

HOW WILL VIRTUAL REALITY TRAINING IMPACT RESPONSES TO MENTAL
HEALTH CALLS FOR SERVICE IN A LARGE URBAN LAW ENFORCEMENT
AGENCY BY 2009?

A project presented to
California Commission on
Peace Officer Standards and Training

By

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This Command College project is a FUTURES study of a particular emerging issue in law enforcement. Its purpose is NOT to predict the future, but rather to project a number of alternative scenarios for strategic planning considerations.

The ability to define the future is separate from analyzing the past because the future does not exist. In this project, useful possible alternatives have been created to systematically assist the planner in responding to a range of possible futures.

Managing the future means influencing the future; guiding it, restricting it and adapting to it. A futures study helps to direct the path.

The view and conclusions expressed in this Command College project are those of the author and are not necessarily those of the Commission on Peace Officer Standards and Training (POST).

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The encouragement and patience of my family

CHAPTER ONE

ISSUE IDENTIFICATION

Introduction

A Valley Transportation Authority (VTA) bus was scheduled to arrive at its downtown destination at 1645 hours. Officers were dispatched on a welfare check of a possible mentally ill person (5150 W&I) causing a disturbance and acting violent on the bus. The subject was described as a 23-year-old male, who was very agitated, screaming, yelling and threatening passengers on the bus and not allowing them to leave. The male subject was seated in the rear of the bus screaming and yelling repeatedly “Quit yelling at me!” “Don’t call the police!” and “I don’t need to go to the hospital!” There are approximately 10 additional passengers, including two young children seated very close to this man in the rear portion of the bus. The bus driver is stuck in traffic and is fearful for the safety of his passengers.

While enroute to the scene, the officers conduct a records check on the preliminary information obtained from the bus driver. The bus driver, familiar with this passenger, noted the subject’s agitation. When the officers arrive on scene, they park around the corner, out of the field of view of the bus. They make their approach on foot, heading toward the front of the bus. The officers hear screaming, yelling and the sound of breaking glass. They see that the subject has broken out a rear window of the bus. There are still four passengers on the bus including the two young crying children. The subject appears to be arguing and talking to someone. The officers immediately and authoritatively direct that the subject stop yelling.

Did the officers use the best tactics while attempting to engage the subject on the bus? Most officers trained in crisis intervention strategies would not have used this confrontational method. This highly emotional scenario, regardless of whether the officers made a sound decision or not, will greatly impact future responses to similar calls for service. The main objective of this training exercise is to teach additional survival skills.

Fortunately, for these officers, this scenario occurred in the world of virtual reality (VR). The experiences in this setting are not life threatening; it is antiseptic. In real life, police officers may not be given a second chance to learn from their mistakes. But VR training helps prepare the officer for potential encounters on the street. Virtual reality training allows the body to feel the same sensations of sight sense and touch because the more realistic the training the greater the lessons learned (Hormann, J.S. 2004). As Sandia National Laboratories described in their September 23, 1999, news release, “We tend to understand what we see with our eyes and do with our hands” (Sandia National Laboratories, 1999). In addition, the strength of VR is being able to train on things one can’t do otherwise, particularly in highly stressful situations (ScienceDaily,1999).

According to Jeffrey Hormann’s article, VR is high-tech illusion that is a computer generated three-dimensional environment. Once entered, VR becomes reality to the user. This training is a way for the human brain to help people to feel successful as Do2learn.com stated on the Discovery Channel video on VR obtained from Derse Exhibits.

Historical Perspective

Although VR is a relatively new technology to law enforcement, it has been in existence since 1965, when Ivan Sutherland expressed his ideas of designing virtual or imaginary worlds. At MIT, he conducted experiments and developed the first three-dimensional displays of information (Sutherland, I., 2004). The “Remote Reality” vision systems of the Bell Helicopter project in 1966 turned head-mounted camera technology into virtual reality by replacing the camera with computer images (Sun Microsystems, 1999). In the mid 1970s, Myron Krueger coined the term “Artificial Reality” (Krueger, M., 2004) as a way to see the relationship between people and machines. The purpose was to have a full-body experience using a computer that immersed the senses without any special instruments, creating an illusion so believable, that it would be perceived as real.

Jaron Lanier, a computer scientist, composer, visual artist, and author is probably best known for his work in coining the term “virtual reality” (Lanier, J., 2002). In the early 1980s he founded Visual Programming Language (VPL) Research, the first company to sell VR products. Lanier also developed the first implementations of multi-person virtual worlds using head-mounted displays as well as “avatars,” (Guinn, C., 2000) or simulated persons.

In 1984, William Gibson invented the word and concept of “Cyberspace” that addresses the spatial/place quality of the shared digital environment (Cyberspace, 1999) or information-space, the electronic medium of computer networks, in which online communication takes place (Cyberspace, 2002). Gibson’s imagination of cyberspace has moved from the Star Wars three-dimensional data type of space to virtual architecture

and new training tools for use of VR technology throughout the 1990s and into the 21st Century. VR training is highly interactive, because the whole body becomes immersed in a 3-D computer-simulated setting in which users and objects can be manipulated, changed or altered using BioSimMER, (ScienceDaily, 1999) a VR application for first responders. In a VR world, representations of a real place with avatars moving in real time allow training to occur in highly contaminated or stressful situations without injury because a reset button can be pushed.

Movies such as “Tron,” (Lisenberger, S., 1982) “Minority Report,” (Spielberg, S., Dick, P. and Frank, S., 2002) and “Total Recall,” (Verhoeven, P., Dick, P. and Shuset, R., 1990) depict virtual reality, but the movie “A Beautiful Mind” (Howard, R. & Goldsman, A., 2001) shows how John Forbes Nash, Jr. lived with schizophrenia in his virtual world. Schizophrenia is a severe mental illness characterized by a dysfunction of the thinking process such as hallucinations and delusions, and withdrawal from the outside world (Schizophrenia, 2003). According to information listed on the web regarding schizophrenia, many of the people who suffer from schizophrenia are not a danger to others. However, during psychotic episodes, patients with schizophrenia can experience hallucinations such as hearing the television instructing them to kill themselves or seeing inanimate objects changing into people. One out of 10 people with schizophrenia will eventually commit suicide (NAMI SCC Website, 2002).

Virtually Better, innovator in the creation of VR environments for the treatment of anxiety disorders, such as fear of flying, fear of heights, fear of public speaking as well as post-traumatic stress disorder (PTSD) was founded in 1996 (Virtually Better, 1996).

This new type of therapy combined cognitive and behavioral techniques including VR exposure therapy to treat disorders.

In 2002, UK mental health experts began showing schizophrenic patients “virtual reality” hallucinations to help convince patients that their own hallucinations are not real. VR simulations are intended to help the person realize that they have a condition that requires treatment and if/when drug therapy fails, the VR technology could help them to get better. Drawbacks to this experience are that virtual hallucinations may appear very frightening (NAMI SCC Website, 2002). This VR tool would provide the user a sense of being in someone else’s skin.

Janssen Pharmaceutica developed a drug treatment for schizophrenia and also created a multimedia simulation that enables participants to see the world through the eyes and ears of a person suffering from schizophrenia (Silberner, J., 2002). This VR experience takes about five minutes and combines three-dimensional computer animation, video images and sound effects to make real to the viewer what it is like to live with schizophrenia. This VR hand-held unit cost approximately \$15,000 including the computer program (Farkasovsky, C., 2003).

Hearing voices is one of the common symptoms of schizophrenia and the simulation is very authentic. When voices are heard, the voices jump around and they are persistent and it is impossible to ignore or filter out (Feinstein Kean Healthcare, 2003). Having the opportunity to experience virtual schizophrenia will enable people to better imagine what it is like to suffer from schizophrenia.

VR entertainment, exercise, et cetera, will become more advanced so people will not have to leave their homes to take a vacation or relax, for it will all be at their

fingertips. According to an article titled “4. VR Hardware,” 1.1.1 Health Hazards from Stereoscopic Displays,” (Isdale, J., 2004) a study was conducted by Edinburg Virtual Environment Lab, Department of Psychology, University of Edinburg regarding drawbacks to VR usage indicated in health hazards related to head-mounted displays. After ten minutes, visual acuity decreased and there was a binocular stress affect in more than half the subjects. With a deeper viewing distance, the eyes were more comfortable, but there was a tendency to stare and not blink often enough. Tripping and falling and simulator sickness (a condition similar to motion sickness caused by exposure to virtual environments) occurs when there is a lack of coordination between the eyes and the inner ear.

Terminology

Virtual Reality or Immersive Virtual Reality Equipment

Head-Mounted Display (HMD)

The first device developed to provide the wearer with an immersive experience. A HMD contains two miniature display screens and an optical system that projects images from the screens to the eyes and presents the virtual world.

Binocular Omni-Orientation Monitor (BOOM)

This device was created as an alternative to the HMD. The screens and optical system are housed in a box that is attached to a multi-link arm. The user views the virtual world through the box.

Cave Automatic Virtual Environment (CAVE)

This instrument projects stereo images on the walls and floor of a room-sized cube. A head tracking system continuously adjusts the stereo projection of the lead

viewer and other people wearing lightweight stereo glasses can enter and walk inside the CAVE.

Input Devices and other Sensual Technologies

Input devices such as data gloves, joysticks, and hand-held wands allow the user to find their way through a virtual environment and to interact with virtual objects.

Tactile and force feedback devices, voice recognition, directional sound and other technologies enhance the immersive experience (<http://library.thinkquest.org>., 2004)

Law Enforcement Training & Applications

After the terrorist attack on the United States on September 11, 2001, the Department of Homeland Security (DHS) was created and there was resurgence in training the nation's first responders. On March 30, 2004, the United States DHS awarded \$2.2 billion from the State Homeland Security Grant Program and \$725 million from the Urban Area Security Initiative to state and local governments to help first responders across the nation better protect their communities. These funds are part of over \$8 billion the Department has allocated or awarded since March 1, 2003 to help the nation's first responders and state and local governments prevent, respond and recover from acts of terrorism and other disasters (Department of Homeland Security, 2004).

