets in motion a chain of events that virtually guarantees additional arrests when the EDP has future contacts with the police. This factor is often cited as contributing to the fact that mentally ill people are the fastest growing segment of the prison population (Janik, 1992). Individuals who may have been committed in the past to a care facility are now being sent to jail (Pogrebin & Poole, 1987). In fact, 25% of inmates in provincial jails have a history of mental illness (McGinn, 1999, as cited by Trovato, 2000).

The criminalization hypothesis itself is controversial. For example, individuals exhibiting signs of mental illness may be arrested more often than individuals who do not exhibit symptoms.

Individuals who are abusive, disrespectful or belligerent may find themselves under arrest and labelled as mentally ill simply due to officers' ignorance of the genuine symptoms of mental illness (Teplin, 2000).

## **Community-based police practices**

Changes in health-care delivery to mentally ill people have resulted in new methods to assist police in dealing with this population. Over the past 10 to 15 years, the concept of community-based policing has moved across North America. As the theory goes, police are members of the community working together with the local population to address residents' concerns. As a result of this move to community policing three models specifically designed to assist police officers in dealing with the mentally ill members of the community have arisen in the U.S.

The Memphis, Tennessee model was developed in 1988 after police fatally shot a man with a long history of mental illness and substance abuse. This model utilizes volunteer police officers who are graduates of a 40-hour program of scenario-based training. Officers learn de-escalation techniques, along with instruction on mental health and addictions (Dupont & Cochran, 2000).

The Birmingham, Alabama model, in use since 1980, uses civilians (community service officers).

These officers are unarmed and wear street clothes. They provide limited crisis intervention and follow-up after police have left the scene.

The final model is the Knoxville, Tennessee model. Knoxville mobile crisis approach is a hospital-based model in which hospital staff respond to calls from law enforcement officers and jails that do not have an inpatient mental health-care program (Steadman, Deane, Borum & Morrissey, 2000).

Are these various models successful? All three models have resulted in cost savings. This is accomplished by reducing the time police officers spend at hospitals. In an assessment conducted at a downtown urban police unit, time required at hospitals by officers was reduced by two thirds, compared with other areas in the city (unpublished material). Community-based mobile crisis teams have resulted in a lower rate of hospitalization than hospital-based interventions (Gou, Biegel, Johnsen & Dyches, 2001).

Do police and consumer groups favourably receive mobile crisis teams? According to Scott (2000), mobile crisis teams provide cost-effective psychiatric emergency care and are favourably received by police and (mentally ill) consumer groups.

## Militarization of police agencies

Developing almost lockstep with the growth of community-based policing has been the movement to a more militarized police presence. Police agencies around the world are employing specialized tactical response units or Special Weapons and Tactics (SWAT) teams. In the U.S., these units developed as a result of American civil unrest in the 1960s and as a response to the inability of police to deal with heavily armed individuals. Then-Inspector Daryl Gates created the first SWAT team in Los Angeles in 1966 (Parenti, 1999). The first Canadian SWAT team was devised to

counter potential terrorist threats at the 1976 Olympic Games in Montreal (Pugliese, 1998).

Although civil unrest faded and the terrorist threat did not materialize at the Olympics, the tactical unit has become a permanent fixture on the landscape of law enforcement agencies. The original intent of these specialized units was to deal with incidents beyond the abilities of general officers, such as hostage takings and terrorist attacks. Over the years, the use of tactical units has evolved to include assisting in the execution of search warrants, dealing with barricaded persons, high-profile security details, general patrols and dealing with EDPs. The number of tactical units has grown at a rapid pace, to the extent that nearly every police service in Canada with over 100 officers has a tactical unit (Pugliese, 1998).

Little research has been devoted to the actual study of the interaction between a tactical response unit and an EDP. Panzarella and Alicea (1997) undertook to study a "special unit" of a large metropolitan police department. The members of this unit defined the unit's function as SWAT. The members felt that dealing with mentally ill people was not within the mandate of the unit. Training scenarios consisted of dealing with terrorists or heavily armed gangs. The members believed that the primary function of this unit was not in dealing with the emotionally disturbed person but with highly dangerous situations. Members of the unit have an "action orientation" and therefore feel that if the unit is called to attend when regular police officers have failed to manage a situation, drastic action must be taken. As a result of this thinking, officers feel that dealing with EDPs is not a task worthy of their skills. The study's authors conclude by stating "A multi-purpose SWAT team is probably the wrong unit to handle situations involving mentally disturbed people. To optimize police performance in managing the growing number of situations which involve mentally disturbed people it may be necessary to focus on both training and the police department's organizational structure" (Panzarella & Alicea, 1997).

A potential consequence of the increased use of tactical response teams for routine policing activities is desensitization of police officers. More drastic solutions are viewed as proper solutions in a variety of situations (Kraska & Paulsen, 1997); for example, dealing with protesters. Perhaps an even more disturbing trend is that this type of policing is considered exciting for the participants: "Most of these guys just like to play war; they get a rush out of search and destroy missions instead of the bullshit they do normally" (Kraska, 1996).

### Police use of force

The institution of policing occupies a unique position within contemporary society. As agents of the State, only police and the military are granted the authority to employ force. In Canada, for military force to take place permission must be granted through an act of Parliament. As a result, police agencies are the sole institution able to employ force within the community. In Canada, the ultimate sanction regarding the use of force is found within the Criminal Code.

Section 25 of the Criminal Code of Canada states (in part):

Everyone who is required or authorized by law to do anything in the administration or enforcement of the law;

- a) as a private person
- b) as a peace officer
- c) in aid of a peace officer or public officer
- is, if he [sic] acts on reasonable grounds, justified in doing what he [sic] is required or authorized to do and in using as much force as is necessary for that purpose.

Of all the activities engaged in by police officers use of force is the most highly scrutinised. By engaging in the use of force, police oftentimes find themselves at odds with the very communities that they are entrusted to serve. Whenever violence or lethal force is used, police officers often feel it is justified, as it was a legitimate response to an extreme circumstance. In contrast, however, the public, particularly minority and otherwise disadvantaged communities, feel unfairly targeted and further isolated from the mainstream. Fear, anger and violence permeate the climate of community-police relations in the aftermath of the use of lethal force by police, too often equivalent to the shooting itself (confidential information).

Considerable community pressure has caused police agencies around the world to investigate how officers use force within the jurisdictions they are entrusted to protect. Many agencies now have strict procedures regarding dealing with EDPs and the use of force. As a result of lethal police/EDP encounters a movement has resulted. This movement has brought about the adoption of new equipment and techniques for officers. This new equipment has resulted in new terminology becoming part of the police lexicon: "less-lethal technology". Additionally, officers are increasingly called upon to employ diffusion and de-escalation techniques.

Weapons such as oleoresin capsicum (pepper spray), rubber projectile bullets and the TASER would be characterized as less-lethal technologies. Less-lethal technology is where "there is only a temporary effect and minimal medical implications to normally healthy subjects; there is a high probability of instantaneous control over a highly motivated suspect; and there are observable effects, with a high probability of affecting only the intended targets" (confidential information). For less-lethal technologies to be considered practical, they must be able to be operated by one police officer, portable and not affected by environmental conditions. Due to these considerations

very few commercially available products meet the needs of front-line police officers. This leaves the traditional force options of bare hands, pepper spray, batons and firearms.

Trying to increase community satisfaction has become reality for police leaders and officers.

Cheurprakobkit and Bartsch (2000) found that the "professional conduct factor (professional knowledge, professional conduct, honesty, quality of service, and fairness) received relatively higher satisfaction and importance scores, compared to the friendliness factor (friendliness, putting one at ease, concern, politeness, and helpfulness) and the crime control/prevention factor (level of police protection, investigative skill, ability to fight crime, and ability to prevent crime)."

The ability to defuse or de-escalate situations has become one of the most important skills for police officers. Expectations placed on officers in democratic countries have changed drastically in recent years. Physical force is sometimes necessary; however, improper use of force leads to complaints, escalation of the contact and potentially placing the person on whom force is used and the officer at greater risk (Kop & Euwema, 2001). Through training and education officers can reduce their need to resort to physical force (Cooper & Scholar, 1997 cited in Kop & Euwema, 2001).

## **CHAPTER 3: RESEARCH METHODOLOGY**

## **Data Sources**

The data were compiled following a comprehensive review of records regarding the contacts and apprehensions of EDPs by members of a Canadian police force spanning the period January 1 to March 31, 2001 (inclusive). The following internal documents were utilized: Use of Force reports, Records of Arrest and Supplementary reports, Emotionally Disturbed Persons Contact information forms. This evidence would be characterized as 'non-public agency records' (Maxfield & Babbie, 1998). Recognizing that non-public agency records are not created for research purposes, caution must be exercised in the interpretation of the resulting data.

## The Use of Force report

The Use of Force report is a standardized provincial form. Officers are required to submit this report anytime an officer uses a weapon other than a firearm on another person.

Uses physical force on another person that results in an injury requiring medical attention. Draws a handgun in the presence of a member of the public, or discharges a firearm.

The form is designed for two specific purposes: analysis of the actions of officers and to determine any emerging trends in use of force. Data recorded on the use of force report include: date of occurrence; time event commenced; time event concluded; rank of the reporting officer, if the report is completed by an individual officer; and the length of the officer's service. If reporting officers were working as a team (e.g., tactical unit or other specialized squad), the number of officers involved would be noted and the report would be submitted as a team report. Officers also describe the nature of duties at the time of the incident, ranging from regular patrol functions to off duty. The remainder of the report details the event: type of force used, effectiveness of the force; number of subjects; weapons possessed by the subject(s) if any; event location; weather; and lighting conditions. The form also asks, in case of injuries, was medical attention required; and the nature of injuries, ranging from unknown to fatal. The final portion of the form allows officers to provide a narrative description of the event.

# **Record of Arrest and Supplementary form**

A Record of Arrest is completed in cases when an officer apprehends or arrests an individual. The form documents the reason for the apprehension or arrest, actions taken with the subject by officers while in custody, and the subsequent release from police custody.

The form is divided into three sections. In Section One, the subject's particulars (name date, place of birth, and a physical description) are recorded. Residential, vehicle, and employment information (if applicable) are also noted. Section Two contains information

about the actual arrest, the nature of the charges, the arresting officers, the time, and location of the arrest, and co-accused (if any). Any previous contact (prior arrests, convictions or other contacts) between the subject and police would be noted in this section, through a series of extensive checks that would have been conducted. The final section documents the treatment of the subject while in police custody: access to meals, use of telephone, type of release or continued detention of the subject.

The Record of Arrest also includes a supplementary report, which contains is a detailed narrative of the event.

### The Emotionally Disturbed Person Contact form

This form was designed to capture the circumstances surrounding an officer's interaction with an EDP. The information recorded is largely demographic; the form collects basic information about the subject, such as name, address, gender and age. Police information, the name and badge number of the reporting officer, the reason for the apprehension (Section 17 of the Mental Health Act, Form 1, Form 2, Form 9 or voluntary apprehension), whether the SWAT team attended or a mobile crisis agency attended. Other information includes information about how the initial call was received (911 or other means), the facility the subject was transported to, and the length of time spent at the facility.

The largest single section of the form is a 34-item check-box-style list. Within this section, the behaviours officers may observe when in contact with the subject are noted.

The form also includes a narrative section where officers are able to record any other observations. The subject's use of prescribed psychiatric medication and if the person is a taking part in a mental health program is also capable of being recorded.

Data collection

### **Use of Force report**

An analysis of the Use of Force reports was conducted at the policy agency. This is necessary as this material is prohibited from being copied or removed by law. The actual documents are stored at a central location of the police agency.

For the purposes of this analysis, the Use of Force report must explicitly mention EDP or refer to a Mental Health Act apprehension (Form 1, Form 2 or Section 17 of the Mental Health Act) or describe an action on the part of the subject that would be readily apparent that they are a person in crisis (e.g., suicidal behaviour). In several situations, multiple officers submitted reports for the same incident. In those cases the report of the most senior officer (based on length of police service) was used for the incident analysis.

# **Record of Arrest and Supplementary forms**

All arrests and apprehensions of the police agency are entered into a database and consequently can be sorted by a variety of methods. All apprehensions identified as 'mental health' for the specified period (January 1, 2001 to March 31, 2001) were retrieved for analysis.

## **EDP Contact Report form**

The completed documents are submitted to the Mental Health and Homelessness Issues coordinator of the police agency. The reports are stored at a central police facility. The Coordinator provided access to the documents which were reviewed onsite.

Data analysis

#### Limitations

### **Use of Force report**

The Use of Force report is an exceptionally useful tool to capture the actions of officers. The form records in detail events that occurred when officers encountered an individual and used force. Factors such as time of day the event occurred, weapons used, number of officers on the scene, injuries to the subject or officer(s) are all captured on the report. However, the use of this tool is limited. While it is a provincially mandated form all the actual situations where officers use force may be documented, officers for a variety of reasons do not complete the report. This is evidenced simply by reviewing the reports: in several incidents, the number of officers recorded, as being in attendance did not match the total number of submitted reports. Some officers may feel that they are not required to submit a report in given the situation and do not do so. A second limitation is the ambiguous way in which reports are written. While studying the reports, several reports with narratives describing situations were found in which it appeared that the subject was in crisis or emotionally disturbed. However, there was not an explicit description of a mental-health apprehension or EDP within the narrative. Those cases were excluded from analysis.

## **Record of Arrest and Supplementary forms**

There is a major limitation in the use of this database. If an individual was charged at the time of apprehension with an offence against the Criminal Code, precedence would reside with the criminal charges. As a result, this information would not be included in the mental health apprehension database. Therefore, some subjects who encountered police for a criminal matter while displaying signs of mental illness are excluded from the database of EDP apprehension records.

