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GLOBALLY MITIGATING THE OPIOID EPIDEMIC:

A COMPARISON STUDY: BEST PRACTICE POLICY & APPLICATION

CANTON OF ZURICH, SWITZERLAND AND THE STATE OF GEORGIA, USA

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ABSTRACT

Dozens of articles have been written on the success of the Four Pillars Policy, which refers to the prevention, repression, therapy, and risk reduction (Csete, 2012). Pioneering healthcare providers, elected officials and associates made harm reduction services mainstream. The Four Pillars program has resulted in a noticeable decrease in the crises and increased prevention, convincing policymakers and skeptics of the program's viability. McCann (2015) writes that Switzerland has a resource base that affords useful lessons for establishing evidence-based policy on illicit drug use and prevention that other areas could benefit (McCann, 2015). The following research examines this assertion by comparing harm reduction efforts used to mitigate opioid overdose deaths in the Canton of Zurich, Switzerland and the State of Georgia, USA

I. SCOPE OF PROBLEM

Zurich

The heroin epidemic ravished the Canton of Zurich for decades beginning in the 1980s before the government stepped in to advocate for recovery (Uchtenhagen, 2014). Although heroin was not legal, a societal change occurred when hordes people inundated the canton seeking a free-spirited legal open drugs lifestyle. Uchtenhagen (2010), describes how when the canton began to address the problem – by placing drug users in central locations (i.e., Platzspitz & Kocher "Needle" Parks) to allow better police observation and greater accessibility for emergency services - dysfunction increased rapidly with even more rampant drug abuse, spread of HIV and an unprecedented surge in overdose deaths (Uchtenhagen, 2014).

Approximately 1,350,000 people live in the urban area of Zurich itself. In Zurich, approximately 3,701 people underwent methadone treatment for heroin or opioid abuse each year, from 1998 -2006 (Nordt, Landolt, Stohler, 2009). In 1990, at the height of the epidemic, the scope of the problem (i.e., incidence rate) was estimated at .75 per 1,000 residents (Nordt et al, 2009). The table below, Figure 4, illustrates the estimated heroin users at over 7000 people at the height of the epidemic in Zurich (Nordt & Stohler, 2009). Recently published data suggests the number of incidences exceeded 20,000 users.