Now is the time for law enforcement leaders to use the available funding from DHS grants to invest in virtual reality training. VR technology is currently used in law enforcement primarily in driving simulators, firearms force options, crime view mapping, and through interactive skills training.

Driving simulators for vehicle pursuits and flight simulators for the air support pilots are two areas that VR technology has been used in police departments in the U.S.

The simulators assist in the decision-making process of whether or not to pursue, without risking injury to the driver or damage to the vehicle.

The VR firearms force options simulator creates a more realistic and interactive three-dimensional environment instead of the existing two-dimensional flat screen. This VR system enables an officer to enter a scenario alone or in a team setting and to respond to the computer-generated suspects or other VR users. This training scenario could be recorded, observed and evaluated from different perspectives: the officer, suspect or witness. VR would greatly assist in decision making and judgment processes, ultimately reducing injury to personnel and liability.

CrimeView 2002 is an advanced interface for existing CAD and RMS databases. This application specifically addresses the integration of crime data in order to effectively query and analyze it in a mapping environment. This crime data assists with the allocation of resources. VR could be used to enhance the current map to develop plans for response by patrol officers, presentations for community policing meetings or as an educational resource for public outreach, such as citizen academy training.

There are four basic elements to a VR experience: Virtual world, immersion, sensory feedback and interactivity. The virtual world is the imaginary space where objects and rules of gravity, injury, or death are not permanent. Immersion involves the feeling of being in a different world. The various mediums could be a book, video, radio, movie, computer, game simulation; or it could be physical stimulus such as the IMAX experience with the eight-story theater screen and surround sound. For VR to create realistic feedback for the senses, it must cause the right sensation to the user. VR must involve visual stimuli: hearing (the direction and distance of sound), touch and force

feedback (haptic) and the sense of smell and taste. The last element is interactivity, in which the computer application responds to the actions of the trainee. Interactivity allows the virtual world to have moving objects, avatars et cetera and it must move in real time to remain realistic (Takala, T., 2004).

VR will become a cost effective method of training law enforcement in the future because of the variety of scenarios that could be designed to help prepare officers for events that normally would not allow second chances. The more repetition in training exercises or opportunities to experience stressful situations will help build self-confidence and teach officers how to make better decisions.

However, many law enforcement officers have not had the personal knowledge, experience or involvement with someone who is mentally ill. Last year, San Jose Police Department responded to 2,683 calls for service involving mentally ill people (Fay, P., 2004), so it is important to receive training on what a person with mental illness is experiencing. According to a Los Angeles Times article in July of 2003, more than 645,000 Californians suffer from “severe and persistent” mental illness. A federal study suggests that the unemployment rate nationwide for people with mental illness is nearly 90 percent (Glionna, J. M., 2003). Law enforcement officers are trained to assess how someone’s behavior affects them. This is done by observing the level of threat, if their speech is incoherent, how the subject is responding to verbal commands and so forth, but ultimately what matters is learning some basic interactive skills.

Interactive Training Applications Responsive Virtual Human Technology

Responsive virtual human technology (RVHT) is applied to interaction skills training such as interviewing, negotiating, presenting and eliciting information where improved interaction becomes critical. Some specific training applications for law enforcement officers would involve the use of responsive virtual humans to train personnel in dealing with subjects that present symptoms of serious mental illness.

The JUST-TALK project, funded by the National Institute of Justice Office of Science and Technology and developed by Research Triangle International (RTI), involved integrating virtual reality training software within a 3-day class at the North Carolina Justice Academy. The course was structured to include classroom-based lecture, videos, discussion, live human role-playing, and virtual human role-playing (Frank, G., Guinn, C. and Hubal, R., 2002). JUST-TALK provides a computerized virtual person to interact with the student in a role-playing environment. Students are able to converse with the virtual person using spoken natural language, and see and hear the virtual human's responses — a combination of facial gesture, body movements, and spoken language. This training tool is to be used in conjunction with instructor-led training to reduce training development and delivery costs and to increase the student training effectiveness and consistency on critical interaction skills.

The purpose of this project is to answer the question: How will virtual reality training impact responses to mental health calls for service in a large urban law enforcement agency by 2009? For the purpose of this research project, a large urban law enforcement agency is defined as an agency that employs more than 500 sworn officers.

Specifically, VR training would be a total-body immersive experience using a 3-D computer-simulated environment application for first responders.

This technology would involve the purchase of computerized equipment, development of software for interactive role-playing, creation of scenarios and basic skill sets, and training personnel in recognizing symptoms exhibited by subjects with serious mental illness. VR technology would allow police officers to learn positive strategies and interactions for working with the seriously mentally ill in society. Through improved communication skills, including non-verbal and role-playing scenarios, the VR experience may help change an officer's attitude toward people who live with hallucinations and delusions.

The following chapters will involve futures forecasting of trends and events that will help to identify scenarios for a desired future. The next steps would be the development of a strategic plan, identification of potential obstacles for implementation and finally the conclusion and recommendations.

CHAPTER TWO

FUTURE STUDY

Introduction

Futures forecasting, provides a framework used for anticipating the future and influencing change. A method for obtaining this information is the Nominal Group Technique process. This process will help identify and prioritize trends and events that may have an impact on the issue.

One of the tools utilized in future forecasting is the Nominal Group Technique. The results of the Nominal Group Technique process are then used in a cross-impact analysis to forecast the impact of the trends and events that influence the issue. Through adequate preparation, organizations can plan for the future and anticipate the potential impact for the allocation of services, resources and opportunities. What is occurring in the external environment serves to guide the alternative future scenarios. Each scenario will influence the opportunities of the department and will help to define how virtual reality technology will impact response to mental health calls for service.

The Nominal Group Technique

In an effort to obtain specific recommendations for the identification and prioritization of trends and events that could impact virtual reality training and responses to mental health calls for service, the Nominal Group Technique (NGT) process was facilitated. This method is effective in ensuring equal participation by all members of the panel.

For this project, the NGT panel consisted of nine individuals who were selected to provide a diverse perspective on how virtual reality training will impact response to mental health calls for service in a large urban law enforcement agency. Participating members of the group included a regional manager from county public health, mental health division director and co-founder of the Crisis Intervention Team (CIT) program in San Jose, a non-profit agency manager for family services, a non-profit agency manager for out-patient services, a police officer/psychologist who developed a homeless mentally ill rehabilitation program, a police patrol lieutenant, an adult custody mental health program manager, a non-profit board President and Non-profit board Vice President (See Appendix A).

Prior to the NGT panel, all of the participants received a personal briefing on the topic of discussion. Each member was provided with specific information on the definitions of the NGT process, trends and events. Each panelist was asked to identify five to ten trends and events prior to attending the session.

Trends

Trends are defined as a series of incidents or events taking place that seem to indicate a direction in which a particular issue may be heading. It is based on the past, present and future, and can be quantitative or qualitative. After a brief introduction and a quick overview of the process including ground rules, panel members were asked to identify trends that showed how virtual reality technology would impact responses to mental health calls for service in a large urban law enforcement agency. The process involved silent brainstorming followed by a “round robin” sharing of ideas until all ideas

had been identified. The group identified 38 trends (See Appendix B). After clarifying the meanings, the panel voted on the most compelling. Eleven trends were then selected, reviewed, and given a value relative to today, five years ago and five and ten years into the future. Each selected trend was then reviewed by the panel for its individual level of concern with regard to the issue statement.

Table 2.1 presents the trends selected by the panel for review and the panel's historical and future analysis for each. The score of 100 is an arbitrary number for the level of the trend today. The historical and future values represent the level of each trend compared to today, using the median of all panelists' ratings. The level of concern is the median score derived from the panel's input and reflects the level of concern of each trend relative to the issue statement.

| Trend | | -5 years | Today | +5 years | +10 years | Concern 1 - 10 |
|----------|---|----------|-------|----------|-----------|-------------------|
| Trend 1 | Number of Jurisdictions with mobile mental health intervention teams with the police | 125 | 100 | 75 | 100 | 8 |
| Trend 2 | Level of available services | 120 | 100 | 90 | 110 | 9 |
| Trend 3 | Number of discretionary arrests (minor/misdemeanor) of mental health clients | 80 | 100 | 75 | 75 | 8 |
| Trend 4 | Number of 5150 commitments by law enforcement | 80 | 100 | 100 | 90 | 8 |
| Trend 5 | Rate of acceptance of 5150 detainees for actual admission Emergency Psychological Services (EPS) | 125 | 100 | 75 | 75 | 8 |
| Trend 6 | Number of jail diversion programs | 50 | 100 | 125 | 150 | 9 |
| Trend 7 | Number of preventive mental health programs | 115 | 100 | 100 | 125 | 8 |
| Trend 8 | Level of substance abuse by people with a mental illness diagnosis | 90 | 100 | 110 | 115 | 8 |
| Trend 9 | The level of accessibility to mental health programs by the severely mentally ill | 125 | 100 | 95 | 125 | 10 |
| Trend 10 | Recidivism rate of the severely mentally ill | 75 | 100 | 110 | 120 | 8 |
| Trend 11 | Number of police interactions with the mentally ill | 115 | 100 | 100 | 90 | 9 |

Trend Summary Table

Table 2.1

Trend Analysis

The following summarizes the panel's discussion of the trend and analysis of the data:

T1: Number of jurisdictions with mobile mental health agencies

This trend is defined as the number of mobile mental health agencies that are affiliated with police departments. These mobile mental health units are different from Crisis Intervention Team (CIT) trained officers. One panelist stated that the City of Berkeley has a mobile mental health agency that responds to calls for service requested by law enforcement. Several other panelists spoke about the closure of the local mobile mental health program due to budget cuts. Five years ago the panel felt there were more agencies with these intervention teams than today. In the next five years the panel anticipated a decrease in mobile mental health teams but within 10 years, the numbers would slowly return to the levels of today.

The level of concern was an eight because the panel felt strongly that jurisdictions with access to mobile mental health agencies were better able to provide immediate care and assessment for the mentally ill consumer. With the anticipated budget cuts, these services would return to the current level, but it might be housed in the police department rather than in the mental health department.