## **EDP Contact Report form**

Under usage continues be a major limitation regarding the use of EDP contact forms as research data. In the period covered by this study (January 1, 2001 to March 31, 2001) a total of 1018 Mental Health Act apprehensions were reported by officers. During the same period, officers submitted 270 EDP Contact forms. Brown and Maywood (2001) proposed several possible reasons for the underreporting: officer unfamiliarity with the form itself, hospital reluctance to cooperate with the use of the form, precedence of criminal charges, and finally the apparent complexity of the form itself.

# **Methods of analysis**

All the information from the various reports was coded and entered into SPSS for

Windows V. 11 for statistical analysis. Basic descriptive statistics were generated, including frequencies as well as cross tabulations. The results were compiled into tables and figures for analysis. Comments and conclusions were made based on researcher knowledge of organizational policies and procedures.

## **CHAPTER 4: RESULTS**

The following chart describes the Police Service rank structure of officers involved in EDP apprehensions.

Rank	Abbreviation	Length of Service
Cadet-in-training	СТТ	Not sworn in as a police officer.
Fourth class constable	PC4	Less than 12 months of completed police service.
Third class constable	PC3	More than 12 months of police service, but less than 24 months.
Second class constable	PC2	More than 24 months of police service, but less than 36 months.
First class constable	PC1	More than 36 months of police service.
Plainclothes constable	PL1	Equivalent to PC1
Senior police constable	SPC	Police constable with 10 or
Sergeant*	SGT	more years of service First level supervisor
Detective	DET	Investigator at the same level as sergeant

<sup>\*</sup> a police officer can be promoted to sergeant upon reaching the rank of first-class constable

Many officers complete 30 or more years of service since under the current pension formula, an officer is eligible for a full pension when the years of service combined with

age equals a factor of 85. Therefore, an officer can retire with a full pension at age 55 if the officer joined at age 25.

### Police demographic characteristics

Tables 1 to 3 describe the results of the data collected from the completed Record of Arrest forms. This information represents the demographic information of the apprehending officers. Internal policies require that reports must include the names and badge numbers of all the officers involved in the apprehension of the EDP. The badge number is an identification unique to each officer. The badge number allows access to personnel records, which determine length of service and rank. Length of police service was calculated as time elapsed from appointment date to March 23, 2001; rank as of the same date. The population numbered 1204 officers.

Table 1 represents the distribution of officers apprehending the EDPs categorized by rank. The second largest group was Fourth class constables (PC4) 25.9 percent, after senior constables (SPC) 33.1 percent. This PC4s are involved in 25 percent of the EDP apprehensions. For the first several months of an officers' career they work in tandem with a more experienced coach officer (generally, an officer who has attained first class (PC1) status).

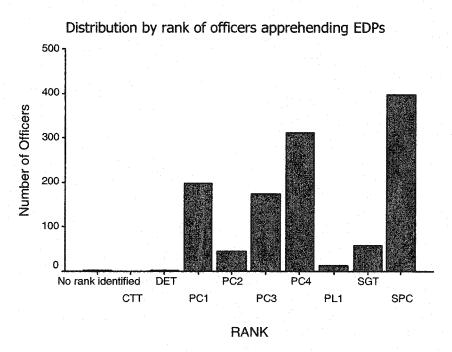
TABLE 1

Distribution by Rank of Police Officers Apprehending EDPs

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No rank given	3	.2	.2	.2
	CTT	1	.1	.1	.3
	DET	3	.2	.2	.6
	PC1	197	16.4	16.4	16.9
	PC2	44	3.7	3.7	20.6
	PC3	174	14.5	14.5	35.0
	PC4	312	25.9	25.9	61.0
	PL1	13	1.1	1.1	62.0
	SGT	59	4.9	4.9	66.9
	SPC	398	33.1	33.1	100.0
	Total	1204	100.0	100.0	

Record of Arrest forms.

FIGURE 1.



Record of Arrest forms.

Table 2 summarizes the length of service of the population of officers involved in the EDP apprehensions. Service ranges from less than one year (including four cadets-intraining) to over 30 years. The mean length of service is 8.7 years, the median is 4.1 years and the mode 1 year of police service.

Table 3 illustrates the effects of reduced hiring of police officers combined with the effect of retirements. Examining all the officers of the police agency in 2002, 42.2% of uniform members had 20 or more years of service, and between 25 and 30 years of service was the most frequent service level; the next most frequent service level was between 0 and 4 years due to the recent recruitment drive (confidential information). Indicating that, as with many other organizations, the retention of staff has become a major issue for the police service due to the lack of officers with 10 to 20 years of service.

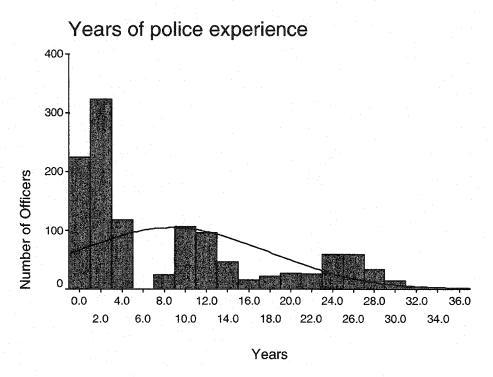
TABLE 2

#### **Statistics Summarizing**

Years of Police experience						
Total	Valid	1200				
	Missing	4				
Mean		8.7				
Median		4.1				
Mode		1				

Record of Arrest forms

### FIGURE 2.



Record of Arrest forms.

Table 3 describes the range of police service for the officer population, in 5 year intervals. The single largest group is the officers with fewer than 5 years of police experience, representing 55%.

TABLE 3

Range of Police Experience in Years

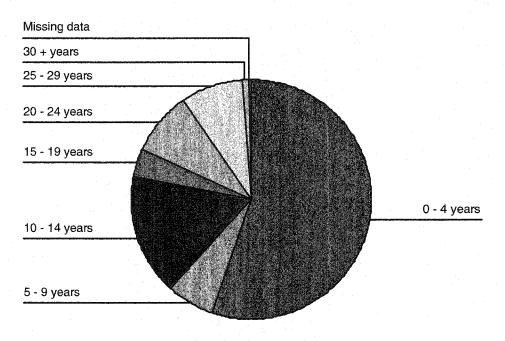
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 - 4	666	55.3	55.5	55.5
	5 - 9	76	6.3	6.3	61.8
	10 - 14	198	16.4	16.5	78.3
	15 - 19	46	3.8	3.8	82.2
	20 - 24	103	8.6	8.6	90.8
	25 - 29	102	8.5	8.5	99.3
	30 +	9	.7	.8	100.0
	Subtotal	1200	99.7	100.0	
Missing	data	4 <sup>a</sup>	.3		
Total		1204	100.0		

Record of Arrest forms.

a. Footnote:denotes officers not yet sworn in as constables

#### FIGURE 3.





Record of Arrest forms

## EDP demographic characteristics

During the span of the study period, officers effected 1018 apprehensions under the Mental Health Act documented through the Records of Arrest forms. During the same period officers submitted 270 EDP contact forms. The results of both data sources are analyzed and compared. Record of Arrest form data will precede the EDP Contact form

data unless otherwise indicated. It must be noted that some of the EDP population is be represented in both sources of data.

Although officers were involved in over 1000 separate apprehensions analysis of the individual records indicates a large number of repeat EDP contacts within the data. Identity was determined to be the same when the spelling of the name, date of birth and address information were found to be consistent. For the purpose of the study however, all records were treated as individual. The total number of individuals apprehended was 890 (see Appendix B). This includes one individual (Subject S369) who was apprehended on eight occasions during the study period. This may be one indication as to why police officers feel frustration when dealing with EDPs within the community, as officers are repeatedly dealing with the same people.

From the Records of Arrest information Table 4 shows that males hold a slightly higher representation than females: 53.1% to 46.7%. In Table 4a, the EDP Contact forms show a higher female representation: 52.6% female to 47.4% male.

TABLE 4

Gender of EDPs, from Record of Arrest forms

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Unknown	2	.2	.2	.2
Male	541	53.1	53.1	53.3
Female	475	46.7	46.7	100.0
Total	1018	100.0	100.0	

Record of Arrest forms.

**TABLE 4A** 

Gender of EDPs, from EDP Contact forms

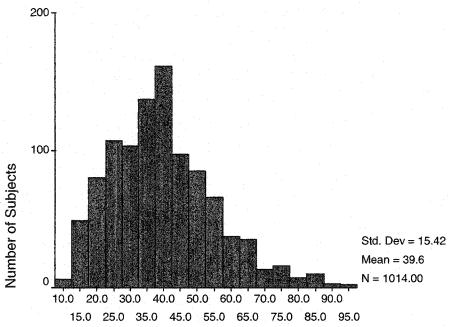
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
	Male	128	47.4	47.4	47.4
	Female	142	52.6	52.6	100.0
***************************************	Total	270	100.0	100.0	

EDP Contact forms.

Tables 5 and 5a and Figures 4 and 4a describe the age characteristics of the EDPs. The mean age for the Record of Arrest population being 39.6 years, compared with the EDP Contact form group, whose the mean age was 40.3 years. However, both results are consistent with the findings of Brown and Maywood (2001), suggesting that mental illness is a largely 'middle-aged' phenomenon.

## FIGURE 4





Record of Arrest forms.

#### FIGURE 4A

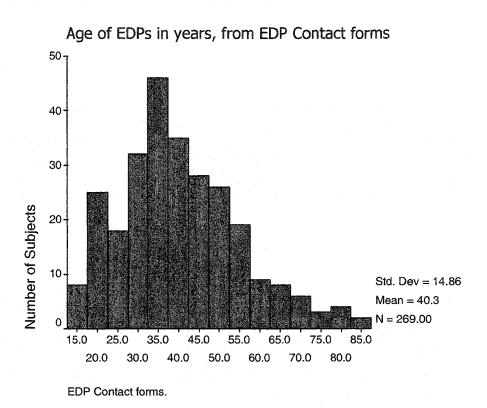


Table 5 and 5a the largest proportion of subjects falling within the age group of 25 – 44 years. Record of Arrest population is 50.1% and the EDP Contact form population is 52.2%. This findings counters the suggestion of Brown and Maywood (2001) which found the age group 35 – 54 was the group most likely to be in contact with police as a result of mental illness.

TABLE 5

Range of EDP by age group, from Record of Arrest forms

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Age	0 - 14	. 19	1.9	1.9	1.9
Group	15 - 24	152	14.9	15.0	16.9
	25 - 34	225	22.1	22.2	39.1
	35 - 44	285	28.0	28.1	67.2
	45 - 54	170	16.7	16.8	83.9
	55 - 64	95	9.3	9.4	93.3
	65 + years	68	6.7	6.7	100.0
	Subtotal	1014	99.6	100.0	
Missing	Data	4	.4		
Total		1018	100.0		

Record of Arrest forms.

**TABLE 5A** 

Range of EDP by age group, from EDP Contact forms

		Frequency	Percent	Valid Percent	Cumulative Percent
Age	0 - 14	4	1.5	1.5	1.5
Group	15 - 24	32	11.9	11.9	13.4
	25 - 34	63	23.3	23.4	36.8
	35 - 44	78	28.9	29.0	65.8
	45 - 54	47	17.4	17.5	83.3
	55 - 64	24	8.9	8.9	92.2
	65 + years	21	7.8	7.8	100.0
	Subtotal	269	99.6	100.0	
Missing	Data	1	.4		
Total		270	100.0		

EDP Contact forms

Tables 6 and 7 describe the age distribution of the EDPs by gender in 10-year intervals.

From the Record of Arrest forms data and the EDP Contact forms data.

TABLE 6

EDPs by gender and age group, from Record of Arrest forms

Subject Gender		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Unknown	45 - 54	2	100.0	100.0	100.0
Male	0 - 14	11	2.0	2.0	2.0
	15 - 24	87	16.1	16.1	18.2
	25 - 34	138	25.5	25.6	43.8
	35 - 44	147	27.2	27.3	71.1
	45 - 54	66	12.2	12.2	83.3
	55 - 64	55	10.2	10.2	93.5
	65 + years	35	6.5	6.5	100.0
	Subtotal	539	99.6	100.0	
Missing	Data	2	.4		
Total		541	100.0		
Female	0 - 14	8	1.7	1.7	1.7
	15 - 24	65	13.7	13.7	15.4
	25 - 34	87	18.3	18.4	33.8
	35 - 44	138	29.1	29.2	63.0
	45 - 54	102	21.5	21.6	84.6
	55 - 64	40	8.4	8.5	93.0
	65 + years	33	6.9	7.0	100.0
	Subtotal	473	99.6	100.0	
Missing	Data	2	.4		
Total		475	100.0		

Record of Arrest forms

TABLE 7

EDPs by age, from EDP Contact forms

				Valid	Cumulative
Subject Gender		Frequency	Percentage	Percentage	Percentage
Male	0 - 14	2	1.6	1.6	1.6
	15 - 24	12	9.4	9.4	10.9
	25 - 34	31	24.2	24.2	35.2
	35 - 44	40	31.3	31.3	66.4
	45 - 54	22	17.2	17.2	83.6
	55 - 64	10	7.8	7.8	91.4
	65 + years	11	8.6	8.6	100.0
	Subtotal	128	100.0	100.0	
Table Caption	0 - 14	2	1.4	1.4	1.4
	15 - 24	20	14.1	14.2	15.6
	25 - 34	32	22.5	22.7	38.3
	35 - 44	38	26.8	27.0	65.2
	45 - 54	25	17.6	17.7	83.0
	55 - 64	14	9.9	9.9	92.9
	65 + years	10	7.0	7.1	100.0
	Subtotal	141	99.3	100.0	
Missing	Data	. 1	.7		
Total		142	100.0		

EDP Contact forms.