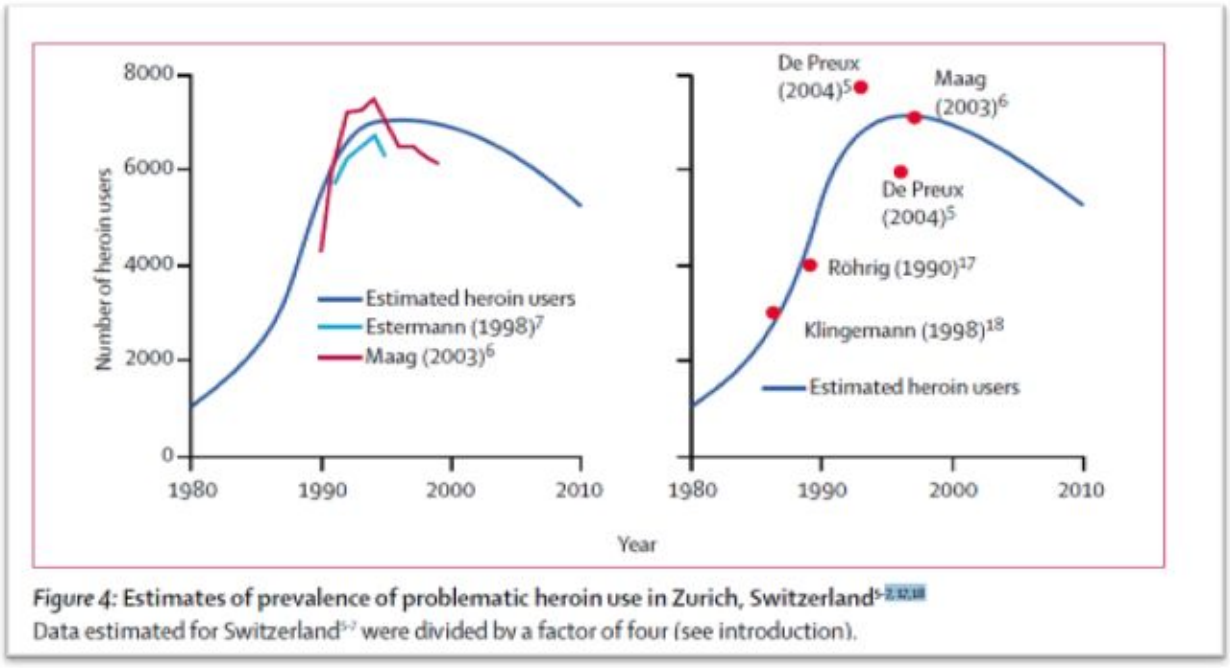

Figure 4: Estimates of prevalence of problematic heroin use in Zurich, Switzerland[5,17,18]
Data estimated for Switzerland[5-7] were divided by a factor of four (see introduction).

Figure 4. Estimates of prevalence of problematic Heroin use in Zurich, Switzerland, 1980-2010. Nordt, Carlos & Stahler, Rudolf (2006). Incidence of heroin use in Zurich, Switzerland: a treatment case register analysis. The Lancet. Vol. 367. June 2, 2006. pg. 1830-34.

Georgia

In the 1990s, physicians were overprescribing pain medications to patients. As a result, a nationwide opioid epidemic begins to take effect (Georgia Department of Health, 2019). In

Georgia, the number of deaths by opioid overdoses increased by 245% from 2010-2017 (DPH, 2019). Out of one hundred & fifty-nine counties, Georgia had a higher increase of overdoses in fifty-five counties. Sixty percent of the provinces were in rural areas where treatment was limited (Langford et al., 2017). From 2014 to 2017, approximately 288,000 Georgians aged twelve or older were dependent or abused illicit drugs annually (Substance Abuse and Mental Health Services Administration, 2019). In 2017, two-thirds of overdose deaths were related to opioids (DPH, 2019).

In 2017, Georgia experienced 1,014 opioid-related overdose deaths which is 9.7 deaths per 100,000 persons (Drugabuse.gov, 2019). The following table Decent stats, but include the # of deaths since that's the key statistic Georgia uses to convey the scope of the problem.