T2: Level of services available

This refers to the services available in the community for the mentally ill consumers. The panel felt that there are many services available to the consumers, but consumers do not seek out help. The NGT panel felt that this is an important trend. In

the past five years, there were more services available than today, but mentally ill consumers often are unaware of the services. Data depicts services available as going down slightly within the next five years, and then slightly increasing above today's level within ten years. The panel felt the biggest problem would be maintaining the levels of service. The level of concern was ranked at nine. There may be money available for services; however, the task may fall on the police department to handle the calls for service because the mental health department can no longer provide the service.

T3: Number of discretionary arrests (minor/misdemeanor) of the mentally ill

The NGT panel defined discretionary arrests of the mentally ill consumer as a mercy booking. The officer uses discretion when deciding whether to arrest someone for minor crimes such as public urination, drunk in public or for minor crimes resulting in warrants for their failure to appear in court. The panel felt that if mental health services were not available, the person would be arrested for the minor offense and be treated while in the correctional system. Data says that today's level is higher than five years ago. The panel stated there were more services available five years ago and now there are fewer options.

The discussion among the panel was how to measure discretion. Measuring the number of the times someone with mental illness is arrested in comparison to the general public resulted in the following question: "Are the mentally ill arrested at a higher rate for minor/misdemeanor offenses because they do not understand what they are supposed to do?" The panel believed that in the next five years, discretionary arrests would decrease, and in ten years, the numbers would remain constant. This decrease in discretionary arrests would be due to the development of mental health partnerships with

law enforcement. The level of concern was rated at an eight. The panel felt that law enforcement will be better trained and will have access to the mental health experts for assessments and/or available resources options.

T4: Number of 5150 (mentally ill) Welfare and Institution Code commitments by law enforcement

The panel used section 5150 of the Welfare and Institutions Code (W & I) to define the criteria needed to place a person in a mental health facility for 72-hour treatment and evaluation. The panel felt that it was important to measure the total number of evaluations of mentally ill consumers by law enforcement. The panel believed that due to law enforcement intervention, mentally ill consumers received mental health services. If law enforcement had not encountered the mentally ill consumer, this person would have remained out of the mental health system.

The panel discussed the problem with not having enough beds available for the consumer. Without response by law enforcement requesting a psychiatric assessment, mentally ill consumers would not seek services. The panel discussed the need for education and cultural training and they felt there would be fewer commitments due to better training. The panel felt that this was an important forecast because it would create a baseline for determining the needs of the mentally ill by counting the number of mentally ill brought in for services by law enforcement. Five years ago there were less commitments by law enforcement than today. This trend may be due to Crisis Intervention Team (CIT) training, that helps officers to recognize symptoms of mental illness. The panel believed that in the next five years the numbers would remain the same, but in ten years there would be a 10 percent decrease in law enforcement

commitments. The panel rated the level of concern at an eight, with the belief that in the future, other options will be available for law enforcement other than 5150 W&I commitment.

T5: Rate of acceptance of 5150 detainees for actual admission to Emergency Psychological Services (EPS)

The panel defined the rate acceptance of 5150 detainees by law enforcement as the number of admissions into EPS. The panel felt the actual number of people accepted into the facility for an evaluation was related to the number of available beds. The panel believed that five years ago, more mentally ill consumers were accepted into EPS as compared to today. In the next five years, the panel believed there would be a 25 percent decrease in the number of mentally ill accepted compared to today, and in ten years, the numbers would remain constant. The panel ranked the level of concern for this trend as an eight. This was an important forecast because if the numbers could be tracked by the rate of acceptance into EPS, it would justify and support the need for additional alternative resources.

T6: Number of jail diversion programs for the mentally ill

Five years ago, the panel agreed that there were fewer jail diversion programs than today. Jail diversion programs were thought to be cost effective by the panel, although this county has closed many of the programs. The panel agreed that they expect to see an increase of 25 percent in the number of jail diversion programs in the next five and ten years into the future. The panel felt that, in the future, jail diversion programs would be used for mental health services or outreach courts for the mentally ill consumer and their families. The level of concern was given a nine. This approach lowers the rate

of recidivism of the mentally ill because jail diversion provides additional skills to keep them in society rather than incarcerated.

T7: Number of preventive mental health programs

The panel defined number of preventive programs for use as an intervention at the initial signs of mental illness. Preventive programs are described as targeting the population who are diagnosed with mental illness and who are seeking resources, training and outpatient services. Five years ago, the panel felt there were more preventive programs because more money was available. The panel forecasted this trend to remain at today's level, and then, within the next ten years, the number of programs will increase. The panel forecasted this trend because multiple agencies would be responsible for mental health programs due to the relationships and collaborations developed, or partnerships involved in the joint funding of grants for preventive education. The level of concern was rated as an eight. The panel believed that preventive programs were important for people suffering from mental illness.

T8: Level of substance abuse by people with a mental illness diagnosis

The panel felt that five years ago there were less people who used drugs and had also been diagnosed with mental illness. Many of the mentally ill consumers tend to self-medicate to feel better. The initial introduction to the mental health system is usually through contact by law enforcement, whether through arrest or EPS evaluation. Once a person entered a drug rehabilitation program and became sober, a diagnosis of mental illness was identified. In the next five and ten years, the panel felt this forecast would show a continued increase in drug usage with diagnosis of mental illness. The level of concern was ranked at an eight. The panel believed the increase in substance abusers

with a diagnosis of mental illness would occur after reaching sobriety. The mental illness is masked due to the substance intoxication.

T9: Level of accessibility to mental health programs by the severely mentally ill

The NGT panel did not feel that mental health programs are very accessible today to many of the mentally ill consumers. Five years ago, one panelist thought there were twice as many programs available than there are today because the services have been reduced for the seriously mentally ill. Since then, a lack of funding has caused a decreased level of accessibility in mental health programs. In the next ten years, universal health care may allow each person the opportunity to receive care. The panel forecasted this trend because they believed it was important to ensure that programs and services to the mentally ill be available. Level of concern was rated ten. The panel felt the caveat would be ensuring that there was someone available to get the person to the services.

T10: Recidivism rate among the severely mentally ill

The panel defined “recidivism” as the multiple arrests of the severely mentally ill. The panel believed that severely mentally ill consumers are frequently in and out of the correctional system. The two panel members from law enforcement felt that through incarceration, the mentally ill consumer would have access to more services and would decrease recidivism. The panel was in agreement that it would be beneficial to measure the number of times a person is incarcerated when there is a diagnosis of being severely mentally ill in comparison to the general public who are not mentally ill. The panel viewed the trend as fewer numbers five years ago, but increasing in the next five to ten years. The panel felt that even with educational awareness of law enforcement and

mental health agencies, the number of contacts might increase because the services available would be limited due to fiscal constraints. The level of concern was rated at an eight. The need will continue to increase, and incarceration will ensure an assessment or treatment.

T11: Number of police interactions with the mentally ill

The NGT panel defined number of people diagnosed with mental illness in the general population and their contact with law enforcement. The panel felt that five years ago the number of interactions was greater with the mentally ill consumer than today. The two panel members from law enforcement felt that through law enforcement contact, mentally ill consumers would receive needed services. The panel felt that the media, movies, training and education all influence a heightened awareness of mental illness. For the next five years, the panel forecasted the number of police interactions with mentally ill people would remain constant. Within the next ten years, the panel felt the trend would decrease even though police interactions usually resulted in the mentally ill consumer obtaining help. The level of concern was a nine. Police interactions are forecasted to decrease; however, the quality of the outcome and service becomes the concern.

Events

Events are singular occurrences that take place at a specific date and time. The panel identified 15 candidate events (See Appendix C). Each event, were it to occur, had the potential to impact how virtual reality training will impact response to mental health calls for service in a large urban law enforcement agency. Each event was analyzed for

its first year of possible occurrence, its likelihood of occurrence within the next five years, its potential to occur within the next ten years and its level of impact upon the development of VR training and responses to mental health calls for service, if it occurred.

For the purpose of this analysis, the panel reduced the most likely events to impact the issue to eight. Table 2.2 contains the information about events collected by the NGT panel and the percentages shown represent the median. The impact column represents the weighted value of the event and how virtual reality technology will impact response to mental health calls for service using a scale of one to ten, with one representing the least amount of impact and ten representing the most impact. The “+” or “-” represents the panel’s impression on whether the impact will be positive or negative on the topic.

| Events | Year(s) > 0 | +5 Years | +10 Years | Impact -10 to + 10 |
|---|-------------|----------|-----------|-----------------------|
| E1 Development of medication to solve mood and thought disorders | 1 | 100 | 100 | 10 |
| E2 Passage of the mental health initiative | 10 | 0 | 90 | 8 |
| E3 Supreme court mandate of CIT training | 4 | 10 | 50 | 7 |
| E4 Implementation of the universal health care insurance | 10 | 0 | 50 | 9 |
| E5 Mandatory outpatient treatment for severely mentally ill | 10 | 0 | 0 | 0 |
| E6 Discovery of genetic markers | 5 | 80 | 100 | 9 |
| E7 Genetic therapy for mental illness | 10 | 0 | 75 | 10 |
| E8 Mandatory integration of mental health and drug/alcohol programs | 3 | 75 | 75 | 5 |

Table 2.2

EVENT SUMMARY TABLE

Event Analysis

E1: Development of medication to solve mood and thought disorders

The panel defined this event as a whole new category of medication that would solve mood and thought disorders as a means to prevent someone from going into crisis.

The drug offered a way to minimize law enforcement's violent contact with individuals.

The panel believed that this medication could be available within one year, with a 100 percent probability of occurrence within five years. This would have a positive impact on VR training and responses to mental health calls for service in a large urban law enforcement agency.

E2: Passage of the mental health initiative

The panel defined a mental health initiative as seeking passage through the legislature for funding a statewide coalition. This passage of the initiative would provide grant funding for mental health services and training. The panel discussed the need to garner support from senators and congressmen who believe in the development of a VR training program for law enforcement statewide. The panel felt that if this event took place, it would not be for at least ten years. The level of impact was rated at an eight.