Table 8 and Table 8a describe the marital status of the EDP population. The population tends to be primarily single. Caution must be used regarding the definition of single category as single does not mean 'never married'. When explored by gender, males tend to be slightly more represented in the single categories (single, widowed, divorced, separated) than females in the same categories: 78.7% for males, compared with 70.4% for females.

TABLE 8

Marital Status of EDPs, from Record of Arrest forms

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Single	639	62.8	62.8	62.8
Divorced	44	4.3	4.3	67.1
Widowed	32	3.1	3.1	70.2
Common Law	38	3.7	3.7	74.0
Communal relationship	1: <b>1</b>	.1	.1	74.1
Married	147	14.4	14.4	88.5
Separated	46	4.5	4.5	93.0
Unk	71	7.0	7.0	100.0
Total	1018	100.0	100.0	

Record of Arrest forms

Marital Status of EDPs by Gender, from Record of Arrest forms

Subject Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Unknown	Single	1	50.0	50.0	50.0
	Unknown	1.	50.0	50.0	100.0
	Total	2	100.0	100.0	
Male	Single	375	69.3	69.3	69.3
	Divorced	17	3.1	3.1	72.5
	Widowed	7	1.3	1.3	73.8
	Common Law	13	2.4	2.4	76.2
	Other		.2	.2	76.3
	Married	64	11.8	11.8	88.2
	Separated	27	5.0	5.0	93.2
	Unknown	37	6.8	6.8	100.0
	Total	541	100.0	100.0	
Female	Single	263	55.4	55.4	55.4
	Divorced	27	5.7	5.7	61.1
	Widowed	25	5.3	5.3	66.3
	Common Law	25	5.3	5.3	71.6

83

19

33

475

17.5

4.0

6.9

100.0

17.5

4.0

6.9

100.0

89.1

93.1

100.0

Record of Arrest forms.

## **Incident characteristics**

**TABLE 8A** 

The incident characteristics describe the events surrounding the actual apprehension.

Through the use of the various documents a greater level of detail is provided than is usually available in a single police report. The available Use of Force reports provide

Married

Separated

Unknown

Total

information, on the nature of the call (incident officers responded to) and the type of force that was used to effect the apprehension (firearm, baton, aerosol weapon, physical control or TASER). The length of time that officers were involved in the incident as well as injuries to the EDP or officers, is also documented. How police were directed to the call (the source of the call) and the eventual method of apprehension is detailed in the EDP Contact form. The apprehension is also detailed in the Record of Arrest.

Therefore, when used in combination, these documents comprise a more complete image of the interaction between the police officer and the EDP. Use of force data are very limited in scope, because while officers conduct thousands of Mental Health Act apprehensions every year, physical force is used in only a fraction of incidents.

Therefore, the uses of force reported should be considered only one piece of the picture, not as representative of all interactions between police and EDPs.

Tables 9 and 9a describe reasons for apprehension. Section 17 of the Mental Health Act (covering police officer's powers for apprehension) overwhelmingly is the chief reason for officers conducting apprehensions. This suggests that officers are performing in primarily a reactive manner, deciding an individual is an EDP after attending a scene and making a determination based on their observations. In contrast, they are less often compelled to act under an order of a justice (Form 2) or a physician (Form 1).

The reactive nature of police apprehensions of EDPs is further illustrated in Table 9b. This table examines the relationship between the source of the call (911 or other means) and the apprehension. One third of the apprehensions (88 of 270 calls) were initiated as 911 calls.

TABLE 9

Reasons for Apprehension of EDPs, from Record of Arrest forms

Subject Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Unknown	Sec 17 MHA	2	100.0	100.0	100.0
Male	Sec 17 MHA	365	67.5	67.5	67.5
	Form 9 Elopee	27	5.0	5.0	72.5
	Form 1 Physician	117	21.6	21.6	94.1
	Form 2 Justice	29	5.4	5.4	99.4
	Other	3	.6	.6	100.0
	Total	541	100.0	100.0	
Female	Sec 17 MHA	336	70.7	70.7	70.7
	Form 9 Elopee	11	2.3	2.3	73.1
	Form 1 Physician	95	20.0	20.0	93.1
	Form 2 Justice	32	6.7	6.7	99.8
	Other	. 1	.2	.2	100.0
	Total	475	100.0	100.0	

Record of Arrest forms.

TABLE 9A

Reason for apprehension of EDPs, from EDP Contact forms

				Valid	Cumulative
Subject gender		Frequency	Percentage	Percentage	Percentage
Male	Unknown	1	.8	.8	.8
	Sec 17 MHA	80	62.5	62.5	63.3
	Form 9 - Elopee	6	4.7	4.7	68.0
	Form 1 - Physician	21	16.4	16.4	84.4
	Form 2 - Justice	7	5.5	5.5	89.8
	Voluntary	13	10.2	10.2	100.0
	Total	128	100.0	100.0	
Female	Unknown	4	2.8	2.8	2.8
	Sec 17 MHA	75	52.8	52.8	55.6
	Form 9 - Elopee	1	.7	.7	56.3
	Form 1 - Physician	25	17.6	17.6	73.9
	Form 2 - Justice	8	5.6	5.6	79.6
	Voluntary	28	19.7	19.7	99.3
	Community treatment order terminated	. 1	.7	.7	100.0
	Total	142	100.0	100.0	

EDP Contact forms.

**TABLE 9B** 

Reasons for apprehension of EDPs by Source of Call Crosstabulation

Count

				Sourc	e of C	all			
		9-1-1 Call	Non-emergency Call	On-scene	Other	On scene - non-emergency	Unknown	Pick-up	Total
Reason for	Unknown	3	2						5
apprehension	Sec 17 MHA	88	49	5	.11	1	1		155
	Form 9 - Elopee		5		2				7
	Form 1 - Physician	9	27	-1	8			1.	46
	Form 2 - Justice		7		7			, 1	15
	Voluntary	23	14	2			2		41
	Community treatment order terminated	1							1
Total		124	104	8	28	1	3	2	270

EDP Contact forms.

Table 10 examines the type of incident that the officers were initially responding to when dealing with the EDP. This information is captured in the Use of Force report. The table describes the distribution of calls attended according to the specific duties of the officers at the time of contact. The 'Other' category is the single largest proportion of calls. In this area of the EDP Contact form officers check the 'Other' box and type in additional information such as Form 1 or Form 2 apprehension, barricaded EDP or

attempted suicide. This indicates that, prior to attending the scene, officers had knew that the involved subject was suspected to be emotionally disturbed.

As a policy of the Police Service, when dealing with apprehension of an emotionally disturbed person, the tactical team must be notified and the supervisor in charge determines whether the team will attend to conduct the apprehension. Potential threat of violence as well as prior police contact are considered when making the decision regarding the attendance of the tactical team. The reason for use of a tactical team for EDP apprehensions, is that tactical teams have greater access to less-lethal force options such as the TASER. This tool is not currently available to the general patrol officer responding to a situation. Less-lethal force options are designed to reduce potential risk to the EDP, the officers and other members of the public.

TABLE 10

Type of Incident by Operational Police Duty Assignment

Count

			Assignment		
		General Patrol	Traffic	Tactical	Total
Type of	Domestic dispute	3			3
Incident	Traffic incident		1		1
	Weapons Call	1		4	5
	Other <sup>a</sup>	2		15	17
Total		6	1.	19	26

Use of Force reports.

a. Includes Form 1, Form 2 Mental Health Act apprehensions.

Recently, one of the less-lethal force options that has been gaining wide acceptance for use by police across North America is the conducted energy weapon (CEW), generally known as the - TASER. Since December 2000, the Police Service has been actively using the TASER through its tactical unit. In 2001, there were 54 deployments (internal document, 2003). During the period of this research project (January 1, 2001 to March 31, 2001), the TASER was utilized in 12 incidents representing 22% of the year's total usage.

Table 11 describes the operational effectiveness of the TASER in the field, as police encounter EDP subjects. To use the TASER, officers must either physically touch the subject or deploy darts, that pierce the skin. Once contact is established, an electrical current is passed from the TASER to the subject, causing an immediate muscle dysfunction. The effects are temporary and there is little risk of permanent physical injury to the person. While the subject is incapacitated additional officers move in to control the subject. This perceived advantage holds great appeal to police agencies across North America as agencies attempt to find ways to deal with the escalating number of contacts with EDPs in urban areas. The TASER reduces the chance of injury to the EDP and reduces potential risk to the officers. Table 11 also describes of the nature of injuries sustained by the people apprehended. All injuries were minor in nature.

Tables 11a, 11b and 11c illustrate the extent to which the TASER has replaced other force options when dealing with EDPs. Other traditional less-lethal force options, such as aerosol weapons (pepper spray or tear gas), impact weapons (batons) and physical

control are not employed with similar frequency as the TASER by tactical-unit police officers.

TABLE 11

**Taser Effectiveness and EDP Injuries** 

			Person injure	d - Subject	
Nature of Injuries			Subject not injured	Subject injured	Total
Minor	Taser	Taser - pointed effective		1	1
	Used	Taser used effective		4	4
		Taser used ineffective		1	. 1
		Taser used effect unknown		<b>1</b> .	. 1
	Total			7	7
None	Taser	Taser - pointed effective	2		2
	Used	Taser used effective	. 1		1
		Taser used effect unknown	<b>1</b>		1
	Total		4		4
Unknown <sup>a</sup>	Taser Used	Taser - pointed effective	1		. 1
	Total		1		. 1

Use of Force reports.

a. Extent of injuries not documented on Use of Force report.

#### TABLE 11A

#### Aerosol Weapon Use by Police Assignment

Count

		Aeroso		
		Effective	Alternative Methods <sup>a</sup>	Total
Assignment	General Patrol	1	6	7
	Traffic		1	1
	Tactical	1	19	20
Total		2	26	28

Use of Force reports

a. Other use of force techniques used

TABLE 11B

#### Impact Weapon Use by Police Assignment

Count

		lm			
		Ineffective	Effective	Alternative Methods <sup>a</sup>	Total
Assignment	General Patrol		1	6	7
	Traffic			1	1
	Tactical	1	2	17	20
Total		1	3	24	28

Use of Force reports

a. Other use of force techniques used

TABLE 11C

**Use of Physical Control Techniques by Police Assignment** 

Count

		Physical C		
		Effective	Alternative Methods <sup>a</sup>	Total
Assignment	General Patrol	1	6	. 7
	Traffic	1		1
	Tactical	3	17	20
Total		5	23	28

Use of Force reports

Table 12 reports on use-of-force situations by EDPs on officers. The table details the functions officers (i.e. general patrol duties) were performing at the time of the incidents and the use of weapons by the EDPs. In situations that require the use of force, tactical officers appear to be dealing with the EDP population more than other police officers. A tactical police presence is required after other officers generally front-line uniform have attended the situation and determined that the situation requires a tactical intervention.

A major concern for police when encountering EDPs is the potential use of weapons. In many of the situations, the person is unarmed. If a weapon is present, edged weapons are common because they are easy to obtain. Edged weapons include knives, scissors and other sharp objects. Firearms are rarely used by EDPs.

a. Other use of force techniques used

#### **TABLE 12**

#### **Operational Police Assignment by EDP Armed**

Count

			Wea	apon i	use		
		EDP unarmed	EDP armed - gun	EDP armed - edged weapon	EDP armed - unknowr <sup>a</sup>	EDP armed - other	Total
Assignment	General Patrol	3		2	1	1	7
	Traffic	1					1
	Tactical	9	1	5	2	3	20
Total	·	13	1	7	3	4	28

Use of Force reports

- a. Armed with unknown weapon
- b. Armed with item not commonly used as a weapon, e.g. fireplace tools

# Conclusions

This study examined internal documents from a Canadian police agency that describe the apprehension of emotionally disturbed persons during the period January 1, 2001 to March 31, 2001 (inclusive). The number of officers involved was 1204 and the number of emotionally disturbed people was 890. In total, there were 1018 Mental Health Act apprehensions, The 270 EDP Contact forms officers submitted and a total of 28 incidents requiring police use of force were also analyzed.

The result of this study was an expansion in knowledge regarding interactions that occur between police and EDPs. The areas of particular interest are the demographic characteristics of both the police officers and the EDP subjects. Some of the questions addressed were: Which groups of officers are conducting the actual apprehensions? What is the length of service of officers involved in apprehensions of EDPs? Questions regarding the EDPs included: What are the actual reasons for the apprehensions? What is the age, gender composition and marital status of the EDP population? Within the interaction, how often is physical force required when dealing with an EDP? What is the exact nature of the force used?

The relationship between police and EDPs is extremely complex. Officers are enforcers of the law; however, in many of these situations, the law may not be applicable.

Moreover, the legal solution may not serve to deal with what is a medical issue.

Unfortunately, officers are provided few options within the community (Cordner, 2000;

Teplin, 1984). The difficulty is attempting to find a balance between the needs of the individual and serving the needs of the community-at-large.

## Police demographic conclusions

The demographic information regarding the officers was of particular importance. Over half (55.3%) of all officers involved in EDP apprehensions had less than 5 years of police experience. The mode of active officers is noteworthy as well: 1 year's service.

Therefore, officers with the least amount of practical policing experience are involved with and conducting the majority of arrests. Initially, new officers (PC4s) are paired with more experienced officers (coach officers). This mentoring relationship usually lasts three months. If the new officer demonstrates capability and confidence, the officer is gradually allowed to work independently. Consequently, situations occur whereby two officers may be assigned to work together, both of whom have little practical policing experience. More experienced officers are available for questions and assistance if necessary; however at times policing can be an extremely dynamic occupation requiring quick decisions about appropriate courses of action. Fyfe (2000) notes that some EDP shootings have involved younger officers who believe that they must be constantly alert as EDPs are potentially 'homicidal maniacs'.