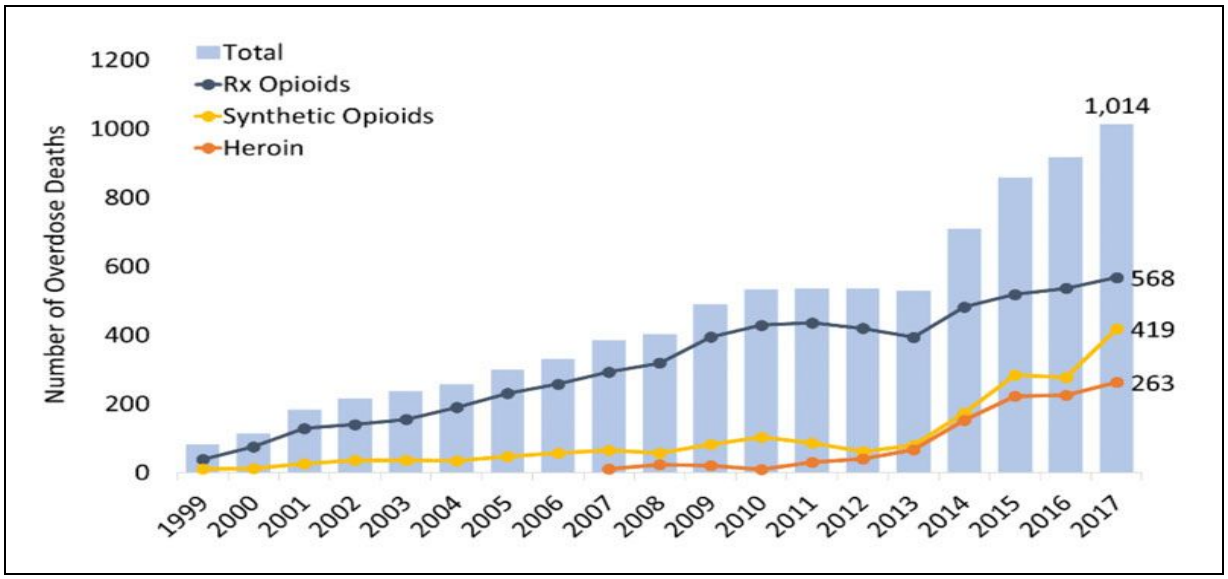

Figure 1. Number of overdose deaths involving opioids in Georgia 1999-2017. NIH National Institute on Drug Abuse: Advancing Addiction Science - Georgia Opioid Summary - March 2019. Retrieved from website:https://www.drugabuse.gov/drugs-abuse/opioids/opioid-summaries-by-state/georgia-opioid-summary

Compare and Contrast

Georgia and Zurich both experienced a major drug crisis in different decades (i.e., Zurich during the 1990-00's and GA 2006-20). In comparison, the major difference is how the epidemic started for both areas. In Georgia, doctors were responsible for the overprescribing of opioids that led to a state-wide epidemic. In Zurich, the problem stemmed from an uncontrollable number of users relocating to the canton then becoming chemically imbalanced addicted abusers once exposed to impure street heroin (Brehmer & Iten, 2001).

Figure 5. Comparison Data: Canton of Zurich and the State of Georgia.
Nordt, Carlos, Landolt, Karin & Stohler, Rudolf (2009). Estimating Incidence trends in regular heroin use in 26 regions of Switzerland using methadone treatment data. Substance Abuse, Treatment, Prevention, and Policy. Vol 4:14.pp. 1-8. doi: 10.1186/1747-597X-4-14

II. WHO SETS THE POLICY?

Zurich

In Zurich, the federal, cantonal and local governments, their health departments, in connection with social and human services nonprofit/non-governmental organizations (NPO/ NGOs) collectively work, by legislative design, to resolve societal issues, including drug addiction. Uchtenhagen (2010), describes both government entities as having policy privilege power that allows them to modify regulatory policy (Uchtenhagen, 2010). Nollert & Budowski (2009), emphasize the mutual dependency on NPO/NGO engagement in implementing political policies as a matter of law in Zurich (Nollert & Budowski, 2009).

The Federal Law on Insurance regulates the health industry in Zurich (Uchtenhagen, 2010). Gouverneur (2018), wrote that "managing epidemics (i.e., drug crisis) is the responsibility of the Federal Council" (Gouverneur, 2018). Cantons, via their Human Services Departments, handle health and social interventions, general healthcare, and narcotic abuse in combination with the Cantonal Drug Commission (Uchtenhagen, 2010). Researchers Kubler & Schwab (2007), confirmed that as of 2018, there are thirty-two (32) local NPO/NGO's in Zurich including foundations, co-ops and charitable/ religious organizations mandated to serve as equal partners with canton, unlike in other cities (Kubler & Schwab, 2007).

Georgia

In Georgia opioid policy is set by the state government. Legislation is in place to address the opioid crisis. In 2017, the Jeffrey Dallas Gay, Jr.,. Act (SB 121) was passed to allow Naloxone, a drug used for prevention and to reverse drug overdoses to be removed from the dangerous drug list (Georgia General Assembly, 2017-2018). The Narcotic Treatment Programs

Enforcement Act (SB 88) requires the Department of Community Health, ensure drug treatment programs are inspected and meet the basic standards, and quality services when they seek a license in Georgia (Georgia General Assembly, 2017-2018).