E3: Supreme Court mandate of Crisis Intervention Team (CIT) training

The panel felt that if this event occurred, the first possibility of occurrence would be in about four years. Five years from now the panel saw only a five percent probability and about 50 percent in ten years. The level of impact was a little greater than half. The panel believed CIT was important training to mandate, but it would probably be taught in the police academy.

E4: Implementation of the universal health care insurance

The panel defined this event label of “universal health care insurance” as a means of socialized medicine. Everyone would have the opportunity to seek health care coverage. They believed that this could possibly become reality in ten years with about a 50 percent probability. If this event happened, it would be a positive impact to law

enforcement by using virtual training technology for working with the mentally ill and more services would be available to the consumers.

E5: Mandatory outpatient treatment for severely mentally ill

If this event were to occur, “mandatory outpatient treatment” would be used as a diversion program or in lieu of incarceration to lower the number of times a person is arrested. This event would make the treatment plan mandatory thus compelling the severely mentally ill consumer to receive treatment. The panel discussed the probability of first occurrence to be beyond ten years; however, it rated a zero probability for the next five to ten years. The word “mandatory” did not allow for any deviance and so it appeared to be an implausible outcome.

E6: Discovery of genetic markers

The panel believed that the first possible occurrence of genetically identifying characteristics that cause mental illness was five years out. In the next ten years, the panel agreed that there would be a 100 percent probability of having the genetic markers identified. When this event took place, it would have a positive impact on society. Using virtual reality technology, law enforcement officers would be better trained in identifying mental illness. The positive impact would be a decline in the number of mentally ill people.

E7: Genetic therapy for mental illness

The panel viewed this event as a way of treating mental illness in which the identified genes could be altered. The panel felt that this event could first occur in ten years with about a 75 percent probability of working successfully. If the genetic therapy occurred, it would have a positive impact on VR training for law enforcement

and responses to mental health calls for service. The genes could be altered so future generations would not have to suffer from severe mental illness, thus reducing calls for service. Gene therapy could improve how a person functions in society enabling them to become an active participant in life. The panel rated this as a +10 impact.

E8: Mandatory integration of mental health and drug/alcohol programs

The panel identified this event as a potential avenue for funding sources in a joint collaborative effort. The panel felt that the mentally ill consumer often was not diagnosed with the mental illness due to self-medicating. The mandatory integration of services could first occur within three years. Within the next five to ten years, there is a 75 percent probability of occurrence. The level of impact of VR training of law enforcement officers and responses to mental health calls for service was rated a five.

Cross Impact Analysis

A cross impact analysis consists of a study of the impact each of the listed events would have on each of the eleven trends identified by the NGT panel. Following the NGT panel meeting, a group of three NGT panel members and four San Jose Police Department Bureau of Field Operations members met to complete a cross impact analysis. The results of the analysis are reflected in Table 2.3. The table depicts the panel's assessment of the impact of each event on each trend. Using a scale of -5 to +5, with +5 representing the most positive influence on the topic and a -5 representing the most negative influence. The results are used to identify the trends and events which will have the most influence in how virtual reality training will impact responses to mental health calls for service in a large urban law enforcement agency by 2009. From this

information, strategies can be developed to maximize the possibility of positive combinations occurring and minimizing the potential of the most negative combinations occurring.

| | Trends | | | | | | | | | | |
|---|---|-----------------------------|-------------------------------------|---|--------------------------------|------------------------------|---|---|-----------------------------|------------------------|------------------------------------|
| Events | T1 Mobile Mental Health Teams | T2 Services Available | T3 Discre- tionary Arrests | T4 5150 commit- ments by L.E. | T5 Accept 5150 to EPS | T6 Jail Diver- sion | T7 Preven- tive Mental Health | T8 Substance abuse / Mental Illness | T9 Level of Access | T10 Recidi- vism | T11 Police Interac- tions |
| E1 Development of Meds | 0 | 1 | 2 | 0 | 2.5 | 0 | 0 | -1.5 | .5 | -2.5 | 0 |
| E2 Mental Health Initiative | 1.5 | 2 | .5 | .5 | 1 | 1.5 | 1.5 | 0 | 2.5 | -.5 | .5 |
| E3 Supreme court mandate of CIT training | 2 | 0 | .5 | 2 | .5 | 0 | .5 | 0 | .5 | 0 | 1 |
| E4 Implementation of the universal health care insurance | 0 | 2.5 | 0 | 0 | 1 | 0 | 2.5 | -1 | 4 | 0 | .5 |
| E5 Mandatory outpatient treatment for severely mentally ill | 2 | 1.5 | 1 | 1.5 | .5 | 2 | 3 | -.5 | 3.5 | 3 | 1.5 |
| E6 Discovery of genetic markers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E7 Genetic therapy for mental illness | 0 | 0 | 0 | .5 | 0 | 0 | 0 | .5 | 0 | .5 | 0 |
| E8 Mandatory integration of mental health and drug/alcohol programs | 1 | 1 | 0 | 0 | .5 | 2.5 | 2.5 | -2 | 2.5 | 1 | 1 |

Cross Impact Analysis
Table 2.3

A review of Table 2.3 reveals four combinations of events/trends that resulted in an impact rating $\geq \pm 3$. The comments below reflect the panel's discussion about each of the selected combinations.

- 1) E4 Implementation of the universal health care +4
T9 Level of accessibility to mental health programs for the severely mentally ill

If universal health care were implemented, there would be a large number of mentally ill consumers with access to mental health programs. With virtual reality training, more people with severe mental illness contacted by law enforcement would have access to the necessary mental health programs.

- 2) E5 Mandatory outpatient treatment for severely mentally ill +3
T7 Number of preventive mental health programs

If outpatient treatment became mandatory for severely mentally ill consumers, there would be an increase in preventive mental health programs. If mandatory outpatient treatment occurred in conjunction with virtual reality training of law enforcement, many of the severely mentally ill would receive treatment in mental health programs.

- 3) E5 Mandatory outpatient treatment for severely mentally ill +3.5
T9 Level of accessibility to mental health programs for the severely mentally ill

In this event/trend combination, the panel believed that if mandatory outpatient treatment occurred, there would be an increase in mentally ill consumers with access to mental health programs. The panel indicated that this would have a significant positive impact on the ability of law enforcement agencies to implement virtual reality training.

- 4) E5 Mandatory outpatient treatment for severely mentally ill +3.0
T10 Recidivism rate of the severely mentally ill

The panel believed that if mandatory outpatient treatment occurred, there would be a decrease in the recidivism rate for the severely mentally. The panel felt this event

would have a positive impact on the virtual reality training because mentally ill consumers would receive mandatory treatment services and stay out of jail.

Scenarios

The process of scenario writing allows an opportunity for anticipated future forecasting. The scenarios provide alternative futures that help to visualize possibilities and describe potential impacts. The three possible outcomes become the pessimistic, optimistic and surprise free futures that allow for open discussion. The scenarios are written based on information obtained from the NGT panel's projection of trends and events and their potential impact on VR training and response to mental health calls for service.

Pessimistic

The year is 2009 and a 33-year-old male calls officers to a residence in a middle-class neighborhood. He tells the 911 operator his ex-girlfriend had just come to the door and she is "crazy." She is distraught over the recent third and final breakup of their relationship and is threatening to kill him. In the background, the call taker can hear what sounds like a high-pitched female voice screaming hysterically and someone pounding on the front door. When asked if the ex-girlfriend has any weapons, the RP says he doesn't know, but is sure she is capable of attacking him if she gets in.

When responding officers arrive, they find the ex-girlfriend sitting calmly in her car out in front of the RP's home. Upon contacting her, they find out the following information about her. She is a 31-year-old registered nurse, but has not been employed for several years due to her mental problem. She suffers from a number of psycho-emotional disorders, not the least of which is paranoid schizophrenia. She occasionally

also suffers from manic episodes of depression and these usually cause and/or coincide with a break up with her “on again, off again” boyfriend (the RP).

She freely admits to officers she is “crazy” and shows them a plastic garbage bag filled with her medications from her prior commitments at Emergency Psychological Services (EPS). In the bag, officers find over 50 different pill bottles, all containing some sort of psychotropic medication, anti-depressant or tranquilizer. She also admits she will do great bodily harm to the RP, and possibly herself, if she gets the chance, and admits she has not taken any of her medications for quite some time. Although her demeanor is calm and business-like while being interviewed by the officers, they determine she meets the criteria for 5150 W&I, in that she is a danger to herself or others (the RP). Due to severe budget troubles six years ago, the mobile mental health intervention team was cut, thus making it impossible to obtain an in-field assessment. A short time later, the woman is released and she returns to the RP’s home.

VR training was not available, thus the responding officers were unaware of how to respond to a schizophrenic individual. While the officers initiated contact with the person, she attempted to stab them with her knife. Unfortunately, the mentally ill woman was shot and she later succumbed to her injuries.

Subsequent to this event, the line personnel received additional information from citizens regarding this individual; however, it was too late to impact the interactions with this woman. The media attention and public outcry brought mental illness into the public spotlight. The police department was sued and settled this case out of court; however, it significantly impacted the financial stability of the city.

Optimistic

It is the year 2009 and VR training has become an additional tool to help quell the violence involving the mentally ill populace. With the discovery of the long acting wonder medications, law enforcement rarely encounters the violent confrontations with mentally ill consumers. The concerns surrounding the violence and discretionary arrests of the mentally ill consumer has drastically been reduced. With the passage of the mental health initiative in the legislature and the implementation of universal health care insurance, services are accessible and available for those suffering from mental illness. The number of discretionary arrests and 5150 W&I commitments has decreased, due to the mandatory outpatient treatment for mental illness and the integration of mental health/drug and alcohol programs.