In Figure 2, at the Year 4 interval, there is a drastic reduction in the number of officers involved in EDP apprehensions. Officers at this stage of their careers are first-class constables (PC1s) capable of working with a high degree of autonomy. Having been exposed to both the mental health care system and the criminal justice system, officers

may elect to proceed with a criminal charge and request that the court order a mental health assessment. Trovato (2000) found that judges often order such assessments based on information presented by police. Through this action, officers ensure an outcome that is perceived as favourable. Police officers demonstrate both compassion and control -- compassion for the EDP and control over the situation. Although the officer circumvents the mental health care system, the EDP still receives a court-ordered assessment.

In addition, notable in Figure 2 is the lack of officers with 6 years' policing experience. This gap reflects a hiring freeze. During the early 1990s, no officers were hired by the police service. This hiring freeze lasted for nearly 2 years. The freeze has produced a visible gap in the levels of experience of officers.

# **EDP demographic conclusions**

Representation by gender from the Record of Arrest forms (males 53%: females 46.7%) and the EDP Contact forms (males 47.4%: females 52.6%) is similar. These records were analyzed by individual incident; individual EDPs who repeatedly encountered police were not counted more than once. Officers apprehended 890 individuals in 1018 incidents during the period of the study (see Appendix B). The mean age of the EDPs, according to the Record of Arrest forms (males 38.5; females 40.9) and the EDP Contact forms (males 40.6; females 40.1) is similar as well. Brown and Maywood (2001) conclude that EDP intervention is a middle-aged phenomenon. The authors suggest that

further research must take place to understand the characteristics of this age group, in particular why this group is in contact with police with such frequency.

In the category of marital status most EDPs a single (nearly 75%). This category includes single, divorced, widowed and separated designations. The fact that many of the EDPs are single is apparent through incident information as well. Researchers examining the sources of initial calls for service found that the majority of calls to police are initiated by parties not related to the EDP and by strangers (Brown & Maywood, 2001; Panzarella & Alicea, 1997).

#### **Incident characteristics conclusions**

Analysis of Record of Arrest and EDP Contact forms reveals that the majority of EDPs are apprehended using the officer's powers of apprehension under Section 17 of the Mental Health Act. The Record of Arrest data shows that 69.1% (703 of 1018) of all apprehensions were conducted using police powers of arrest and the EDP Contact form shows 57.4% (155 of 270).

The Mental Health Act requires that four conditions be satisfied when officers apprehend an EDP.

 The officer must have reasonable and probable grounds that the person is acting in a disorderly manner. Disorderly, as defined by the courts, means irrationally.

- 2. The officer must have reasonable cause to believe the person has threatened or is threatening to cause bodily harm to him/herself; or has attempted or is attempting to cause bodily harm to him/herself; or has behaved or is behaving violently toward another person; or has caused or is causing another person to fear bodily harm from him/herself; or has shown or is showing a lack of competence to care for him/herself. This condition is known as the 'past/present test': has the person acted in this manner in the past or is the person engaged in these activities in the present?
- 3. The officer must form the opinion that the person is apparently suffering from a mental disorder that will likely result in one or more of the following: serious bodily harm to him/herself; or serious bodily harm to others; or serious physical impairment of him/herself.
- 4. In the opinion of the officer it would be dangerous to proceed by way of a judicial order. The officer feels the situation requires an immediate intervention and any delay would be dangerous.

If these conditions are satisfied, the officer will apprehend the person and transport that individual to the nearest psychiatric facility for examination by a physician.

Policing in urban areas officers may feel that when dealing with EDPs, the eyes of the public are upon them. According to EDP Contact form data, officers responded to 911 calls in 45.9% of the incidents. In 32.5% of apprehensions police powers to apprehend

under Section 17 of the Mental Health Act were exercised. When combined with voluntary apprehensions (the officer does not apprehend the subject; however the person is transported willingly to a psychiatric facility by police) the percentage increases to 41. The perceived urgency of the situation (a 911 call) may compel officers to find an expedient solution.

Use of physical force when dealing with an EDP is a rare occurrence. Bittner (1967) notes that, in most cases, people are compliant, passive, or at least manageable by means of verbal influence. While most situations are resolved without the use of coercive force by police, the method in which those particular incidents are concluded is noteworthy. In the Use of Force reports analyzed, the EDPs were likely unarmed in 13 of 28 incidents and armed with guns in 1 incident. This suggests that the individuals are not acting offensively (i.e., lashing out with the intention of being a danger to others). Panzarella and Alicea (1997) found that few of the EDPs in their study had actually threatened (31 of 90) or injured anyone (23 of 90).

The conducted energy weapon (CEW), or TASER, is seen to have several practical advantages for police. This weapon is less likely to injure, and, as a secondary advantage, there are no concerns about decontamination or clean-up after usage. Therefore, since December 2000, the police agency has employed this force option within the tactical unit. This weapon has supplanted traditional means (i.e., pepper spray, empty-hand techniques, impact weapons) of dealing with higher risk EDP calls.

Police have made measurable gains in their efforts to deal with emotionally disturbed people in the community. Deinstitutionalization has had a significant impact on the training and equipment that officers use to deal with EDPs. Pepper spray and TASERs were not common tools a generation ago; however, as a result of incidents across North America where EDPs have been killed by police, new equipment has been adopted. Providing effective, less lethal options to officers is a positive start; the ultimate goal of reducing injury or death to citizens and officers is highly laudable.

#### Recommendations

Based on the results of data analysis the following recommendations are divided into two categories: training and organizational issues.

### **Training issues**

Traditionally, as a result of an inquest or other external pressure exerted on a police agency, training for EDP situations was routinely mandated for all officers. The cost of undertaking training in this ad hoc manner is challenging, both logistically and financially. Officers work over a large geographic territory, with a variety of shift schedules. These factors combined with other influences (i.e., court requirements, vacations, officer illness, promotions, retirements and transfers), mean it will take several years before all the officers receive the mandated training. This broad-stroke approach has proven to be highly inefficient.

Demographically targeted training is recommended, based on the profile of officers conducting the apprehensions. Officers with the least practical policing experience should be provided with initial training. These officers are extensively involved in the majority of EDP apprehensions. More senior officers should be provided training through alternative methods (i.e., video updates, Intranet, corporate newsletters). In addition, selected senior officers (coach officers) should attend training to receive updates in

legislation, ensuring their knowledge is consistent between the classroom and its practical street level application.

## **Organizational issues**

For the police agency, dealing with emotionally disturbed people is an expensive process. In 2001, officers spent 3 hours on average at a psychiatric facility with an apprehended EDP. Police policy mandates that while at the facility, officers must have an escorting officer. Therefore, when this is converted into a dollar cost the police service estimated costs were over \$830,000 in 2001 (unpublished material). This estimate deals only with the cost of officers attending at the psychiatric facility. Many apprehensions require three or more officers. The tactical unit records indicate that 150 of 508 tactical unit call-outs in 2001 were EDP related (confidential information). The tactical unit utilizes from 6 to 10 officers; a general patrol police presence is also necessary for the purpose of crowd control. Therefore, a call requiring the services of a tactical unit can command the services of up to a dozen or more police officers and other related personnel (e.g., Ambulance Services provides specially trained paramedics). This places a strain on police resources; other emergency calls may not be receive a timely response.

One potential solution that appears to answer the dual needs of EDPs and police officers appears to be the CIT (crisis intervention team) model. This solution differs in implementation by jurisdiction. For example, some centres will have police and mental health professionals working together. Others will utilize a civilian-only response or a

mental-health-worker only response. The common thread is the relationship between the police and the mental health system. This relationship model exemplifies leadership. In this model, police and the mental health community must create a solution that has as its focus the individual and not the respective agency need for an expedient solution. Law enforcement must look at this issue in a new light. Additional training - as is so often called for - will not completely solve the problem. Training is a tool to build expertise within the police agency, not a panacea.

#### **CHAPTER 5 – RESEARCH IMPLICATIONS**

## Organization implementation

In urban settings around the English-speaking world, EDPs interact daily with police. Police agencies are trying to find new solutions to the escalating numbers of EDP-related calls with which officers are required to deal. Emergent technologies have provided a variety of less-lethal weapons allowing officers to respond more appropriately to these situations. In addition, reviews of mental health legislation has brought about changes such as Bill 68 in Ontario. This Bill, given Royal Assent in June 2000, brought about major changes in the way police can deal with EDPs. Because of this legislation, officers are no longer required to observe a person acting in a disorderly manner, the officer must merely *believe* that the person is mentally ill. Further, it is dangerous to wait to seek an order from the court. Bill 68 also introduces Community Treatment Orders (CTOs); and established rules addressing the transfer of an EDP from police custody to a psychiatric facility's care.

These technological and legislative changes only address the mechanics of the interaction between officers and EDPs. With the advent of the community-based policing philosophy, police agencies are required to develop more of a solution focus. Police organizations must examine barriers that inhibit the development of better relationships with their communities. These barriers may interfere with the development of measures to ensure mutually satisfactory solutions to problems. Police training practices and the organizational culture itself of policing are two such barriers that need to be addressed.

Across North America, police training practices have evolved over several years, from simply having officers annually demonstrate proficiency with their firearms to situational training. In situational training, officers must demonstrate judgment by selecting the appropriate Use-of-Force option and effectively articulating their choice in a debriefing session afterward. Training of this type must be encouraged as officers begin to overcome the traditional emphasis that use of firearms is the only option in confrontations. In conjunction with situational training, officers must be provided with more training in conflict management. Current training tends to focus on officers gaining the upper hand in a situation. This emphasis on winning does not allow officers to explore mediated alternatives (confidential material). Geller and Toch (1996) suggest that enhanced oral communication skills should be the primary tool for controlling potentially violent people. However, they correctly suggest that non violent tactics do not always work, and police officers must be competently trained in coercive physical measures. Proper training not only enhances skills (i.e., conducting a safe traffic stop), it transfers the expectations and attitudes of the organization (safe, successful resolution of situations) to officers.

Although the community-based policing model has been in use for nearly 20 years, policing culture is still based on the military model of 'command and control.'

Consequently, the transition to a community-based model that encourages collaboration has been hampered by the paramilitary police culture (confidential material).

Community-based policing calls on officers to become problem-solvers within the area they patrol. In practice, this has merit for both the community and the officers. Both groups have ownership of problems, which may lead to long-lasting solutions. This joint

problem-solving practice has not yet reached a point whereby all officers are participating. Many officers work in a reactive incident-driven mode. Culturally, until police agencies move away from this model of situation-management real change cannot begin to take place.

#### **Future Research**

This project has generated several possible avenues of future research. Areas of particular interest are use of force repeat encounters between police and EDPs criminalization of persons suspected to be mentally ill and the effectiveness of current police training.

Police use of force elicits strong opinions regarding the role of the police when dealing with emotionally disturbed people. Using force at times puts police at odds with the community – particularly on the rare occasions when serious injury or death occurs. More effort must go into the study of all situations requiring force. Future studies must examine the situations in which officers decide to exercise force. Since 1994, police agencies have been required to collect data on officers using force, but to date, no study of this data has been undertaken (confidential material). Proper analysis and dissemination of this information would assist in creating transparency regarding the activities of police and would provide a measure of public accountability.

A noteworthy finding in the Record of Arrest data was the number of EDPs repeatedly apprehended by police during the period of the study. Repeated apprehensions may

suggest that local police and these EDPs develop relationships over time and may possibly have numerous, undocumented contacts that may have been resolved informally. Police may only resort to apprehensions when a situation becomes unmanageable. The intervals between apprehensions and the circumstances (i.e., use of police officer powers of arrest, judicial or physician's order) of subsequent apprehensions provide details regarding events taking place in the lives of the EDPs. This information could be useful in suggesting the types of services and resources that could be brought into a community to serve the needs of the EDP population.

Several of the EDPs identified in the Contact forms were not identified as apprehendees within the Record of Arrest data. This lack of redundancy suggests that these EDPs may have been apprehended and charged with a Criminal Code offence. The lack of information about this group of individuals could be addressed by studying all the Records of Arrest for a specified period. This could be helpful in identifying EDPs who have been arrested by officers and ordered to receive treatment for a mental illness by the court. This information would provide a better picture of the extent of police-EDP contacts that occur.

Training, is often mandated for police following an inquest or other judicial inquiry. The effectiveness of these training interventions is not without controversy. Janus, Bess, Cadden and Greenwald (1980) concluded that bias toward psychiatric patients can be minimized through instruction. Borum (2000) counters that, while not harmful, educational programs and crisis intervention training programs are not sufficient to fundamentally change the nature of the encounters between the police and EDPs.

Ultimately, police agencies require information to determine the most effective allocation of resources. Only through examining training and day-to-day practices can agencies learn which methods have brought a reduction in injuries and death to EDPs.

#### **CHAPTER 6 - LESSONS LEARNED**

## **Project Lessons**

The initial intention of this research project was to study the attitudes of police officers normally involved with the apprehension of emotionally disturbed persons within the community. These officers were to have been surveyed. The survey would have tested the attitudes of officers when presented with scenarios describing various common situations of people with an apparent mental illness. The officers were to have responded with what actions they would have taken. Three distinct groups were the target of the study: tactical team officers, Mobile Crisis Intervention team officers, and uniform officers. Each of these units represents a decidedly different police response to a given situation. The full-time tactical officer has specialized training to deal with dangerous or violent situations. The mobile crisis officer is trained to deal with situations involving persons in crisis, with a regard to a medical intervention. Uniform officers are generalists, the front-line responders.

Additionally, two other research methods were to have been used gathering research material and archival research utilizing the Use of Force reports and the Emotionally Disturbed Persons Contact form.

A committee was formed comprising senior-level police managers, mid-level and front-line supervisors, and academic advisors. Within a month of the formation of the committee, one senior-level member was lost due to his transfer to another police unit.