Comparison

In Georgia, legislation is passed through state and local governments following Federal guidelines, in the same manner as Zurich. In Georgia, the amount of legislation passed is very limited. Zurich specifically involves NPO /NGO communities, along with the state and federal government, as a collective to implement policy. Also, according to Nollert & Budowski (2009), universal state-provided healthcare is available to all residents of Zurich within ninety days of arrival through the Federal Law of Health Insurance (Nollert & Budowski, 2009). In comparison, the State of Georgia does not have this option.

III. WHO DELIVERS SERVICES?

Zurich

In Zurich, services are delivered through the Cantonal Departments of Mental and Public Health (i.e., the equivalent to Georgia Substance Abuse Mental Health Services Administration - SAMHSA), and local NPO/NGO services through various programs(Nollert & Budowski, 2009). Specifically, Zurich has five (5) hospitals and private clinics that manage legislatively mandated drug rooms as part of the local service delivery (Nollert & Budowski, 2009). According to the Harm Reduction International website (2019), NPO/ NGOs operate the "Heroin Prescription Program (PEP) Clinics" and "Heroin Assisted Therapy (HAT) Program", which provide

supervised consumption of illicit drugs under the umbrella of the Four Pillars Policy (HRI website, 2020). Thus, the NPOs and canton governments both play a role.

Georgia

In Georgia, pharmacies are responsible for monitoring medications. Hospitals such as Anchor Hospital, provide inpatient and outpatient care for adults as well as adolescents with drug dependence (Anchor Hospital, 2020). Also, Anchor Hospital serves as a dual- treatment center that addresses the physical and psychological needs associated with drug abuse (Anchor Hospital, 2020). Additionally, there are several programs available through private, profit, nonprofit and public agencies that provide treatment (Georgia Department of Behavioral Health and Developmental Disabilities, 2019).

Comparison

Cantonal Departments of Mental and Public Health are the equivalent to the Georgia state agencies, including the Department of Public Health (DPH), and Substance Abuse & Mental Health Services Administration (SAMHSA, 2019). Although Zurich has a monitoring program, they appear only to monitor the database of treatment registry of injections versus 'prescription' records which give the full details, which is required of a pharmacist before refilling a patient's prescription in Georgia (Nordt & Stohler, 2006).

IV. WHAT ARE THE KEY APPROACHES?

Zurich

Zurich was the first in the nation to legalize medical prescription heroin (i.e., "diacetylmorphine") as part of the Experimental Heroin Prescription Program (PEP) in 1994 which eventually evolved into the Four Pillars Policy less than a decade later (Fischer, Oviedo-Joekes, Blanken, Haasen, Rehm, Schechter., & Van den Brink, 2007). Fischer et al. (2007) goes on to write that after years of debate and other approaches, the Four-Pillars system was created by a network of harm resistance advocates and opponents "to reduce harm, provide treatment and for jail reduction for heroin users...by legalizing drug rooms" (Csete, 2012, p.82). The Four Pillars policy also "expanded opioid substitution therapy, needle & syringe exchanges, and lowered the threshold to get into the program" (Csete, 2012 , pg 82).

Elected officials, community leaders, law enforcement, and medical experts created the Four-pillar system, each pillar standing for a particular theory - **reduction** to reduce harm (e.g., HAT, MAT), **enforcement** and **prevention** to reduce incarceration and manage the crisis, and **treatment** to provide alternatives for heroin users (Fischer et al., 2007). There was activist resistance initially that forced a national referendum in 1997. However, 70% of Swiss citizens voted in favor of the law. The Four Pillars have dealt with other challenges, but the majority of voters continue to support the policy (Fischer et al., 2007). Again, the harm reduction strategy aimed at reducing damage through controversial methods, such as legalizing drug consumption rooms, needle exchange programs and heroin-assisted treatment facilities. However, in two decades, the number of opioid-related deaths in Switzerland has decreased by sixty-four (64%)

percent (Fischer et al., 2007). The Four Pillars policy also expanded opioid substitution therapy and have lowered the threshold to get into the program. Users can now walk into a clinic for the first time and start treatment within 20 minutes. To reiterate, as a result of the success of the program the number of opioid-related deaths in Switzerland has dramatically decreased (Fischer et al., 2007). Additionally, there has been a reduction in crime and the spread of other needle spread diseases (e.g., HIV)(Fischer et al., 2007).