During the last few years, the San Jose Police Department developed and finalized a countywide protocol to promote interagency cooperation. The City of San Jose Police Department instituted a VR training program for law enforcement personnel to train officers on how to respond to mental health calls for service. The cost incurred for this training was appropriated from the general fund of the city. However, the general fund was reimbursed from subsidies established through alliances with County Mental Health, National Alliance for the Mentally Ill (NAMI), medical, technological and pharmaceutical companies and other non-profit organizations.

The virtual reality training technology component was obtained as part of the interagency cooperation protocol to allow usage of this technology to reduce violent confrontations when responding to mental health calls for service. As with other city departments, the police department has been visionary and has stressed the importance of

forming strategic alliances with numerous agencies in the form of a task force. The department has been instrumental in providing on-going VR technology training within the department and to other allied agencies. A protocol was designed in cooperation with the allied agencies to reduce the potential violence, liability and injury to innocent people, the mentally ill individual or the officers responding to calls for service by responding in a team approach.

A 33-year-old male calls officers to a residence in a middle-class neighborhood. He tells the 911 operator his ex-girlfriend had just come to the door and she is “crazy.” She is distraught over the recent third and final breakup of their relationship and is threatening to kill him. In the background, the call taker can hear what sounds like a high-pitched female voice screaming hysterically and someone pounding on the front door. When asked if the ex-girlfriend has any weapons, the RP says he doesn’t know, but is sure she is capable of attacking him if she gets in.

When the officers are dispatched to this event, because of the implementation of the universal health care insurance, the psychologist/counselor on call also responds in accordance with the new joint response program. When responding officers arrive, they find the ex-girlfriend sitting calmly in her car out in front of the RP’s home. Upon contacting her, they find out the following information about her. She is a 31-year-old registered nurse, but has not been employed for several years due to her mental problems. She suffers from a number of psycho-emotional disorders, not the least of which is paranoid schizophrenia. She occasionally also suffers from manic episodes of depression and these usually cause and/or coincide with a break up with her “on again, off again” boyfriend (the RP).

She freely admits to officers she is “crazy” and shows them a plastic garbage bag filled with her medications. In the bag, officers find over 50 different pill bottles, all containing some sort of psychotropic medication, anti-depressant or tranquilizer. She has not been through a psychological evaluation in several years, but because of the changes in the health care system and the discovery of the long acting medication, it is accessible to her. She also admits she will do great bodily harm to the RP, and possibly herself, if she gets the chance, and admits she has not taken any of her medications for quite some time. Although her demeanor is calm and business like while being interviewed by the officers, they determine she meets the criteria for 5150 W&I, in that, she is a danger to herself or others (the RP).

All of the officers on the department had received virtual reality training depicting the perspective of an individual suffering from schizophrenia. They were also aware that most of the mentally ill consumers suffering from schizophrenia are non-violent, but are very frightened and agitated. The VR training scenarios enabled the officers to maintain their relationship until the arrival of the clinician through the preventive mental health care program. The officers had developed a good rapport with her and encouraged her to receive additional mental health services. The clinician arrived on scene within 30 minutes and conducted an assessment. The clinician was familiar with the on-call doctor who had prescribed most of her medications. Noting the infrequency of the contact with the previous doctor and the newly passed mandatory treatment and implementation of the universal health care initiative, the woman was eligible for the integrated treatment program. Both the doctor and the clinician agreed to place the woman on a 72-hour hold

and she was transported to the local psychiatric ward. The officers completed their reports and went back in service.

Surprise Free

The year is 2009. The budget constraints and reduction in funding sources have resulted in new and enterprising partnerships with a combination of medical, technological, pharmaceutical, mental health, public safety and non-profit organizations working and training together. In 2007, Crisis Intervention Team (CIT) training became mandatory for law enforcement in the State of California.

A 33-year-old male calls officers to a residence in a middle-class neighborhood. He tells the 911 operator his ex-girlfriend had just come to the door and she is “crazy.” She is distraught over the recent third and final breakup of their relationship and is threatening to kill him. In the background, the call taker can hear what sounds like a high-pitched female voice screaming hysterically and someone pounding on the front door. When asked if the ex-girlfriend has any weapons, the RP says he doesn’t know, but he is sure she is capable of attacking him if she gets in.

When responding officers arrive, they find the ex-girlfriend sitting calmly in her car in front of the RP’s home. Upon contacting her, they find out the following information about her: She is a 31-year-old registered nurse, but has not been employed for several years due to her mental problems. She suffers from a number of psycho-emotional disorders, not the least of which is paranoid schizophrenia. She occasionally also suffers from manic episodes of depression and these usually cause and/or coincide with a break up with her “on again, off again” boyfriend (the RP).

She freely admits to officers she is “crazy” and shows them a plastic garbage bag filled with her medications. In the bag, officers find over 50 different pill bottles, all containing some sort of psychotropic medication, anti-depressant or tranquilizer. She does not have any health care coverage, so access to mental health services had been limited. Several different doctors have prescribed all the medications, but one specific doctor has given her more than any of the others. She also admits she will do great bodily harm to the RP, and possibly herself, if she gets the chance, and admits she has not taken any of her medications for quite some time. Although her demeanor is calm and business-like while being interviewed by the officers, they determine she meets the criteria for 5150 W&I, in that she is a danger to herself or others (the RP).

When officers attempt to handcuff her, she immediately becomes violently combative. Two officers who are considerably larger and stronger than her have a very difficult time taking her into custody. Due to the mandated CIT training, both of these responding officers had completed training scenarios involving mentally ill consumers. Nevertheless, she is eventually transported to the local psychiatric ward and placed on a 72-hour evaluation hold. Currently, the number of 5150 W&I commitments by law enforcement and police interactions with mentally ill consumers have continued to decrease. However, the level of services available and the number of preventive mental health programs have increased.

A few hours later, the district sergeant receives a phone call from the examining psychiatrist, who wants police to come get the woman and book her into jail. The reason the psychiatrist is calling for the police is because the woman is a danger to others. When the sergeant inquires if they have contacted her psychiatrist regarding any of the pill

bottles in her possession, the County examining psychiatrist tells him “no,” as a matter of practice, they do not do that. Police refuse to come get her from the psych ward, saying that is the reason she was brought to the psychiatric facility in the first place...she is a danger to others as a result of a psychiatric disorder or condition. A short time later, the woman is released from EPS and she returns to the RP’s home. She is arrested without incident, for trespassing and attempted assault with a deadly weapon (a kitchen knife). She is booked into county jail.

Summary

In this chapter, the Nominal Group Technique has identified trends and events of concern for local law enforcement and for the need for continuous VR training for the reduction of injuries and to maintain the safety for the officers and mentally ill consumers. The panel identified trends and events likely to have significant impact on the issue of virtual reality training of law enforcement in response to mental health calls for service. As one of the few governmental operations that are available twenty-four hours a day and seven days a week, law enforcement, and patrol officers in particular, are the representatives likely to encounter the severely mentally ill in crisis as a response to someone needing assistance.

The three scenarios presented possible alternative futures most likely to occur when nothing is done and all of the worst trends and events come true, when there is a lack of VR technology used, and without VR this is the worst possible alternative future. The NGT and scenarios will assist in developing a roadmap for change in the following chapters.

CHAPTER III

STRATEGIC PLANNING

Introduction

Strategic planning is a systematic approach for addressing an issue, problem or area of concern. The purpose of a strategic plan is to examine, facilitate and create a plan that will lead an organization to a desirable future. For effective strategic planning, the leadership of an organization must clearly understand the organization's purpose. Choices made today will determine the future. Strategic planning helps to concentrate organizational resources on priorities, create a framework for budgets and operations, and maximize the chances for attaining the optimal future, while minimizing the chances for the undesirable future (Esensten, T., 2003).

This comprehensive strategic plan for law enforcement defines strategies essential to developing, implementing and managing how VR training impacts responses to mental health calls for service in a large urban law enforcement agency by 2009. The following will help assess the San Jose Police Department's readiness to adopt VR training. A vision was created in the strategic plan to describe the future. This vision allows members of the organization to fast forward to the future from the present state to the desired future state.

Vision Statement

In order to lead others to achieve the desired goal, it is essential that a vision statement be developed. The vision statement must reflect the values and core objectives of the organization and show all interested parties a path that will lead them to it. An

example of such a vision statement in the context of implementing virtual reality training that impacts response to mental health calls for service might look like the following:

Our police department has an ongoing obligation to improve the quality of services that it provides to the community. One portion of this obligation is to ensure that we treat all members of the community with dignity and respect. We recognize that communication and interactive skills learned exhibit professionalism, reduce violent confrontations and injury to all parties involved. Our organization takes steps to identify unprofessional and inappropriate responses through training, education and outreach services. We will take appropriate measures to train our personnel and have committed to creating a comprehensive VR training program for mental health responses to calls for services with the express intent of helping our employees and collaborative partners to better serve our community, while at the same time seeking to prevent potential liability.

The population of the City of San Jose is over nine hundred fifty thousand people. The city is nestled in the valley in an affluent area, home primarily to high technology companies, corporate headquarters, sporting facilities, diverse cultures and numerous institutions of higher learning. The population is well educated and affluent; hence, the public safety resources are highly equipped, maintained and well compensated.

As with any large industrialized area, the city has its share of the mentally ill. The mentally ill populace ranges in degrees of severity from those willing to take their medication and to live in mainstream society to the homeless who may be unable to care for themselves and who choose to live on the streets. Many do not rise to the attention of law enforcement; however, due to violent confrontations, mental illness was drawn to the limelight. The media allows it to become the issue of the day.

Organizational Analysis

In every organization, there exists an organizational culture. Customs and traditions, both formal and informal, serve as powerful forces that must be carefully considered before an agency executive can successfully implement significant change. Matching internal organizational strengths and weaknesses with environmental opportunities and threats (SWOT) is a systematic method of classifying the internal and external organizational environment. It is extremely difficult for those who have worked in a given organizational culture to objectively evaluate the need for significant change. Once the need for change is recognized, it is important to evaluate those forces and people in the organization who will likely support the change and those who will likely oppose it. The SWOT analysis was conducted using the San Jose Police Department, a large urban law enforcement agency. The analysis examined the department's receptiveness to the proposed training.