The officer who replaced him did not join the committee, although he was advised of the status of the project. A special advisor was added to the committee by the researcher.

Initially, committee members approved of the research design. A survey instrument was constructed and testing was given to the committee for final approval for distribution to the different groups. At this stage, the survey was forwarded to the police service's legal branch for final approval. This process proved to be very time consuming. Ultimately, the legal branch did not grant approval to the survey portion of the project, citing the need for organizational confidentiality. As a compromise, however, if the researcher had obtained approval for the survey at the command level of organization (deputy chief of police or chief) no further objections would be raised. However, time constraints made this option impossible.

As a result, the survey was abandoned and the focus of the project moved to analysis of archival data. Far less objections were raised. The individuals who controlled the police agency data provided complete access and often provided information about leads to additional sources of information. This experience indicates that while philosophically in agreement with the project, the higher level managers on the advisory committee could not provide the practical assistance necessary to move the project forward.

A research project on a controversial subject, in the opinion of this researcher, cannot be conducted within the organization. The backing of a provincial or national organization must be obtained, thereby allowing the surveying of many officers across a

large geographic area, rather than within only one organization. This will avoid the one organization feeling that the spotlight has been cast upon that group.

The research question for this project was How has deinstitutionalization impacted daily police activities? This question is best answered with qualitative data, and the data gathered in this project addressed quantitative issues. Nevertheless, the project commented on the activities of officers and the types of interactions that occur on a daily basis. However, the specific impact on policing of, people dealing with mental illness moving into the community was not addressed.

The research question for this project evolved as a result of the concerns of police agency managers whose interest was for the security of the organization. The only accurate way to answer a qualitative question accurately answered is to ask it of the people the question is targets. Only through a large organization allowing anonymity for respondents can questions of this nature be addressed.

In addition, the researcher gained practical skills by learning to use SPSS. After engaging in a training session, the researcher was able to do all the statistical analysis described within this projects with minimal assistance. The researcher has gained valuable collaborative skills working with a major metropolitan hospital using police data in a long-term study on suicide.

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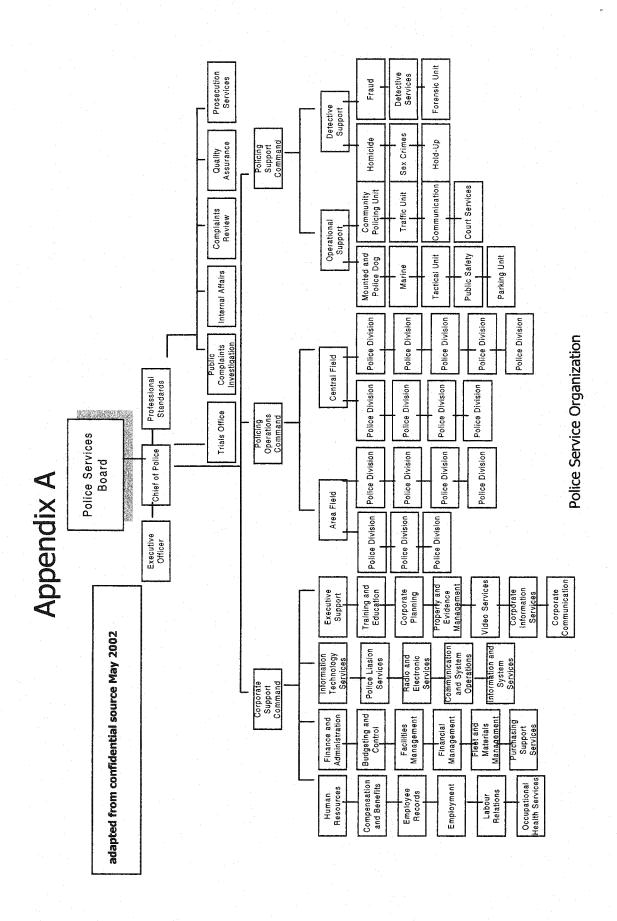
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# Appendix B

**EDP Identification** 

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid S1	1	.1	.1	.1
S10	1	.1	.1	.2
S100	3	.3	.3	.5
S101	1	.1	.1	.6
S102	2	.2	.2	.8
S103	1	.1	.1	.9
S104	1	.1	.1	1.0
S105	1	.1	.1	1.0
S105	1	.1	.1	1.1
S100	1	1		1.2
\$107 \$108	1 .	.1	.1	1
1	1	.1	.1	1.4
S109	3	.3	.3	1.7
S11	1	.1	.1	1.8
S110	1	.1	.1	1.9
S111	1	.1	.1	2.0
S112	1	.1	.1	2.1
S113	1	.1	.1	2.2
S114	1	.1	.1	2.3
S115	1	.1	.1	2.4
S116	1	.1	.1	2.5
S117	1	.1	.1	2.6
S118	1	.1	.1	2.7
S119	1	.1	.1	2.8
S12	1	.1	.1	2.8
S120	1	.1	.1	2.9
S121	1	.1	.1	3.0
S122	1	.1	.1	3.1
S123	1	.1	.1	3.2
S124	1	.1	.1	3.3
S125	1	.1	.1	3.4
S126	1	.1	.1	3.5
S127	1	1	.1	3.6
S128	1	.1	.1	3.7
S129	1	1	.1	3.8
S13	1	.1	.1	3.9
S130		.1	.1	4.0
S130	1	.1	.1	4.0
S131	1	1	Į.	4.1
S132 S133	B		.1	1
	1	.1	.1	4.3
S134	1	.1	.1	4.4
S135	1.	.1	.1	4.5
S136	1	.1	.1	4.6
S137	1	.1	.1	4.7
S138	1	.1	.1	4.8
S139	2	.2	.2	5.0
S14	.1	.1	.1	5.1

Record of Arrest forms.

**EDP Identification** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S140	1	.1	.1	5.2
	S141	1	.1	.1	5.3
	S142	1	.1	1	5.4
	S143	. 1	.1	.1	5.5
	S144	. 2	.2	.2	5.7
	S145	1	.1	.1	5.8
	S146	1	.1	1	5.9
	S147	1	.1	.1	6.0
	S148	1	.1	.1	6.1
	S149	1	.1	.1	6.2
	S15	1	.1	1	6.3
	S150	1	.1	.1	6.4
	S151	1	1	.1	6.5
	S152	1	1	.1	6.6
	S153	1	.1	.1	6.7
	S154	1	_1	.1	6.8
	S155	1	1 .1	.1	6.9
	S156	1	1	.1	7.0
	S157	1	.1	[ '	
	S157			.1	7.1
	S150	2	.2	.2	7.3
		2	2	.2	7.5
	S16	1	.1	.1	7.6
	S160	1	.1	.1	7.7
	S161	2	.2	.2	7.9
	S162	1	1	.1	8.0
	S163	1	.1	.1	8.1
	S164	1	.1	.1	8.2
	S165	1	.1	.1	8.3
	S166	1	.1	.1	8.3
	S167	2	.2	.2	8.5
	S168	1	.1	.1	8.6
	S169	1	.1	.1	8.7
	S17	1	.1	.1	8.8
	S170	1	.1	.1	8.9
	S171	1	1	.1	9.0
	S172	1	.1	.1	9.1
	S173	1	.1	.1	9.2
	S174	1	.1	.1	9.3
	S175	1	.1	.1	9.4
	S176	1	.1	.1	9.5
	S177	1	1	.1	9.6
	S178	1	.1	.1	9.7
	S179	4	.4	.4	10.1
	S180	1	.1	.1	10.2
	S181	1	.1	.1	10.3
	S182	1	1	.1	10.4
	S183	1	.1	.1	10.5
	S184	1	.1	.1	10.6

Record of Arrest forms.

**EDP Identification** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S185	1 requericy	.1	.1	10.7
	S186	1	.1	.1	10.8
	S187	3	.3	.3	11.1
· • • • • • • • • • • • • • • • • • • •	S188	1	1	.1	11.2
	S189	1	.1	.1	11.3
1	S19	1	.1	.1	11.4
	S190	1	.1	.1	11.5
	S191	1	1	.1	11.6
	S192	1	.1	.1	11.7
	S193	1	.1	.1	11.8
1.	S194	1	.1	.1	11.9
	S195	1	.1	.1	12.0
	S196	1	.1	.1	12.1
	S197	1	.1	.1	12.2
-	S198	1	.1	.1	12.3
	S199	1	.1	.1	12.4
	S2	. 2	.2	.2	12.6
	S20	1	.1	.1	12.7
	S200	1	.1	.1	12.8
	S201	1	.1	.1	12.9
	S202	2	.2	.2	13.1
	S203	1	.1	.1	13.2
	S204	1	.1	.1	13.3
1	S205	1	.1	.1	13.4
	S206	3	.3	.3	13.7
	S207	1	.1	.1	13.8
	S208	1	.1	.1	13.9
	S209	1	.1	.1	13.9
	S21	1	.1	.1	14.0
	S210	1	.1	.1	14.1
	S211	1	.1	.1,	14.2
	S212	1	.1	.1	14.3
	S213	1.	.1	.1	14.4
	S214	1	.1	.1	14.5
	S215	1	.1	.1	14.6
	S216	1	.1	.1	14.7
	S217	1	.1	1 .	14.8
	S218	1	.1	.1	14.9
	S219	1	.1	.1	15.0
	S22	1	.1	.1	15.1
	S220	1	.1	.1	15.2
	S221	1	.1	.1	15.3
	S222	1 .	.1	.1	15.4
	S223	1	.1	.1	15.5
	S224	1	.1	.1	15.6
	S225	1	.1	.1	15.7
Princeton	S226	1	.1	.1	15.8
	S227	1	.1	.1	15.9

**EDP Identification** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid S	5228	1	.1	.1	16.0
	3229	. 1	.1	.1	16.1
	S23	1	.1	.1	16.2
	S230	1	.1	.1	16.3
	3231	1	.1	.1	16.4
	S232	1	.1	.1	16.5
	S233	1	.1	.1	16.6
9	S234	1	.1	.1	16.7
ā	3235	1	.1	.1	16.8
8	S236	3	.3	.3	17.1
R	S237	1	.1	.1	17.2
B .	S238	2	.2	.2	17.4
B.	5239	1	.1	.1	17.5
R .	S24	3	.3	.3	17.8
1	S240	1	.0	.1	17.9
8	S241	1	.1	.1	18.0
8	S242	1	.1	_1	18.1
B	S242	1	.1	.1	18.2
l .	3243 3244	1	.1	.1	18.3
B	S244 S245			l .	18.4
	S245	1	.1	.1	1
§	S240	1	.1	.1	18.5
8		1	.1	.1	18.6
	S248	1	.1	.1	18.7
1	S249	1	.1	.1	18.8
1	S25	1	.1	.1	18.9
4	S250	1	.1	.1	19.0
9	S251	1	.1	.1	19.1
I	S252	1	.1	.1	19.2
	S253	1	.1	.1	19.3
1	S254	1	.1	.1	19.4
	S255	1	.1	.1	19.4
9 -	S256	1	.1	.1	19.5
2	S257	1	.1	.1	19.6
8	S258	1	.1	.1	19.7
1	S259	1	.1	.1	19.8
8	S26	1	.1	.1	19.9
9	S260	2	.2	.2	20.1
B .	S261	1	.1	.1	20.2
\$	S262	1	.1	.1	20.3
B	S263	2	.2	.2	20.5
8	S264	1	.1	.1	20.6
2	S265	1	.1	.1	20.7
2	S266	4	.4	.4	21.1
8	S267	2	.2	.2	21.3
B .	S268	1	.1	.1	21.4
1	S269	2	.2	.2	21.6
B .	S27	1	1	.1	21.7
	S270	1	.1	.1	21.8

**EDP** Identification

	<b>-</b>		V-1:45	Cumulative
Valid S271	Frequency 1	Percent 1	Valid Percent .1	Percent 21.9
\$271 \$272	1	1	.1	21.9
S272			1	
S273	1	1	.1	22.1
	1	.1	.1	22.2
S275	1	.1	.1	22.3
S276	-1	.1	.1	22.4
S277	1	.1	.1	22.5
S278	1	.1	.1	22.6
S279	1	.1	.1	22.7
S28	1	.1	.1	22.8
S280	1	.1	.1	22.9
S281	1	.1	.1	23.0
S282	1	.1	.1	23.1
S283	2	.2	.2	23.3
S284	1	.1	.1	23.4
S285	2	.2	.2	23.6
S287	1	.1	1	23.7
S288	1	.1	.1	23.8
S289	2	.2	.2	24.0
S29	1	.1	.1	24.1
S290	1	.1	.1	24.2
S291	1	.1	.1	24.3
S292	2	.2	.2	24.5
S293	· 1	.1	.1	24.6
S294	. 1	.1	.1	24.7
S295	1	.1	1	24.8
S296	1	.1	.1	24.9
S297	2	.2	.2	25.0
S298	1	.1	.1	25.1
S299	. 1	.1	.1	25.2
<b>S</b> 3	1	1	.1	25.3
S30	1	.1	.1	25.4
S300	. 1	.1	.1	25.5
S301	1	.1	.1	25.6
S302	1	.1	.1	25.7
S303	1	.1	.1	25.8
S304	1	.1	.1	25.9
S305	1	.1	.1	26.0
S306	1	.1	.1	26.1
S307	1	.1	.1	26.2
S308	. 1	.1	.1	26.3
S309	2	.2	.2	26.5
S31	2	.2	.2	26.7
S310	2	.2	.2	26.9
S311	2	.2	.2	27.1
S312	2	.2	.2	27.3
S313	2	.2	.2	27.5
S314	3	.3	.3	27.8