Georgia

One significant initiative is the **Prescription Drug Monitoring Program** (Georgia Department of Public Health, 2018). This legislation requires doctors, medical assistants and pharmacists to register and load prescriptions into a database every twenty-four hours instead of the seven-day requirement with prescribing a controlled substance (GDPH, 2018). In July 2018, prescribers must review information from the Prescription Drug Monitoring Program before they give a prescription to a patient for the first time and must do so once every ninety days (GDPH, 2018). This program eliminates duplicating prescriptions and also allows a provider or pharmacist to check a patient's medicine history. By utilizing both methods it helps reduce the risk of drug abuse (GDPH, 2018).

Georgia Multi-Stakeholder Opioid and Substance Use Response Plan, developed by the Georgia Department of Health (DPH, 2019) is a state-wide strategic plan that utilizes a multi-facet approach to dealing with the crisis. It involves collaboration with many different stakeholders throughout Georgia (DPH, 2019). Six work groups were formed to address specific goals and objectives related to the opioid epidemic. The policies will focus on prevention,

maternal substance abuse, improving data gathering efforts, treatment and recovery, enforcement, and expanding PDMP. Currently, the plan is moving into the implementation phase (DPH, 2019).

Comparison

Both Zurich and Georgia have developed good practices using different approaches to the opioid crisis. Zurich decided to liberalize its drug policy and allow treatment with heroin, provided access to methadone programs, excetera. Georgia's PDMP is the most progresssive treatment implemented through policy change thus far. However, other Georgia However, in the same vein as Zurich, utilizing the practice of treating drugs with drugs (i.e., cannabis replacement and medical marijuana) could be more effective. Another key component in fighting this epidemic is the naloxone injection treatment policy, which helps reverse the effects of overdose in real time. Most importantly, Georgia could benefit from a four-pillar program because of the different aspects and phases covered under this policy. Each is a positive, practical and progressive policy that, if funded properly, could mitigate overdose deaths. The question to ask legislators is why not. Not only is there need for more liberal and inclusive policy, educating the public as to the mental health component of this epidemic and decriminalizing opioid abuse, is crucial.

Figure 3. Treatment Comparison: Zurich v. Georgia

Georgia	Zurich
Seeking to legalize marijuana/ cannabis; presently criminalized	Legalized heroin consumption in 1994 for treatment purposes; decriminalized
Methadone Treatment	Methadone Treatment proved to be ineffective for 24% of population
PDMP Tracking	Treatment (e.g., PEP, HAT) Tracking
Culturally unacceptable -	Culturally acceptable - Social Equity

V. WHAT ROLE DO NONPROFITS PLAY?

Zurich

Zurich's Nonprofit/ Non-governmental organizations (NPO/NGO) sector is categorized as "associations, co-operatives, or foundations" (Nollert & Budowski, 2009). Nollert & Budowski (2009) go on to share that the cantonal relationship with NPO/NGO is symbiotic, interconnected because the political philosophy is a shared responsibility and "all social problems except for defense, foreign affairs, and currency, should be managed by municipalities, cantons, families, commercial, and nonprofit companies" (Nollert & Budowski, 2009). An example of the interconnectedness of NPO/ NGOs and governance is Zurich's Harm Reduction International (HRI), "dedicated to reducing the adverse health, social, and legal impacts of drug use and policy, and is funded by Open Society Foundation, the European Commission, and the Swiss Government" (Nollert & Budowski, 2009).