A SWOT analysis of the San Jose Police Department by department managers revealed the following internal and external factors:

Internal Strengths

- The San Jose Police Department is known for its innovative training programs.
- Salary savings through retirement, may be an available funding source that will not impact the general fund.
- There is a strong working relationship between the department and the police officers association.
- Dedicated employees believe in the department's mission and vision statement.

Internal Weaknesses

- Money may not be available since the department is facing significant budget cuts this next fiscal year.
- The union may initially oppose the training program because it reduces and limits number of available resources.
- Officers believe they are currently doing a good job with dealing with the mentally ill and don't see a need for change.

External Opportunities

- Community partnerships and outreach training currently exist. These programs can be used to further the proposal.
- The department has had past relationships with mental health organizations that can be renewed.
- Technology grants may be funded through state and federal homeland security grant funding.
- Virtual reality training is just beginning in law enforcement.
- The number of mentally ill in the community will justify support for the proposal.

External Threats

- With recent officer involved shooting incidents, the community has been fearful and hesitant in calling the police.
- There is a general lack of support from the community, in both public and private sectors regarding police responses to mental health calls for service.

- With the unexpected \$45 million dollar expenditure by city council for the new city hall furniture, city council may be reluctant in approving additional funds for VR technology.
- The mental health agencies want to have total control over the creation of VR training scenarios, instead of working in partnership.
- There are few organizations with mobile mental health teams.

Stakeholder Identification

One of the crucial steps that must be reviewed prior to considering alternative resolutions is the identification of key stakeholders. Stakeholders are those individuals, groups or organizations that will be significantly impacted by the planned change or those, though not impacted, who can significantly impact the implementation of the plan. Identifying concerned stakeholders in the beginning of the process allows management to develop supportive alliances. Stakeholders are often found within the organization; however, it is imperative for those responsible for implementation to consider people outside the organization who may also be a key stakeholder.

It is extremely important that those tasked with program implementation not only be aware of who the stakeholders are, but have a clear understanding of the relationships that exist between the stakeholders. When garnering support from stakeholders, it may not be critical to receive total support from all. Knowing stakeholder relationships can result in a desirable outcome, with a limited number of stakeholders supporting the change and the rest who choose not to oppose it. An example of this involving a virtual reality training context might be where the local police officers association (POA) decides not to oppose the chief's plan to implement the virtual reality training as part of a

broader strategy to achieve three percent at fifty years of age retirement package in collective bargaining.

The following are several key stakeholders who would have a significant impact on the implementation of a virtual reality-training program. This list includes issues and/or concerns associated with each of them.

Chief of Police-

The Chief of Police is not only responsible for the welfare of the police force, but is ultimately responsible for the entire community. The chief will most likely be supportive and receptive to VR technology, as public safety will be directly impacted.

Department Management –

Department management is responsible for the creation, implementation and monitoring of new VR training programs. Management is responsible for identifying specific training and equipment needs, potential funding sources, and for staffing with appropriate personnel. Monitoring to ensure the negative impacts of the VR training program both within and outside the organization are minimized and to ensure that the outcome is cost effective. Department management is supportive of technology. Management's position is positive and will most likely be receptive and committed to VR training.

Supervisors –

First line supervisors, sergeants and corporals are concerned about the safety and VR training received by their subordinates as first responders, and they are responsible for the quality of service provided to the community. The

supervisors are interested in becoming better trainers, effective supervisors and mentors. They ensure that all on-duty personnel are held accountable for their conduct and actions with regard to their response to the mental health call for service. The supervisors are in support of VR training.

POA –

Police officer union or collective bargaining unit represents officers in both wage/benefit negotiations and in disciplinary cases. The union is concerned about officer safety and reduction in injury to officers and less violent confrontations with mentally ill offenders. They ensure fair treatment of its members and are supportive of VR training.

City Attorney's Office –

The City Attorney's Office is responsible for potential negotiations and litigation associated with the VR training program. They would advise the city manager, mayor, city council and the police chief on legal issues. There is concern about health hazards associated with VR training. The City Attorney has interest in representing the police department in civil litigation.

Mayor/City Council –

The mayor/city council is the governing body responsible for ensuring that all interests are represented, considered and provided an opportunity to voice concerns. The advocates for the mentally ill can express displeasure in the VR training program and the council chamber is the venue for this discussion. City council is charged with the duty to enact ordinances that address local concerns,

and ensures accountability of the city manager and the police chief. The city council is supportive of the training.

Mental Health Partnerships/Advocates -

These agencies would be advisors/technical experts regarding authenticity of the scenarios and training depicted in the VR training program. The following agencies would interact with the liaison position: National Alliance for the Mentally Ill (NAMI), Santa Clara County Department of Mental Health, National Institute of Mental Health (NIMH), National Institute of Justice (NIJ), Police Executive Research Forum (PERF), Department of Corrections, District Attorney, College and University students-Psychology, Psychiatry, Therapy, Drama or Acting Schools, medical professionals, military, EPS, hospitals, Janssen Pharmaceutica, media, Virtual Technology Companies and other non-profit agencies would assist law enforcement with their expertise. All are in supportive positions.

Another area of stakeholder identification is the ability to recognize and handle the “Snail Darter” that finds its way into any project. The Snail Darter is a small species of fish that was once considered an “endangered” species under the federal Endangered Species Act. Its discovery in the Little Tennessee River in 1973 led to the lengthy delay in construction of the Tellico Dam. The term Snail Darter in this context refers to an unanticipated force or set of circumstances that disrupts an otherwise well thought out implementation plan. The best way to deal with the unpredictable is to develop a plan for a predictable process by which to resolve unanticipated setbacks. To do this, the implementation team must be granted the authority to make program changes after

consulting with the stakeholders. Potential snail darters would be the unanticipated worm or viruses, incompatibility of the computer software for the VR training or the computer obsolescence.

Development of Alternative Strategies

As part of any strategic plan, the development of alternatives should be considered prior to taking action. Five alternative strategies are suggested that could be employed to reach the goal of implementing a virtual reality training program to impact responses to mental health calls for service.

Alternative Strategy One – No Change

The first alternative is that an agency may choose to take no action to address the virtual reality training. Everything merely remains status quo. Committing to a course of action means there is a potential commitment to spending resources that may greatly impact other areas of the department. Although this is a realistic alternative, it will not address the need for virtual reality training to impact responses to mental health calls for service. Management could decide that the existing Crisis Intervention Team (CIT) 40-hour academy training is sufficient training for the police department and that there are other agencies specifically trained and responsible for handling these services. In fact, if the agency follows this option, the number of employees to receive training is limited with only two academies held per year, with class size limited to 30. A large urban law enforcement agency has more resources than mental health staff and as first responders available 24/7 are tasked with initial contacts with mentally ill consumers in crisis. Without the VR training available to assist with providing better interactive and communications skills to law enforcement personnel, there will continue to be liability

issues involving violent confrontations, injury to personnel, mentally ill consumers and innocent bystanders.

Alternative Strategy Two: Usage of Existing Training Equipment

Another alternative is to create a strategic plan using the existing Firearms Training System (FATS) marksmanship and judgmental training course designed to meet the training needs of today's law enforcement officers. Change the training program to incorporate the challenging responses to mental health calls for service. These specially designed courses will enhance the officer proficiency. The judgmental training portion of this program places the officer in a two-dimensional video real world atmosphere. These scenarios test the officer's ability to communicate with on-screen subjects, take control of a situation, and administer the appropriate level of force when the situation dictates it. Instructors have the ability to escalate or de-escalate a situation to test the officer's reactions to different threat levels. These scenarios are also designed to enhance an officer's assertiveness skills, which will help to identify potentially threatening situations earlier, thus giving the officer an edge of preparedness (Firearms Training System Inc. FATS, 2004).

Alternative Strategy Three-Collaboration

The agency develops a collaborative multi-disciplinary approach to VR training by sharing resources. Each stakeholder sends a representative to a mental health steering committee tasked with identifying partners willing to design scenarios, role play, obtain VR technology and equipment. This steering committee establishes the necessary contacts to lay the foundation for developing the VR training. Each participant will have an equal obligation and opportunity to share in the financial commitments, benefits, and

training. Part of the collaborative includes colleges and universities, which allow credit for participation in an internship program. It is a grass roots collaborative that involves corporations, government agencies, non-profit organizations, schools, colleges and universities, military, et cetera, to allow for the least expense with the greatest gain in educating all members in the best ways to respond to mental health calls for service from a variety of perspectives. All agencies recognize the high financial cost of advanced technology. Plans should include the justification for such technology based on proven financial savings through training, reductions in violent confrontations, on-the-job injuries and preparation for encounters with mentally ill consumers.

Alternative Strategy Four- VR Training of Personnel

Providing a basic level of mental health training to sworn personnel with yearly updates better prepares officers to make good decisions using their best judgment. The primary purpose behind VR training is to increase sound decision making skills by encouraging officers to better understand and recognize symptoms of mental illness, and to safely handle crisis situations. The most cost-effective manner of preparing personnel to address these calls for service are by establishing a network of contacts and resources for referrals or services with other agencies. It is through an interactive training application utilizing Responsive Virtual Human Technology and the Virtual Hidden Reality experience of schizophrenia that will place the officers in an emotional experiential opportunity to view the world of mental illness. Cross training between real life role-playing and VR training will provide the best opportunities to interact without the potential life-threatening exposure.

Alternative Strategy Five – A combination of alternative strategies

An alternative to addressing a VR training program is one that encompasses the utilization of combined alternatives. The first step would be to create a membership in a collaborative multi-disciplinary approach, initially using the existing FATS training course to help develop the curriculum for training all personnel. This multi-disciplinary approach incorporates the participation of stakeholders to determine the minimum level of mental health training necessary for achieving the best interactive skills. The training facility with the existing FATS training course can be used to develop and implement the training. Continuous monitoring for effectiveness must occur with each individual agency assessing the value of the partnership, considerations for funding sources, joint oversight and a structure of accountability.