**EDP Identification** 

		_			Cumulative
Valid	S315	Frequency 2	Percent .2	Valid Percent	Percent
Vallu	S316	2	.2	.2	28.0 28.2
	S317	4	l		
	S318		.4	.4	28.6
		3	.3	.3	28.9
	S319	2	.2	.2	29.1
	S32	1	.1	.1	29.2
	S320	1	.1	1	29.3
	S321	1	.1	.1	29.4
	S322	2	.2	.2	29.6
	S323	2	.2	.2	29.8
	S324	1	.1	.1	29.9
	S325	1	.1	.1	30.0
	S326	1	.1	.1	30.1
	S327	1	.1	.1	30.2
	S328	1	.1	.1	30.3
	S329	. 1	.1	.1	30.4
	S33	1	.1	1	30.5
	S330	1	.1	.1	30.6
	S331	1	.1	.1	30.6
	S332	1	.1	.1	30.7
	S333	1	.1	.1	30.8
	S334	. 1	.1	.1	30.9
	S335	1	.1	.1	31.0
	S336	1	.1	1	31.1
	S337	1	.1	.1	31.2
	S338		.1	.1	31.3
	S339	1	.1	.1	31.4
	S34	1	.1	.1	31.5
	S340	3	.3	.3	31.8
	S341	1	.1	.1	31.9
	S342	1	.1	.1	32.0
	S343	1	.1	.1	32.1
	S344	1	.1	.1	32.2
	S345	3	.3	.3	32.5
	S346	2	.2	.2	32.7
	S347	1	.1	.2	32.7
	S348	1	.1	.1	32.9
	S349			1	
	S35	1	.1	.1	33.0
	1	1	.1	.1	33.1
	S350	1	.1	.1	33.2
	S351	1	.1	.1	33.3
	S352	1	.1	.1	33.4
	S353	3	.3	.3	33.7
	S354	1	.1	1	33.8
	S355	1	.1	.1	33.9
	S356	1	.1	.1	34.0
	S357	. 3	.3	.3	34.3
	S358	1		.1	34.4

**EDP** Identification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S359	1	.1	.1	34.5
	S36	1	1	.1	34.6
	S360	1	.1	.1	34.7
•	S361	2	.2	.2	34.9
•	S362	. 1	.1	.1	35.0
	S363	1	.1	.1	35.1
	S364	1	.1	.1	35.2
## · · · · · · · · · · · · · · · · · ·	S365	1	.1	.1	35.3
	S366	1	.1	.1	35.4
	S367	. 1	.1	.1	35.5
	S368	1	.1	.1	35.6
	S369	8	.8	.8	36.3
	S37	1	.1	.1	36.4
	S370	1	.1	.1	36.5
	S371	1	.1	.1	36.6
	S372	1	.1	.1	36.7
	S373	1	.1	.1	36.8
	S374	1	.1	.1	36.9
	S375	1	.1	1	37.0
	S376	1 -	.1	.1	37.1
	S377	1	.1	.1	37.1
	S378	. 1	.1	.1	37.3
	S379	1	.1	.1	37.3 37.4
	S38	2	.2	.2	37.4 37.6
•	S380	1	.2 .1	.2	37.0 37.7
	S381	1	.1	1	37.8
	S382		.1	.1	37.0
	S383	1 2	.1		37.9
	S384		ſ	.2	
	S385	1	.1	.1	38.2
	S386	. 1	.1	.1	38.3
	S387	1	.1	.1	38.4
		1	.1	1	38.5
	S388	1	.1	.1	38.6
	S389 S39	2	.2	.2	38.8
		1	.1	.1	38.9
	S390	1	.1	.1	39.0
	S391	1	.1	.1	39.1
	S392	1	.1	.1	39.2
	S393	1	.1	.1	39.3
	S394	1	.1	.1	39.4
THE STREET	S395	1	.1	.1	39.5
	S396	1	.1	.1	39.6
	S397	1	.1	.1	39.7
	S398	1	.1	1	39.8
	S399	1	.1	.1	39.9
	S4	1	.1	.1	40.0
	S40	1	.1	.1	40.1
	S400	1	.1	.1	40.2

**EDP Identification** 

Valid         S401         Frequency         Percent         Valid Percent         Percent           S402         1         .1         .1         .4           S403         1         .1         .1         .4           S404         1         .1         .1         .4           S405         1         .1         .1         .4           S406         1         .1         .1         .1         .4           S407         1         .1         .1         .1         .4           S408         1         .1         .1         .1         .4           S409         1         .1         .1         .1         .4           S409         1         .1         .1         .1         .4           S410         1         .1         .1         .4         .4           S411         1         .1         .1         .4					Cumulative
Valid         \$401         1         .1         .1         .4           \$402         1         .1         .1         .1         .4           \$403         1         .1         .1         .4         .4           \$404         1         .1         .1         .1         .4 <td< th=""><th></th><th>Frequency</th><th>Percent</th><th>Valid Percent</th><th>Percent</th></td<>		Frequency	Percent	Valid Percent	Percent
\$403         1         .1         .1         .4           \$404         1         .1         .1         .4           \$405         1         .1         .1         .4           \$406         1         .1         .1         .4           \$407         1         .1         .1         .4           \$408         1         .1         .1         .4           \$409         1         .1         .1         .4           \$409         1         .1         .1         .4           \$409         1         .1         .1         .4           \$409         1         .1         .1         .4           \$410         1         .1         .1         .4           \$410         1         .1         .1         .4           \$411         1         .1         .1         .4           \$411         1         .1         .1         .4           \$412         1         .1         .1         .4           \$413         1         .1         .1         .4           \$415         2         .2         .2         .2         .2	1			.1	40.3
\$404         1         .1         .1         .4           \$405         1         .1         .1         .4           \$406         1         .1         .1         .4           \$407         1         .1         .1         .4           \$408         1         .1         .1         .1         .4           \$409         1         .1         .1         .1         .4           \$409         1         .1         .1         .1         .4           \$409         1         .1         .1         .1         .4           \$409         1         .1         .1         .1         .4		1	1	.1	40.4
\$405         1         .1         .1         .4           \$406         1         .1         .1         .4           \$407         1         .1         .1         .4           \$408         1         .1         .1         .4           \$409         1         .1         .1         .1         .4           \$410         1         .1         .1         .1         .4           \$410         1         .1         .1         .1         .4         .4           \$411         1         .1         .1         .1         .4	S403	1	.1.	.1	40.5
\$406         1         .1         .1         .4           \$407         1         .1         .1         .4           \$408         1         .1         .1         .4           \$409         1         .1         .1         .4           \$410         1         .1         .1         .4           \$410         1         .1         .1         .4           \$410         1         .1         .1         .4           \$411         1         .1         .1         .4           \$411         1         .1         .1         .4           \$412         1         .1         .1         .4           \$413         1         .1         .1         .4           \$413         1         .1         .1         .4           \$415         2         .2	S404	1	.1	.1	40.6
\$407         1         .1         .1         .4           \$408         1         .1         .1         .4           \$409         1         .1         .1         .4           \$41         1         .1         .1         .4           \$410         1         .1         .1         .4           \$410         1         .1         .1         .4           \$410         1         .1         .1         .4           \$411         1         .1         .1         .4           \$411         1         .1         .1         .4           \$412         1         .1         .1         .4           \$412         1         .1         .1         .4           \$413         1         .1         .1         .4           \$414         1         .1         .1         .4           \$415         2         .2<	S405	1	1 1	.1	40.7
\$408         1         .1         .1         .4           \$409         1         .1         .1         .4           \$41         1         .1         .1         .4           \$410         1         .1         .1         .4           \$410         1         .1         .1         .4           \$411         1         .1         .1         .4           \$412         1         .1         .1         .4           \$412         1         .1         .1         .4           \$413         1         .1         .1         .4           \$414         1         .1         .1         .1         .4           \$415         2         .2<	S406	1	.1	.1	40.8
\$409         1         .1         .1         .4           \$41         1         .1         .1         .4           \$410         1         .1         .1         .4           \$411         1         .1         .1         .4           \$412         1         .1         .1         .4           \$412         1         .1         .1         .4           \$413         1         .1         .1         .4           \$413         1         .1         .1         .4           \$414         1         .1         .1         .4           \$415         2         .2<	S407	1	.1	.1	40.9
S41       1       .1       .1       .4         S410       1       .1       .1       .1       .4         S411       1       .1       .1       .1       .4         S412       1       .1       .1       .1       .4         S413       1       .1       .1       .1       .4         S414       1       .1       .1       .1       .4         S415       2       .2       .2       .2       .2       .2       .4         S418       1       .1       .1       .1       .4	S408	1	.1	.1	41.0
S410         1         .1         .1         .4           S411         1         .1         .1         .4           S412         1         .1         .1         .4           S413         1         .1         .1         .4           S414         1         .1         .1         .1         .4           S415         2         .2         .2         .2         .4           S417         1         .1         .1         .1         .4	S409	1	.1	.1	41.1
S411         1         .1         .1         .4           S412         1         .1         .1         .4           S413         1         .1         .1         .4           S414         1         .1         .1         .1         .4           S415         2         .2         .2         .2         .4           S417         1         .1         .1         .1         .4           S418         1         .1         .1         .1         .4	S41	1	.1	.1	41.2
S412         1         .1         .1         .4           S413         1         .1         .1         .4           S414         1         .1         .1         .4           S415         2         .2         .2         .2         .4           S417         1         .1         .1         .1         .4         .2         .2         .2	S410	1	.1	.1	41.3
S413         1         .1         .1         .4           S414         1         .1         .1         .4           S415         2         .2         .2         .4           S417         1         .1         .1         .4           S418         1         .1         .1         .4           S419         1         .1         .1         .4           S420         1         .1         .1         .4           S420         1         .1         .1         .4           S421         4         .4         .4         .4           S422         1         .1         .1         .4           S423         1         .1         .1         .4           S423         1         .1         .1         .4           S424         1         .1         .1         .4           S425         1         .1         .1         .4           S426         1         .1         .1         .4           S427         1         .1         .1         .4           S428         1         .1         .1         .4	S411	1	.1	.1	41.4
S414         1         .1         .1         .4           S415         2         .2         .2         .2         .4           S417         1         .1         .1         .4	S412	1	.1	.1	41.5
S415         2         2         2         4           S417         1         .1         .1         .4           S418         1         .1         .1         .4           S419         1         .1         .1         .4           S420         1         .1         .1         .4           S420         1         .1         .1         .4 <th>S413</th> <td>1</td> <td>.1</td> <td>1</td> <td>41.6</td>	S413	1	.1	1	41.6
S415         2         .2         .2         .4           S417         1         .1         .1         .4	S414	1	.1	.1	41.7
S417       1       .1       .1       .4         S418       1       .1       .1       .4         S419       1       .1       .1       .4         S420       1       .1       .1       .4         S420       1       .1       .1       .4         S421       4       .4       .4       .4         S422       1       .1       .1       .1       .4         S423       1       .1       .1       .1       .4         S423       1       .1       .1       .1       .4         S424       1       .1       .1       .1       .4         S425       1       .1       .1       .1       .4         S426       1       .1       .1       .1       .4         S427       1       .1       .1       .4         S428       1       .1       .1       .4         S430       1       .1       .1       .4         S431       1       .1       .1       .4         S432       1       .1       .1       .4         S433       1	S415	2	.2	.2	41.8
S418         1         .1         .1         .4           S419         1         .1         .1         .4           S42         1         .1         .1         .4           S420         1         .1         .1         .4           S421         4         .4         .4         .4           S422         1         .1         .1         .1         .4           S423         1         .1         .1         .1         .4<	S417	1 .	.1	.1	41.9
S42       1       .1       .1       .4         S420       1       .1       .1       .4         S421       4       .4       .4       .4         S422       1       .1       .1       .1       .4         S423       1       .1       .1       .4	S418	1	.1	.1	42.0
S42       1       .1       .1       .4         S420       1       .1       .1       .4         S421       4       .4       .4       .4         S422       1       .1       .1       .1       .4         S423       1       .1       .1       .1       .4         S424       1       .1       .1       .1       .4         S425       1       .1       .1       .1       .4         S426       1       .1       .1       .1       .4         S427       1       .1       .1       .1       .4         S428       1       .1       .1       .1       .4         S429       1       .1       .1       .4       .4         S430       1       .1       .1       .4       .4         S431       1       .1       .1       .4       .4         S432       1       .1       .1       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4       .4	S419	1	.1	l	42.1
\$420         1         .1         .1         .4	S42	\$	1	l .	42.2
S421         4         .4	\$420	3	i		42.3
\$422       1       .1       .1       .4         \$423       1       .1       .1       .4         \$424       1       .1       .1       .4         \$425       1       .1       .1       .1       .4         \$426       1       .1       .1       .1       .4         \$427       1       .1       .1       .1       .4         \$428       1       .1       .1       .1       .4         \$429       1       .1       .1       .1       .4         \$430       1       .1       .1       .1       .4         \$431       1       .1       .1       .1       .4         \$432       1       .1       .1       .1       .4         \$433       1       .1       .1       .1       .4         \$434       1       .1       .1       .1       .4         \$435       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$439       1	S421	1		1	42.7
\$423       1       .1       .1       .4         \$424       1       .1       .1       .4         \$425       1       .1       .1       .4         \$426       1       .1       .1       .4         \$427       1       .1       .1       .4         \$428       1       .1       .1       .4         \$429       1       .1       .1       .1       .4         \$430       1       .1       .1       .1       .4         \$431       1       .1       .1       .1       .4         \$432       1       .1       .1       .1       .4         \$433       1       .1       .1       .1       .4         \$434       1       .1       .1       .1       .4         \$435       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$440       1       .1       .1       .1	S422				42.8
\$424       1       .1       .1       .4         \$425       1       .1       .1       .4         \$426       1       .1       .1       .4         \$427       1       .1       .1       .4         \$428       1       .1       .1       .1       .4         \$429       1       .1       .1       .1       .4         \$430       1       .1       .1       .1       .4         \$431       1       .1       .1       .1       .4         \$432       1       .1       .1       .1       .4         \$433       1       .1       .1       .1       .4         \$434       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$438       1       .1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       .1       .	S423	1	1 .	1	42.9
\$425       1       .1       .1       .4         \$426       1       .1       .1       .4         \$427       1       .1       .1       .4         \$428       1       .1       .1       .4         \$429       1       .1       .1       .4         \$430       1       .1       .1       .4         \$431       1       .1       .1       .4         \$432       1       .1       .1       .1       .4         \$433       1       .1       .1       .1       .4         \$434       1       .1       .1       .1       .4         \$435       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .4         \$438       1       .1       .1       .4         \$439       1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .4       .4         \$442 <td< th=""><th>S424</th><th></th><th></th><th>ľ</th><th>43.0</th></td<>	S424			ľ	43.0
\$426       1       .1       .1       .4         \$427       1       .1       .1       .4         \$428       1       .1       .1       .4         \$429       1       .1       .1       .4         \$430       1       .1       .1       .4         \$431       1       .1       .1       .4         \$432       1       .1       .1       .4         \$433       1       .1       .1       .4         \$434       1       .1       .1       .4         \$435       1       .1       .1       .4         \$436       1       .1       .1       .4         \$437       1       .1       .1       .4         \$438       1       .1       .1       .4         \$439       1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .4       .4         \$442       1       .1       .1       .1       .4	\$425			l .	43.1
S427       1       .1       .1       .4         S428       1       .1       .1       .4         S429       1       .1       .1       .4         S43       1       .1       .1       .4         S430       1       .1       .1       .4         S431       1       .1       .1       .4         S432       1       .1       .1       .4         S433       1       .1       .1       .4         S434       1       .1       .1       .4         S435       1       .1       .1       .4         S436       1       .1       .1       .4         S437       1       .1       .1       .4         S438       1       .1       .1       .4         S439       1       .1       .1       .4         S44       1       .1       .1       .4         S440       1       .1       .1       .1       .4         S441       1       .1       .1       .1       .4         S442       1       .1       .1       .1       .1       .4		1	i .	l	43.2
\$428       1       .1       .1       .4         \$429       1       .1       .1       .4         \$43       1       .1       .1       .4         \$430       1       .1       .1       .4         \$431       1       .1       .1       .4         \$432       1       .1       .1       .4         \$433       1       .1       .1       .4         \$434       1       .1       .1       .1       .4         \$435       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$442       1       .1       .1       .1       .1       .4	S427	1	i	I	43.3
\$429       1       .1       .1       .4         \$43       1       .1       .1       .4         \$430       1       .1       .1       .4         \$431       1       .1       .1       .4         \$432       1       .1       .1       .1       .4         \$433       1       .1       .1       .1       .4         \$434       1       .1       .1       .1       .4         \$435       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$438       1       .1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$442       1       .1       .1       .1       .1       .4	S428				43.4
\$43       1       .1       .1       .4         \$430       1       .1       .1       .4         \$431       1       .1       .1       .4         \$432       1       .1       .1       .4         \$433       1       .1       .1       .1       .4         \$434       1       .1       .1       .1       .4         \$435       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$438       1       .1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$44       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$442       1       .1       .1       .1       .1       .4	S429	1		}	43.5
\$430       1       .1       .1       .4         \$431       1       .1       .1       .4         \$432       1       .1       .1       .4         \$433       1       .1       .1       .4         \$434       1       .1       .1       .1       .4         \$434       1       .1       .1       .1       .4         \$435       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$438       1       .1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$442       1       .1       .1       .1       .1       .4			l .	1	43.6
\$431       1       .1       .1       .4         \$432       1       .1       .1       .4         \$433       1       .1       .1       .4         \$434       1       .1       .1       .4         \$435       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$438       1       .1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$442       1       .1       .1       .1       .4	9	l .	1	•	43.7
\$432       1       .1       .1       .4         \$433       1       .1       .1       .4         \$434       1       .1       .1       .4         \$435       1       .1       .1       .4         \$436       1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$438       1       .1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$44       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$442       1       .1       .1       .1       .4		1 .	1	1	43.8
\$433       1       .1       .1       .4         \$434       1       .1       .1       .4         \$435       1       .1       .1       .1       .4         \$436       1       .1       .1       .1       .4         \$437       1       .1       .1       .1       .4         \$438       1       .1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$44       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$442       1       .1       .1       .1       .1       .4	1	li .	1	1	43.9
\$434       1       .1       .1       .4         \$435       1       .1       .1       .4         \$436       1       .1       .1       .4         \$437       1       .1       .1       .4         \$438       1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$44       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$442       1       .1       .1       .1       .4	1	I .	l .	ŧ	44.0
\$435     1     .1     .1     .4       \$436     1     .1     .1     .4       \$437     1     .1     .1     .4       \$438     1     .1     .1     .4       \$439     1     .1     .1     .1     .4       \$44     1     .1     .1     .1     .4       \$440     1     .1     .1     .1     .4       \$441     1     .1     .1     .1     .4       \$442     1     .1     .1     .1     .1	1	8		1	44.1
\$436       1       .1       .1       .4         \$437       1       .1       .1       .4         \$438       1       .1       .1       .4         \$439       1       .1       .1       .1       .4         \$44       1       .1       .1       .1       .4         \$440       1       .1       .1       .1       .4         \$441       1       .1       .1       .1       .4         \$442       1       .1       .1       .1       .4		I .	1	1	44.2
S437     1     .1     .1     .4       S438     1     .1     .1     .4       S439     1     .1     .1     .1     .4       S44     1     .1     .1     .1     .4       S440     1     .1     .1     .1     .4       S441     1     .1     .1     .1     .4       S442     1     .1     .1     .1     .4	1		1	ł .	44.3
\$438     1     .1     .1     .4       \$439     1     .1     .1     .4       \$44     1     .1     .1     .1     .4       \$440     1     .1     .1     .1     .4       \$441     1     .1     .1     .1     .4       \$442     1     .1     .1     .1     .4		1		l .	44.4
\$439     1     .1     .1     .4       \$44     1     .1     .1     .4       \$440     1     .1     .1     .1     .4       \$441     1     .1     .1     .1     .4       \$442     1     .1     .1     .1     .4	1	1	1	1	44.5
S44     1     .1     .1     .4       S440     1     .1     .1     .4       S441     1     .1     .1     .1     .4       S442     1     .1     .1     .1     .4		8	1	l .	44.6
S440     1     .1     .1     .4       S441     1     .1     .1     .4       S442     1     .1     .1     .4	i .		i		44.7
S441     1     .1     .1     4       S442     1     .1     .1     4	<b>8</b>		I .	1	44.8
S442 1 .1 .1 4	8	1 .	1	1	44.9
	1		1	1	45.0
	1 .		1.		45.1
		1	I	ì	45.2
	1	3 .	í	•	45.3