Georgia

In our research, we discovered several substantial nonprofit organizations such as the Substance Abuse Research Alliance (SARA) who through the Georgia Prevention Project focus on policy, education and prevention, as well as, located numerous free and Christian drug rehabilitation facilities in Georgia focused on treatment (Senate.Ga.gov Website, 2019). SARA is a collaborative or 60 organization with reporting responsibilities to the Georgia State legislature to help study this epidemic (Senate.ga.gov, 2020). The Salvation Army, which is connected to the Universal Christian Church, offers treatment centers for adults in the area (The Salvation Army, n.d.). Trinity Community Ministries, Inc. provides services to men with drug addictions and assists them in recovering from addiction and prepare them for life back into society (Trinity Community Ministries, 2020). My Father's House is a non-profit women's recovery residence that is provided by Sisters in Recovery Ministries. This is a twelve-month drug treatment program for women, who also assist with employment, education, individual counseling, and attend church (My Father's House, n.d.).

Comparison

Georgia and Zurich both have non-profit facilities. The public subsidizes Zurich's facilities through direct contributions, capital and service agreements (Nollert & Budowski, 2009). In Georgia and the United States, public donations via taxpayers are tax-deductible contributions. Georgia, as well as the rest of the nation, needs a cultural mindset shift related to universal healthcare, societal responsibility versus burden, and evaluating this crisis as a mental health issue versus as a crime. Zurich, specifically the NPO/ NGOs provide the heroin-assisted treatment, so they are direct service and treatment providers, as well as policy influencers. In

Georgia, although there are NPOs that provide treatment, such as the previously mentioned organizations, the NPOs play a greater role in policy-setting, education, and advocacy (i.e., SARA which reports on theoretical terms versus practical application (Senate.ga.gov, 2020)..

VI. EFFECTIVENESS

Zurich

The effectiveness of the Four-Pillars Policy on harm reduction measures for prevention, interventions, reduction and law enforcement is working. As of 2010, nineteen (19) cities throughout the canton had adopted the programming (Uchtenhagen, 2010). That was a decade ago. According to more recent statistics listed in the Global Harm Reduction 2018 Report, the Four Pillars Policy - including HAT, Needle & Syringe Programs, Opioid Substitution Therapy and Drug Consumption Rooms - have been adopted in dozens of countries (HRI.global, 2018). Four Pillars impact, according to Gouverneur (2018), states that "the number of drug addicts has fallen by two thirds, drug-related crime is down, the public order is restored, the spread of HIV has been reduced by 80% in Zurich" (Gouverneur, 2018).

Georgia

Statistics by the Georgia Public Health Department show an improvement in the reduction of the epidemic crisis. The percentage of opioid prescriptions reduced by thirteen percent between 2016 and 2018. At the time of this research, those reduced numbers have not been verified by these researchers. The reduced numbers could be the effect of the numerous policies and programming collectively. Perhaps it is the result of the overall education of

physicians on the danger of opioids. What we do know is that PDMP was introduced but not completely implemented until January 2018. Nevertheless, reducing consumption was a goal from the original problem. Zurich policy makers were forced to deal with an out of control environment of heroin users while Georgians were abused being over prescribed. Finally, opioid-related deaths have decreased by twelve percent between 2017 and 2018 (GPHD, 2018).

Comparison

According to the statistics, both Georgia and Zurich have been successful in their efforts to combat the problem. Though Georgia has shown a significant reduction in opioid overdose deaths, Zurich was the first to take control of their problem by fighting drugs with drugs under supervision. Zurich researchers track the number of treatment cases, i.e., those heroin users enrolled in MAT, PEP, or Methadone treatment. Georgia tracks the number of fatalities and prescriptions. The key difference is their approach. In Switzerland they are actively trying to treat and assist these users. Georgia is reducing fatalities, with some focus on reducing addiction, but that's not the overwhelming focus of their policy portfolio (Waldner, 2020)..