Monitoring and Feedback

A process to monitor the success of the program is imperative to determine its effectiveness and if the goal of the program has been achieved. Specific criteria must be identified that can measure quality of communication and interactive skills. The criteria would include the following: liability, injury, number of officer involved shootings involving mentally ill consumers, virtual reality training technology, professionalism, employee satisfaction, and quality of service.

This program must be continually evaluated and revised to maintain its effectiveness. Through careful monitoring of the program and its impact on responses to mental health calls for service, problem areas can be identified and resolved.

Summary

This chapter provides a systematic approach to prepare for a desired change that will impact the organization and law enforcement's ability to provide quality services. An external and internal analysis of the organization was conducted, stakeholders were identified, and several alternative solutions were analyzed resulting in the selection of strategy four – VR Training of Personnel. This alternative strategy encourages officers to better understand and recognize symptoms of mental illness and through VR technology learn how best to handle potential life-threatening situations without injury or exposure.

With the groundwork set for the proposed VR training program using alternative strategy #4 through strategic planning, it is important that a transition plan be developed to implement the change. This will be discussed in the Transition Management phase of the project, which will be the topic of the following chapter.

CHAPTER IV

TRANSITION MANAGEMENT

Introduction

The purpose of this chapter is to present an analysis as to the opportunities and obstacles that may help to access the support of the stakeholders and prepare the organization for change. Change is a transition from a present state or current condition to a desired state; it is the moving from the present to the future (Beckhard, 1987). Transition Management is the process of addressing the attitudes, feelings and behaviors of employees during times of significant organizational change. Commitment to the program from the stakeholders and the identification of relevant issues impacting the virtual reality training are critical to developing a successful program.

Commitment Planning

Organizational success requires an understanding of change management. By identifying the need or urgency for the change and bringing the urgency to key organizational members generates support for change. A commitment plan is a tool to develop a strategy created to secure the support of the key stakeholders vital for successful implementation of the program. Change efforts will fail without the support of the critical mass (Beckhard, 1987). Creating the opportunity for short-term gains builds momentum for the change process and depicts tangible signs of success. Incrementally building on each of the gains further strengthens the level of support and helps weaken the resistive. Critical mass are those individuals and groups whose active commitment influences others to follow the change process. These change agents see the importance

in the change and support the desired outcome. Organizational managers must identify and target the critical mass.

Table 4.1 depicts the existing level of commitment exhibited by each of the critical mass members as well as their desired level of commitment necessary for successful implementation of virtual reality training program. Current levels of commitment are shown with an “X” and desired levels of commitment are depicted by the symbol “O”.

| Stakeholders | No Commitment | Let it Happen | Help it Happen | Make it Happen |
|--------------------|---------------|---------------|----------------|----------------|
| Chief of Police | | X→ | | O |
| City Attorney | | X→ | | O |
| City Manager | | | X→ | O |
| Mayor/City Council | | | X→ | O |

Current Commitment To Strategic Plan
Table 4.1

In order for implementation to occur, the entire organization participates in one of three action roles:

1. Change Strategists: Those who lay the groundwork by identifying the need for change, craft the vision and define the boundaries
2. Change Implementers: Those who enact the changes
3. Change Recipients: Those who are affected by the change

The following is a description of the commitment to change necessary for the success of virtual reality training efforts in a large urban law enforcement agency.

Chief of Police

The best approach would be to make a presentation to the Chief of Police in order to solicit commitment. A clear action plan would outline the financial liability statistics and address the cost/benefits associated with VR training. This information would be

obtained from the police department safety officer, risk management, retirement services, crime analysis unit (CAU), the City Attorney's office and Department of Justice. The idea person who acts as the change strategist will work with the Chief of Police to create the VR proposal for presentation to the city manager, mayor and city council who are all critical mass.

This presentation will seek the authorization and support for the implementation of the VR training program. Once the approval is obtained, department management is responsible for recognizing those factors that add to, or take away from, the overall satisfaction of the community. The police department defines the level of training desired, lists performance expectations for their personnel and allocates necessary resources. Management support of the program is crucial.

City Manager/Mayor/City Council: Change Strategist

The project manager on behalf of the chief should prepare a proposal outlining the historical issues with regard to mental health issues in the city and how this training will minimize liability and injury. The anticipated support from the politically influential people of the community is essential in drawing the needed support. The mayor and council are responsible for setting policy, fiscal management, and for long term planning. Both the mayor and council members will scrutinize any program that will fiscally impact a substantial amount of city funds even if the funds are allocated for a specific use. Their support is essential to help the change occur.

City Attorney: Change Implementers

The city attorney is responsible, in part, to minimize risk exposure for the city and must work with the finance director and police management to develop the program. The

city attorney will be responsible to defend the city from any challenges that arise from the training presented.

Transition Structure

Whoever is chosen to lead the transition process will play an integral role in the success or failure of the virtual reality program. It is critical that the person selected have full support of all the stakeholders involved in the transition. The project leader must have strong management, technological and interpersonal skills including an interest in mental illness.

It is imperative that participants chosen to become members of the transition team represent all key stakeholder categories to avoid potential common pitfalls during implementation. With the desire to be inclusive rather than exclusive, the relationships developed during this process will create more opportunities for long-term success. Every opportunity should be explored to promote the benefits of the VR training program both internally and externally to the organization and team members.

Responsibility Charting

A responsibility chart provides the framework to identify the responsibilities of all parties involved during the transition to virtual reality training. This chart clarifies the roles and responsibilities and can minimize conflict during the transitional period. The responsibility chart depicts which participants have the responsibility (R) to implement the new program (although not necessarily the authority to make it happen) as well as those participants that have approval rights (A), supporting roles (S), or just need to be

informed (I) as to the progress of the program. Table 4-2 presents a responsibility chart for transition to virtual reality training for law enforcement.

RESPONSIBILITY CHART

Actors

| | Chief of Police | Managers /Supervisors | POA | City Attorney | Mayor/City Council | City Manager | Idea person / Project Manager | Planning Unit | Partnerships |
|--|-----------------|-----------------------|-----|---------------|--------------------|--------------|-------------------------------|---------------|--------------|
| Decisions/Actions | | | | | | | | | |
| Initial Planning Meeting to assess VR training | I | S | S | I | I | I | R | - | S |
| Identify Project Manager | R | A | S | - | - | - | A | S | I |
| Identify Transition Team | A | R | S | I | - | - | S | S | S |
| Identify Training Sources | I | A | - | I | - | - | R | S | A |
| Identify Funding Sources | I | A | - | - | I | I | I | R | A |
| Establish Goals & Objectives | A | S | - | I | I | - | R | A | S |
| Present Concept to Council | R | S | - | - | A | I | S | S | I |
| Dev. Policy Guidelines | A | S | S | I | - | - | S | R | S |
| Dev. Training Curriculum | A | I | I | I | - | - | I | R | S |
| Implement Program | A | I | I | I | I | I | R | S | S |
| Evaluate Program | I | S | I | I | - | S | R | A | S |

R = Responsibility (Not necessarily Authority) S = Support (put resources towards)
 A = Approval (right to vote) I = Informs (to be consulted before action)
 - = Irrelevant to this item

Table 4.2

Analysis of the Responsibility Chart

Initial Planning Meeting

Scheduling the initial planning meeting is the responsibility of the idea person.

The responsibility includes inviting key members who have a role in VR training. The managers and supervisors, police officers association (POA) and partnerships are

identified as support providers. The remaining roles of Chief of Police, city manager, mayor, city council, and city attorney are informed of the VR planning meeting.

Identify Project Manager

The Chief of Police is listed as responsible for identifying the project manager with the POA and the planning unit as support providers. The partnerships are informed of the project manager for VR technology. The idea person/project manager and the managers and supervisors have the right to vote. All other actors are determined as irrelevant to this item.

Identify Transition Team

Managers and Supervisors are tasked with the responsibility of identifying the VR transition team. The POA, idea person/project manager, planning unit and partnerships perform supportive roles. The Chief of Police has the approval for the transition team and the city attorney needs to be informed. The remaining actors are determined to be irrelevant to these items.

Identify Training Sources

The idea person/project manager is tasked with the responsibility of identifying training sources. Approval is given to the managers/supervisors and the partnerships. Both the Chief of Police and the city attorney need to be informed. The planning unit would provide support in identifying the training sources. The remaining actors are determined as irrelevant to this item.

Identify Funding Sources

The planning unit is responsible for identifying funding sources. The partnerships and managers/supervisors are identified for approval. The idea person/project manager,

city manager, mayor, city council and the Chief of Police are informed on funding sources. All of the other actors are irrelevant to this item.

Establish Goals and Objectives

The Chief of Police is ultimately responsible for establishing the goals and objectives. The mayor and city council provide approval. Managers/supervisors, idea person/project manager and the planning unit are all supportive roles. The city attorney, city manager and the partnerships are informed. The POA was determined to be irrelevant to this item.

Present Concept to Council

The Chief of Police is responsible for making the presentation to the mayor/city council. Approval or the right to vote is given to the idea person/project manager and the planning unit. Support providers are the managers/supervisors and the partnerships. The city attorney, mayor and city council are informed. The last two actors are identified as irrelevant to this task.

Develop Policy Guidelines

The planning unit is identified as being responsible for developing policy guidelines. The Chief of Police must approve the guidelines. Managers/supervisors, POA, the idea person/project manager and partnerships are identified as support providers for developing policy guidelines. All of the others roles are determined to be irrelevant to this item.

Develop Training Curriculum

The responsibility to develop a VR training curriculum lies with the planning unit, and the Chief of Police has approval. The partnerships provide support.

Managers/supervisors, the POA, city attorney, mayor and idea person/project manager all need to be informed. The two remaining roles are identified as irrelevant to this item.

Implement Program

The idea person/project manager is identified as having responsibility for implementation of the program. Support providers are the idea person/project manager and the planning unit. The Chief of Police needs to approve before implementation. All other actors are informed.