**EDP Identification** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S446	1	.1	.1	45.4
	S447	1	.1	.1	45.5
	S448	1	.1	.1	45.6
	S449	1	.1	.1	45.7
	S45	1	.1	.1	45.8
	S450	2	.2	.2	46.0
	S451	1	.1	.1	46.1
. [	S452	1	.1	.1	46.2
	S453	1	.1	.1	46.3
	S454	1	.1	.1	46.4
	S455	1	.1	.1	46.5
	S456	1	.1	.1	46.6
	S457	1	.1	.1	46.7
	S458	1	.1	.1	46.8
	S459	1	.1	.1	46.9
1	S46	1	.1	1	47.0
	S460	1	.1	.1	47.1
	S461	1	.1	.1	47.2
	S462	1	.1	.1	47.2
	S463	1	.1	.1	47.3
	S464	1	.1	.1	47.4
	S465	1	.1	.1	47.5
	S466	1	.1	.1	47.6
	S467	1	.1	.1	47.7
	S468	1	.1	.1	47.8
	S469	1	.1	.1	47.9
	S47	1	.1	.1	48.0
	S470	1	.1	.1	48.1
	S471	1	.1	.1	48.2
	S472	1	.1	.1	48.3
	S473	1	.1	.1	48.4
	S474	1	.1	.1	48.5
	S475	1	.1	.1	48.6
	S476	1	.1	.1	48.7
1	S477	1	.1	.1	48.8
1	S478	1	.1	.1	48.9
	S479	1	.1	.1	49.0
	S48	1	.1	.1	49.1
	S480	1	.1	.1	49.2
	S481	1	.1	.1	49.3
	S482	1	.1	.1	49.4
	\$483	1	.1	.1	49.5
	S484	1	.1	.1	49.6
	S485	1	.1	.1	49.7
	S486	1	.1	.1	49.8
	S487	1	.1	.1	49.9
	S488	1	.1	.1	50.0
	S489	1	.1	1	50.1

**EDP Identification** 

		Frequency	Percent	Valid Percent	Cumulative Percent
ı	Valid S49	1	.1	.1	50.2
	S490	1	.1	.1	50.3
	S491	1	.1	.1	50.4
1	S492	1	. 1	.1	50.5
	S493	1	.1	.1	50.6
	S494	1	.1	.1	50.7
-	S495	1	.1	.1	50.8
	S496	1	.1	.1	50.9
	S497	1	.1	.1	51.0
	S498	1	.1	.1	51.1
	S499	1	.1	1	51.2
	<b>S</b> 5	1	.1	.1	51.3
	S50	1	.1	.1	51.4
	S500	1	.1	.1	51.5
	S501	1	.1	.1	51.6
***************************************	S502	1	.1	.1	51.7
	S503	1	.1	1	51.8
	S504	1	.1	.1	51.9
	S505	1	.1	.1	52.0
	S506	1	.1	.1	52.1
	S507	1	.1	.1	52.2
	\$508	1	.1	.1	52.3
	S509	1	.1	1	52.4
	S51	1	1	.1	52.5
	S510	1	.1	.1	52.6
	S511	1	.1	.1	52.7
-	S512	1	.1	.1	52.8
	S513	1	.1	.1	52.8
	S514	1	.1	.1	52.9
	S515	1	.1	.1	53.0
Monthe	S516	3	.1	.3	53.3
-	S517	2	.2	.2	53.5
·	S518	1	.2	.1	53.6
Tanasa a sa s	S519	1	.1	.1	53.7
WWW.0000	S52	2	.2	.2	53.9
(decomposition)	S520	4	.4	.4	54.3
***************************************	S521	1	.1	.1	54.4
Account of the last	S522	1	.1	.1	54.4 54.5
	S523	1	.1	.1	54.5 54.6
Andrews .	S524	1	.1	.1	54.6 54.7
	S525	1	.1	.1	54.7 54.8
	S526	1	.1	1	54.6 54.9
	S527	1	.1	.1	54.9 55.0
Windistration	S528	1	.1	.1	55.0 55.1
- Designation	S529	1	.1	.1	55.1 55.2
000000000000000000000000000000000000000	S53	1	1	.1	55.2 55.3
THE REAL PROPERTY.	S530	1	.1	.1	55.3 55.4
	S530	1		· ·	
	2001	1	.1	.1	55.5

**EDP Identification** 

	ingungeriingas suurses	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S532	1	.1	.1	55.6
	S533	. 1	.1	.1	55.7
	S534	1	.1	.1	55.8
	S535	1	.1	.1	55.9
	S536	-1	.1	1	56.0
	S537	1	.1	.1	56.1
	S538	1	.1	.1	56.2
	S539	2	.2	.2	56.4
	S54	1	.1	.1	56.5
	S540	1	.1	.1	56.6
	S541	1	.1	.1	56.7
	S542	1	.1	.1	56.8
	S543	1	.1	.1	56.9
	S544	1	.1	.1	57.0
	S545	1	.1	.1	57.1
	S546	1	1	.1	57.1
	S547	1	.1	.1	57.3
	S548	1	.1	.1	57.4
	S549	1	.1	.1	57.5
	S55	1	.1	.1	57.6
	S550	1	.1		57.6 57.7
	S550	l .		.1	
	S552	1	.1	.1	57.8
	S553	1	.1	.1	57.9
	S554	1	.1	.1	58.0
		1	.1	.1	58.1
	S555	. 1	.1	.1	58.2
	S556	2	.2	.2	58.3
	S557	1	.1	.1	58.4
	S558	1	.1	.1	58.5
	S559	2	.2	.2	58.7
	S56	1	.1	.1	58.8
	S560	1	.1	.1	58.9
	S561	. 1	.1	.1	59.0
	S562	1	.1	.1	59.1
	S563	.1	.1	.1	59.2
	S564	1	.1	.1	59.3
	S565	1	.1	.1	59.4
	S566	1	.1	.1	59.5
	S567	2	.2	.2	59.7
	S568	1	.1	.1	59.8
	S569		.1	.1	59.9
	S57	1	.1	.1	60.0
	S570	. 1	.1	.1	60.1
	S571	1	.1	.1	60.2
	S572	1	.1	.1	60.3
	S573	1	.1	.1	60.4
	S574	1	.1	.1	60.5
	S575	1	.1	.1	60.6