VII. RECOMMENDATIONS

Zurich

Based on our study of Georgia, we have no suggested policy recommendations for the Canton of Zurich to emulate or implement. Although there appear to be more Georgia Best Practices for mitigating abuse, in reality, the state is at least a decade behind Zurich's more progressive programming. In Georgia, the implementation of the Prescription Drug Monitoring Program (PDMP) is the most effective policy to date in mitigating opioid overdoses deaths in

Georgia. Zurich presently monitors heroin prescription (i.e. injections) using treatment centers Case Registry Data, "registering and evaluating substitution treatments for opioid dependence" as required by law (Nordt & Stahler, 2006). Georgia's most progressive policy thought involves the legalization of Cannabis Medical Marijuana to aid in abstinence from illegal substances, much like the Four Pillars approach. However, until the state and federal government lifts prohibitions on marijuana and revises Public Health policy regarding medical treatment, innovative programs like Four Pillars will never be implemented in Georgia (Knoll, 2016).

Georgia

Additional recommendations for Georgia could be the establishment of state run harm reduction networks that collectively lobby for amending federal law regarding illicit drug/ opioid treatment. Reevaluating the role of the government, eliminating repressive policy, collaborating with local nonprofits, while simultaneously decriminalizing opioid abuse would be ideal, but requires a fundamental mindset change culturally. The State of Georgia could take the lead, and prioritize a media campaign to change the narrative, break the negative stigma associated with addiction as it is a mental health crisis. Zurich is part of a democratic society, just like the State of Georgia. However, the fundamental difference is their approach to health is legislatively mandated as a cultural responsibility (HRI.global, 2018). Georgia also has mandated social services policies but due to varying fractured political perspectives, helping others is frowned upon versus viewed as virtuous. Adopting the Four Pillars Policy would allow practical treatments that could also stimulate the economy by creating jobs, possibly for the formerly addicted, if the medical-grade heroin used for replacement therapy was manufactured and

distributed by local pharmaceutical companies (Gouverneur, 2018). Georgia would benefit from the adoption of the Four Pillars Policy programming.

APPENDIX - Table 2.1 Timeline of Zurich Policy

1960	*Earliest known methadone prescribing policy in Zurich for drug abuse reduction
1975	*National Narcotics Legislation revisited with sanctions on the use of illicit drugs (Uchtenhagen, 2014).
1979	*1st mention of heroin prescribing as an alternative (Brehmer & Iten, 2001).
1980	*Social Services for drug users started in the mid-1980s (Kubler & Schwab, 2007).
1985	*Human & Social Services began for addicts in Zurich (Kubler & Schwab, 2007).
1986	*1st Drug Injection Room opens in Bern 1986 (Gouverneur, 2018). *Drug & Medical Association, sought to reverse specific drug treatment laws (Uchtenhagen, 2010).
1989	*Dr. Emelie Lieberherr, introduced Strategy Plan to incorporate harm reduction principles (McCann, 2015). *Drug Policy via Dr. Emelie adopted by 19 cities and regions in Canton (McCann, 2015).
1991	*1st National Drug Conference in Switzerland (in reaction and dissatisfaction with existing prohibitionist policy (Uchtenhagen, 2009); *Private organization, Association for Risk Reduction in Use of Drugs (equivalent to U.S. SAMHSA.gov) was established in 1991 by Dr. Andre Seidenberg (Uchtenhagen, 2009); *1st Heroin Clinic established (Uchtenhagen, 2009).
1992	*1st Five-Year Trial of Policy began (Gouverneur, 2018); *Zurich introduced cost-sharing policy regarding drug treatments which led to Four-Pillars Policy (i.e., prevention, repression, therapy and risk reduction) in 1994.
1994	*1st Injection Center opens in Zurich (Brehmer & Iten, 2001); *Introduction of Combo Treatment (i.e., health, social and prescription therapies) for opiate addicts who were unsuccessful in other therapies (Uchtenhagen, 2009); *Finally Legalized Prescription Heroin (i.e. diacetylmorphine) (Uchtenhagen, 2009)
1999	*Established PEP Centers Program by Federal Order by 54% of the vote (cite)
2006	*1st Drug Policy Conference entitled "Beyond Criminalization: Healthier ways to control drugs" May 2006 in Zurich (Uchtenhagen, 2009)
2008	*Approved Four Pillars by 68% of Federal vote (Uchtenhagen, 2009)

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