Evaluate Program

The idea person/project manager is responsible for evaluation of the VR program. Approval is necessary from the planning unit. Support providers are managers/supervisors, city manager and partnerships. The Chief of Police, POA and city attorney are informed of the evaluation of the program. The mayor and city council are irrelevant to this item.

The action plan establishes implementation timetables and role responsibility. With the implementation of VR technology as a new training tool for law enforcement, the potential reduction in officer injury and liability becomes a safer alternative. This technology will eliminate the lack of exposure to critical incidents through scenario training.

Summary

The transition management plan created in this chapter helped define the roles and responsibilities of key stakeholders to implement change. Critical mass is the minimum number of individuals or groups whose active commitment is necessary for successful change to take place. The specific responsibilities and commitment levels were identified to clarify performance expectations for managers to implement virtual reality training. A discussion of the findings, implications, and conclusions as they apply to virtual reality training are included in the final chapter.

CHAPTER V

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

Summary

The importance for law enforcement officers, supervisors, and command officers to receive vital training in virtual reality (VR) has been addressed throughout this project and implementation forecasted to the year 2009. This was accomplished through exploration of how VR training would impact responses to mental health calls for service in a large urban law enforcement agency using environmental scanning, literature review, interviews and research. The Nominal Group Technique (NGT) panel was used to examine trends and events that were thought to be associated with this VR training technology. The nature of law enforcement is primarily working with people who are in crisis situations. Officers who exhibit good interpersonal, interactive and communication skills tend to use sound judgment and make better decisions.

This paper presents the value of VR training technology and its ability to provide officers with the skills necessary to negotiate potential encounters that allow the officers to learn from their mistakes. The following are the primary benefits of VR training:

- VR training helps build self-confidence and teaches people how to make better decisions;
- Learning and understanding seems to have a greater impact when utilizing “hands on” techniques;

- Learning positive strategies for improved communication skills include non-verbal interactions with VR training that will help imprint thoughts and actions for response during a critical incident;
- VR totally immerses the senses and once the training begins, it becomes reality to the user;
- A VR death may occur, but at a push of a button the avatar is restored to life, and
- Law enforcement agencies are being tasked with being fiscally prudent, but at the same time officer safety conscious. VR training provides a cost effective method for increasing officer safety.

The following presents the challenges to the implementation of a VR training program:

- There may be resistance from the officers to receive training;
- There may be resistance from the Chief of Police due to lack of funding;
- There may be insufficient political support that does not create the urgency for those ultimately responsible for approving the programs, so program development may be futile;
- Money may not be available since the department is facing significant budget cuts in the next fiscal year;
- There will be fewer officers available to respond to calls for service during training;
- The union may initially oppose the training program because it reduces and limits the number of available resources.

Conclusions and Recommendations

The optimistic scenario developed through the NGT process presented a very positive approach to the outcome of the police department through partnerships and VR training technology. Police high-risk situations are inevitable; however, by providing the necessary tools and training opportunities to prepare personnel, police agencies can avoid permanent damage to their credibility and standing in the community.

Law enforcement leadership will always face public scrutiny especially during critical incidents. Law enforcement leaders need to encourage innovation, creativity and technology by providing empowerment, support and trust in their employees. Cost factors may limit availability and use for VR technology due to budget constraints. Through the implementation of VR training, it would help officers develop a better understanding through experiential exercises of the safety factors associated with critical incidents without the real threat of death for making a mistake.

Of the five alternative strategies for implementing VR Training of Sworn Personnel, Alternative Strategy #4 is the recommended plan. Strategy #4 is to encourage officers to better understand and recognize symptoms of mental illness, and then to safely handle crisis situations. The goal of Alternative Strategy #4 is to provide a basic level of mental health training through VR technology to sworn personnel by influencing trends and events that will create positive future results. The following are specific recommendations for consideration by law enforcement leaders when developing a strategic plan for implementation of Alternative Strategy #4.

- Liaisons should be established with the mental health advocates and partnerships that are currently involved with research and development of

prototype VR technology. These partnerships would include the military, colleges and universities, educators, mental health agencies, medical and pharmaceutical companies and VR companies.

- Prior to implementing the VR training technology, a public relations plan to promote the program must be developed.
- In the police academy, the VR training curriculum should be included in the Crisis Intervention Team (CIT) training.
- The available funding sources need to be identified, such as state or federal sources, i.e. Department of Homeland Security grants, or one-time city council capital budget allocations.
- Organizational policies and procedures related to VR technology needs to be developed.
- A database system needs to be established to track and document the number of calls for service involving mentally ill consumers.
- A monitoring plan will be established to provide user feedback to the police agency regarding the effectiveness of the VR training program.

This project asks the question of how virtual reality training will impact responses to mental health call for service in a large urban law enforcement agency. The literature review and futures forecasting indicate there is support for the use of VR technology in training law enforcement. In 2003, according to the Crime Analysis Unit (CAU) of the San Jose Police Department there were 241 officers. During the same period, according to the California Department of Justice Law Enforcement Information Center Law Enforcement Officers Killed or Assaulted (LEOKA) Statewide there were 2,382.

With the use of VR technology, law enforcement may reduce the number of injuries and deaths to their personnel. The funding cost associated with this new technology can be offset with the assistance of grants or through salary savings. The city council may allocate specific funding to pay for the one time acquisition of VR equipment. Another option would be through a negotiation process with the vendor to include the equipment and filming of the training scenarios. The initial purchase of the equipment may appear too expensive, but when comparing the cost of the equipment and training with the cost attached to litigation and liability exposure, it is well worth the initial outlay.

The best way to overcome the resistance by the officers, the POA and the Chief of Police is through a presentation that clearly outlines the specific benefits associated with VR technology. The best way to demonstrate this technology is to have three-person group interviewed and videotaped going through the same scenario. The group is composed of one person who has had no training with responses to mental health calls for service; the second individual has had the basic 40-hour CIT training that includes classroom and role-playing; and the third person has had 20-hours of training that consisted of 10-hours of classroom and 10-hours of VR training. The third person that has had the VR training experience had safely and successfully demonstrated their interactive skills learned from the repetitive VR training immersive experience. This training experience depicts the benefits of VR training through immersive environments that enable repetition and officer safety, with virtually no threat to life.

Law enforcement leaders must continue to diligently work to increase officer safety through on-going training programs. Some training programs involve innovative,

cutting edge technology, and collaboration such as VR technology. To increase officer effectiveness and provide for increased officer safety they must receive practical cutting edge VR training.

APPENDIX A

LIST OF NOMINAL GROUP PARTICIPANTS

| | |
|--------------------|--|
| Pablo Garcia-Ganan | Santa Clara Valley Health and Hospital System - Mental Health, Director of Staff Services/Co founder of CIT program |
| Lisa Rothrock | Alliance for Community Care - Manager of Family Services |
| Ken Starr | Alliance for Community Care - Service Team Manager |
| Navah Statman | National Association of the Mentally Ill (NAMI)-Santa Clara County-President, Santa Clara County Mental Health board member |
| Sherry Johnson | Department of Corrections Santa Clara Valley Health and Hospital System-Adult Custody, clinical program manager |
| Judy A. Williams | Santa Clara Valley Health and Hospital System – Public Health, Associate Regional Manager – East Valley Regional Office |
| Officer Joel Fay | City of San Rafael – Officer/Psychologist <i>Forensic Multi-Disciplinary Task Force</i> was founded by Officer Joel Fay. This task force created a partnership between the San Rafael Police Department and more than two-dozen other agencies |
| Kathy Forward | National Association of the Mentally Ill (NAMI)-Santa Clara County-Vice President, volunteer and “Family to Family” educator |
| Lt. Chris Moore | City of San Jose – Patrol Lieutenant, Command College Class 35 graduate and an attorney |

APPENDIX B

LIST OF TRENDS

1. Number of discretionary arrests of mentally ill clients booked in jail for minor/misdemeanor crimes.
2. In-patient beds per capita
3. Number of educational institutions in psychosocial rehabilitation
4. Number of people living in the street and in jail due to mental health legislation
5. Continuous legal approach pushes people into institutions
6. Criminal justice and the street
7. Funding for mental health institutions
8. Number of 5150 commitments by law enforcement
9. Number of recidivism rates of the severely mentally ill
10. Number of families seeking help to deal with mentally ill members of their family
11. The ratio of available resources versus requested resources
12. Number of mercy bookings of mentally ill clients
13. Number of jail diversion programs
14. Number of mental health/outreach court programs
15. Number of clinically effective medications
16. The level of public acceptance of homelessness
17. Drug use by people with mental health diagnosis
18. Expenditures for mental health services
19. Level of accessibility of mental health programs for the mentally ill
20. Number of recovery model programs in dual diagnosis treatment
21. Number of primary and secondary preventive mental health programs
22. Number of associations of mental illness and violence in media
23. Number of assigned law enforcement to CIT programs.
24. Trend to punish the mentally ill
25. Number of jurisdictions with mobile mental health intervention teams with police
26. Level of awareness of mentally ill
27. Law enforcement and mental health polarity to approach to the job
28. Stigmatize mentally ill by law enforcement
29. Number of large urban law enforcement agencies with CIT programs
30. Level of awareness of postpartum psychosis and depression
31. Number of police interactions with the mentally ill
32. Number of mental health contacts initiated by a police officer
33. Number of complaints against mental health agencies and law enforcement agencies by consumers
34. Number of admissions to EPS versus the number of beds available
35. Criteria too flexible for 5150 & other indexes
36. The ratio between law enforcement 5150's and actual admissions

APPENDIX C

LIST OF EVENTS

1. Mandatory utilization management
2. Mandatory integration of mental health and drug alcohol problems
3. Implementation of new freedom commission policies
4. The development of medications to solve mood and thought disorders
5. Mandatory outpatient treatment for severely mentally ill
6. Mental health enforcement of insurance parity
7. Discovery of genetic markers
8. Genetic therapy for mental illness
9. Mandatory education in mental health in schools
10. Implementation of universal health care
11. Supreme court mandate of CIT training
12. Mandated mental health court
13. The passage of simple majority for budgets
14. Repeal of proposition 13
15. The passing of the mental health initiative

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