**EDP Identification** 

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid S576	riequency 1	.1	.1	60.7
S577	1	.1	.1	60.8
S578	1	.1	.1	60.9
S579	1	1	.1	61.0
S58	1	1	.1	61.1
S580		1	.1	61.2
S581	1	.1	.1	61.3
S582	1	.1	.1	61.4
S583	2	.2	.2	61.6
S584	1	.1	.1	61.7
S585	1	.1	1	61.8
S586		.1	.1	61.9
S587	1	1	.1	62.0
S588	1	.1	.1	62.1
S589	1	.1	.1	62.1
S59	2	.2	.1	62.4
S590	2	.2	.2	62.4
S591	1	.1	.2	62.6
S592	1	.1	1	62.7
S593	1 1	.1	.1	62.6
S594	1	.1	.1	63.0
S595	1	.1	.1	63.0
S596	1	.1	.1	63.2
S597	1	.1	.1	63.3
S598	1	1	.1	63.4
S599	1	.1	.1	63.5
S6	1	.1	.1	63.6
S60	1	.1	. · · · · · · · · · · · · · · · · · · ·	63.7
S600		.1	.1	63.8
S601		.1	.1	63.9
S602		1	1	63.9
S603	1	.1	.1	1
S604	1	1		64.0 64.1
S605	1	.1	.1	64.1
S606	§	ł	.1	64.2
S607	1	.1	.1	1
\$608	1	.1	.1	64.4 64.5
S609	l'	.1	.1	64.5 64.6
S61	1	1 .1	1	64.6 64.7
S610	1	1 1	.1	1
S610 S611	1 1	.1	.1	64.8 64.9
S612	1	.1 .1	.1	
S613	1	l .	.1	65.0
S614	1	.1	.1	65.1
S615	1	.1	.1	65.2
S616	2	.2	.2	65.4 65.5
S617		.1	.1	65.5
	1	.1	.1	65.6
S618	1	.1	.1	65.7

**EDP Identification** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S619	1	.1	.1	65.8
	S62	1	.1	.1	65.9
	S620	1	.1	.1	66.0
	S621	1	.1	.1	66.1
	S622	1		.1	66.2
	S623	2	.2	.2	66.4
	S624	1	.1	.1	66.5
	S625	1	.1	.1	66.6
	S626	1	.1	.1	66.7
	S627	1	.1	.1	66.8
	S628	2	.2	.2	67.0
	S629	1	.1	.1	67.1
	S63	1	.1	.1	67.2
	S630	1	.1	.1	67.3
	S631	1	.1	1	67.4
	S632	1	.1	.1	67.5
	S633	2	.2	.2	67.7
	S634	1	.1	.1	67.8
	S635	1	.1	.1	67.9
	S636	1	.1	.1	68.0
	S637	1	.1	.1	68.1
	S638	2	.2	.2	68.3
	S639	1	.1	.1	68.4
	S64	- 2	.2	.2	68.6
	S640	1	1	.1	68.7
	S641	1	.1	.1	68.8
	S642	1	.1	.1	68.9
	S643	1	.1	.1	69.0
	S644	1	.1	.1	69.1
	S645	1	.1	.1	69.2
	S646	1	.1	.1	69.3
	S647	1	.1 ,	.1	69.4
	S648	1	.1	.1	69.4
	S649	1	.1	.1	69.5
	S65	1	.1	.1	69.6
	S650	1	.1	.1	69.7
	S651	1	.1	.1	69.8
	S652	1	.1	.1	69.9
	S653	1	.1	.1	70.0
	S654	1	.1		70.1
	S655	1	.1		70.2
	S656	1	.1	.1	70.3
	S657	. 1	.1	.1	70.4
	S658	1	.1	.1	70.5
	S659	1	.1	.1	70.6
	S66	1	.1	.1	70.7
	S660	1	.1	.1	70.8
	S661	1	.1	.1	70.9

**EDP Identification** 

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid S662	1 109401.07	.1	.1	71.0
S663	1	.1	.1	71.1
S664	1	.1	.1	71.2
S665	1	.1	.1	71.3
S666	1	.1	.1	71.4
S667	3	.3	.3	71.7
S668	1	.1	.1	71.8
S669	1	.1	.1	71.9
S67	1	.1	.1	72.0
S670	1	.1	.1	72.1
S671	1	.1	.1	72.2
S672	1	.1	.1	72.3
S673	1	.1	.1	72.4
S674	1	.1	.1	72.5
S675	1	.1	.1	72.6
S676	2	.2	.2	72.8
S677	1	.1	.1	72.9
S678	1	.1	.1	73.0
S679	1	.1	.1	73.1
S68	2	.2	.2	73.3
S680	2	.2	.2	73.5
S681	1	.1	.1	73.6
S682	1	.1	.1	73.7
S683	1	.1	.1	73.8
S684	2	.2	.2	74.0
S685	1	.1	.1	74.1
S686	1	.1	.1	74.2
S687	1	.1	.1	74.3
S688	1	.1	.1	74.4
S689	1	.1	.1	74.5
S69	1	.1	.1	74.6
S690	1	.1	.1	74.7
S691	1	.1	.1	74.8
S692	1	.1	.1	74.9
S693	1	.1	.1	75.0
S694	1	.1	.1	75.0
S695	1	.1	.1	75.1
S696	1	.1	.1	75.2
S697	1	.1	.1	75.3
S698	1	.1	.1	75.4
S699	1	.1	.1	75.5
S7	1	.1	.1	75.6
S70	1	.1	.1	75.7
S700	1	.1	.1	75.8
S701	1	.1	.1	75.9
S702	1	.1	.1	76.0
S703	1	.1	.1	76.1
S704	1	.1	.1	76.2

**EDP Identification** 

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid S705	riequency 1	.1	.1	76.3
S706	1	.1	.1	76.4
S707	3	.3	.3	76.7
S708	1	.1	.5	76.8
S709	1	.1	.1	76.9
S71	2	.2	.2	77.1
S710	1	.2	.1	77.1
S712	1	.1	.1	77.3
S713	1	.1	.1	77.4
S714	1	.1	.1	77.5
S715	1	.1	.1	77.6
S716	1	.1	1	77.7
S717	1	.1	.1	77.8
S718	1	1	.1	77.9
S719	1	.1	.1	78.0
S72	1	1	1	78.1
\$720	1	.1	.1	78.2
S721	2	.2	.2	78.4
S722	. 1	.1	.1	78.5
S723	1	.1	.1	78.6
S724	1	.1	.1	78.7
S725	1	.1	.1	78.8
S726	1	.1	.1	78.9
S727	1	.1	.1	79.0
S728	1	1	.1	79.1
S729	1	.1	.1	79.2
S73	1	.1	.1	79.3
S730	1	.1	.1	79.4
S731	1	.1	.1	79.5
S732	. 1	.1	.1	79.6
S733	1	.1	.1	79.7
S734	1	.1	.1	79.8
S735	1	.1	1	79.9
S736	. 1	.1	.1	80.0
S737	. 1	.1	.1	80.1
S738	1.	.1	.1	80.2
S739	1	.1	.1	80.3
S74	1	.1	.1	80.4
S740	1	.1	.1	80.5
S741	1	.1	.1	80.6
S742	1	.1	.1	80.6
\$743	1	.1	.1	80.7
S744	1	.1	.1	80.8
S745	1	.1	.1	80.9
S746	1	.1	.1	81.0
S747	1	.1	.1	81.1
S748	. 1	.1	.1	81.2
S749	1	.1	.1	81.3

**EDP Identification** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S75	riequency 1	.1	valid Percent	81.4
1	S750	1	.1	.1	81.5
	S751	1	.1	.1	81.6
	S752	1	.1	.1	81.7
	S753	1	.1	.1	81.8
	S754	1	.1	.1	81.9
	S755	1	.1	.1	82.0
	S756				1
	S757	1	.1	.1	82.1
		1	.1	.1	82.2
	S758	1	.1	.1	82.3
	S759	2	.2	.2	82.5
	S76	2	.2	.2	82.7
	S760	1	.1	.1	82.8
	S761	1	.1	:1	82.9
	S762	. 1	.1	.1	83.0
	S763	. 1	.1	.1	83.1
	S764	1	.1	.1	83.2
	S765	. 1	.1	.1	83.3
	S766	1	.1	.1	83.4
	S767	1	.1	.1	83.5
	S768	1	.1	.1	83.6
	S769	1	.1	.1	83.7
	S77	1	.1.	.1	83.8
	S770	2	.2	.2	84.0
•	S771	1	.1	.1	84.1
	S772	1	.1	.1	84.2
	S773	1	.1	.1	84.3
	S774	1	.1	.1	84.4
	S775	1	.1	.1	84.5
	S776	1	.1	.1	84.6
	S777	1	.1	.1	84.7
	S778	2	.2	.2	84.9
	S779	1	.1	1	85.0
	S78	1	.1	.1	85.1
	S780	2	.2	.2	85.3
	S781	1	.1	.1	85.4
	S782	1	.1	.1	85.5
	S783	1	.1	.1	85.6
	S784	2	.2	.1	85.8
	S785	1	.1	.1	85.9
	S786	1	.1	.1	86.0
	S787	2	.2	.2	86.1
	S788	1.	.∠ .1	.2 ,1	86.2
	S789				l .
		1	.1	.1	86.3
	S79	1	.1	.1	86.4
	S790	1	.1	.1	86.5
	S791	1	.1	.1	86.6
	S792	2	.2	.2	86.8

**EDP Identification** 

<u> </u>		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S793	2	.2	.2	87.0
	S794	1		.1	87.1
	S795	1	1	.1	87.2
000	S796	1	1 .1	.1	87.3
	S797	1	1	.1	87.4
	S798	1	1	.1	87.5
	S799	1	1 .1	.1	87.6
	S8	1	1 .1	.1	87.7
	S80	1	.1	.1	87.8
	S800	1	1	.1	87.9
	S801	1		.1	88.0
	S802		1		
	S803	1	.1	.1	88.1
	S803 S804	1	.1	.1	88.2
		1	.1	.1	88.3
	S805	1	1	.1	88.4
	S806	1	.1	.1	88.5
	S807	1	.1	.1	88.6
	S808	1	.1	.1	88.7
	S809	1	.1	.1	88.8
	S81	1	.1	.1	88.9
	S810	1	.1	.1	89.0
	S811	2	.2	.2	89.2
	S812	1	.1	.1	89.3
	S813	1	.1	.1	89.4
1	S814	1	.1	.1	89.5
	S815	1	.1	.1	89.6
	S816	1	.1	.1	89.7
	S817	1		.1	89.8
	S818	1	.1	.1	89.9
	S819	1	.1	.1	90.0
	S82	1	.1	.1	90.1
	S820	1	.1	.1	90.2
	S821	1	.1	.1	90.3
	S822	1	.1	.1	90.4
	S823	1	.1	.1	90.5
	S824	1	.1	.1	90.6
	S825	2	.2	.2	90.8
	S826	1	1	.1	90.9
	S827	1	.1	.1	91.0
	S828	1	1	.1	91.1
	S829	1	1 .1	.1	91.2
B0000000000000000000000000000000000000	S83	1	1 .1	.1	91.3
	S830	1	.1	.1	91.4
	S831	2	.2	.2	91.6
	S832	1	.1	.1	91.7
	S833	1	1 .1	.1	91.7
	S834	1	1	.1	91.7
	S835	1	1	8	
	3030	1	.1	.1	91.9

**EDP Identification** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S836	Frequency 2	Percent .2	valid Percent .2	Percent 92.1
Vana	S837	1	.1	.2	92.2
	S838	1	.1	.1	92.3
	S839	1	1	.1	92.4
	S84	1			*
	S840		.1	.1	92.5 92.6
	S841	1	.1	.1	
		1	.1	,1	92.7
	S842	1	.1	.1	92.8
	S843	1	.1	.1	92.9
	S844	2	.2	.2	93.1
	S845	1	.1	.1	93.2
	S846	1	.1	.1	93.3
	S847	2	.2	.2	93.5
	S848	1	.1	.1	93.6
	S849	1	.1	.1	93.7
	S85	1	.1	.1	93.8
	S850	1	.1	.1	93.9
	S851	1	.1	.1	94.0
	S852	1	.1	.1	94.1
	S853	1	.1	.1	94.2
	S854	. 1	.1	.1	94.3
	S855	1	.1.	.1	94.4
	S856	1	.1	.1	94.5
	S857	1	.1	.1	94.6
	S859	. 1	.1	1	94.7
	S86	1	.1	.1	94.8
	S860	2	.2	.2	95.0
	S861	1	.1	.1	95.1
	S862	1	.1	.1	95.2
	S863	1	.1	.1	95.3
	S864	1	.1	.1	95.4
	S865	1	.1	.1	95.5
	S866	3	.3	.3	95.8
	S867	1	.1	.1	95.9
	S868	2	.2	.2	96.1
	S869	1	.1	.1	96.2
	S87	1	.1	.1	96.3
	S870	1	.1	.1	96.4
	S871	1	.1	.1	96.5
	S872	1	.1	.1	96.6
	S873	1	.1	.1	96.7
	S875	1	.1	.1	96.8
	S876	1	.1	.1	96.9
	S877	1	1	.1	97.0
	S878	1	.1	.1	97.1
	S879	1	.1	. 1	97.2
	S88	1	.1	.1	97.2
	S880	1	.1	.1	97.3

**EDP Identification** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S881	1	.1	.1	97.4
	S882	: 1	.1	.1	97.5
	S883	1	.1	.1	97.6
	S884	1	.1	.1	97.7
	S885	1	.1	.1	97.8
	S886	1	.1	.1	97.9
	S887	. 1	.1	.1	98.0
	S888	2	.2	.2	98.2
	S889	1	:1	.1	98.3
	S89	1	.1	.1	98.4
	S890	1	.1	.1	98.5
	S9	2	.2	.2	98.7
	S90	1	.1	.1	98.8
	S91	1	.1	.1	98.9
	S92	1	.1	.1	99.0
	S93	. 1	.1	.1	99.1
	S94	1	.1	.1	99.2
	S95	. 3	.3	.3	99.5
	S96	1	.1	.1	99.6
	S97	1	.1	.1	99.7
	S98	1	.1	.1	99.8
	S99	2	.2	.2	100.0
	Total	1018	100.0	100.0	