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Addiction Treatment in Iceland

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Substance use disorder treatment in Iceland has a history spanning more than 50 years, during which treatment approaches and the general understanding of substance use disorder have changed dramatically. The development of treatments has been influenced by both general advancement in medicine and psychosocial treatments and by unique factors of the Icelandic society.

Iceland is a small island country in the North-Atlantic Sea with a homogenous population of 321.857 (Statistics Iceland; 2013). It is sparsely populated, with more than two-thirds of the population living in the capital of Reykjavik or its' neighboring towns. Icelandic society upholds a Nordic social welfare system providing universal health care, including substance use treatment, and tertiary education for all. Equality is greatly valued and Iceland has been rated the country with the world's smallest gender gap five years in a row by the World Economic Forum (2013) reflecting equal access to education and health care. The standard of living is high and Iceland has been ranked as the 13th most-developed country in the world by the United Nations' Human Development Index (2013).

These unique features frame the substance disorder treatment system and high accessibility to treatment resulting in a smaller treatment gap than in most other countries. It has been

estimated that in the US only one in ten in need of addiction treatment receive it (NDSUH, 2010); compared to estimates of 50% receiving treatment needed in Iceland (Tyrfingsson et al., 2010).

In addition to accessibility to services being high, another important aspect of the treatment milieu is that addiction has been seen as a biological disorder needing professional treatment. Treatment has thus been part of mainstream healthcare with treatment being provided by health care professionals such as physicians, nurses, addiction counselors, psychologists alongside social workers and other health-care professions. Thus the emphasis has been on the disease model of addiction. This view of addiction among professionals is disseminated to the mainstream, making it easier for people to address their addiction problems and this is reflected e.g. in the lenient outlook of most employers who grant sick leave on pay for those seeking addiction treatment. Social security also provides financial support to those with substance use disorders, just as for any other medical condition further reducing barriers to treatment.

Alcohol and drug policies have been strict in Iceland and have shaped consumption patterns. Alcohol sales are controlled and monopolized by the government and the price of alcohol and tobacco has been kept high. Iceland has been second only to Norway for the highest retail prices of alcoholic beverages in Europe (WHO, 2012). Strict tobacco use restrictions have led to steadily decreasing rates of smoking in the general population with the current rate standing at 17.4% (Directorate of Health, 2012) however, nicotine addiction has been relatively stable at 79% among patients receiving addiction treatment (SAA, 2012).

Drinking patterns in Iceland have been similar to drinking patterns in the Nordic countries. These patterns were characterized by infrequent use of alcohol, mainly heavy drinking or

binge drinking of strong liquor, for the purpose of intoxication during weekends or festivities as the Scandinavian Drinking Survey in 1979 carried out in Iceland, Norway, Sweden, and Finland showed; in addition there was a higher level of acceptance of drunkenness in public than in other countries (Makela, 1984, 1986; Room, 2010; Room & Mäkelä, 2000). The overall volume of alcohol consumption in the Nordic countries has been lower than the EU average and Iceland has had the lowest consumption of alcohol per capita of the Scandinavian countries, with alcohol consumption rates of between 4 and 5 liters from 1970 (3,82 litres) until the 1990's, when consumption showed an increase when beer was legalized 1989, but its sale had been banned from 1915. The total amount of alcohol consumption has risen steadily since that time and sold litres of pure alcohol per capita, 15 years and older in 2012 were 6,93 litres. There was also a shift in consumption patterns from distilled spirits to beer (Olafsdottir, 1998; 2002) and consumption of wine during the last decade of the 20th century increased by 80% (Directorate of Health, 2003) with drinking patterns becoming more similar to those in Western Europe. However, Iceland still holds the distinction of having one of the lowest rates of alcohol consumed in Europe, or almost half the mean rate of consumption in the EU countries (12.5 litres pure alcohol per year) but higher than the global average of 6.1 litres per capita consumption (WHO, 2011).

Thus strict alcohol legislation and a good treatment system have gone hand in hand in the effort to tackle the harmful consequences of alcohol abuse. Despite lower rates of consumption, the prevalence rates of substance use disorders have been similar in Iceland as in other countries. A recent study (Stefansson & Lindal, 2009) of the prevalence of mental disorders in the Greater-Reykjavik area using a random sample of three birth cohorts (born 1931, 1951 and 1971 and aged 34, 54, and 74 during the assessment) showed that the lifetime prevalence of the ICD-10 Mental and behavioral disorders due to use of alcohol was

10.8% with one-year prevalence for alcohol use disorder 6%, being more prevalent among men. These are similar to prevalence estimates based on DSM-IV diagnoses in epidemiological surveys in the US, showing prevalence of lifetime and 12-month alcohol dependence rates of 12.5% and 3.8% (Hasin, 2007).

Treatment of alcohol and drug use disorders in Iceland have involved different treatment settings with mental health services and specialized alcohol and drug services as the main providers of treatment for people with alcohol and drug use disorders. Services for this population began with the foundation of a rehabilitation home (Bláa bandið) based on AA principles in 1955, following the foundation of AA in Iceland 1954, with 2 meetings per week. Icelanders embraced the AA tradition from the start and today it is thriving, with about 300 meetings per week (see Olafsdottir, 2000 for the history of AA in Iceland). Substance use disorder treatment has emphasized the AA approach, and encouraged patients to engage in the AA community. The rehabilitation home was shortly subsumed into the mental health care system.

The next significant development in addiction treatment in Iceland was during the 1970's. A number of people went to the US for treatment and were exposed to what is called the Minnesota Model, consisting of intensive treatment for 4-6 week based on the 12 step approach of AA. Those that came back energized the AA society and decided to form a non-profit layman's association for the advancement of alcohol treatment in Iceland. This association, Society of Alcoholism and other Addictions (SAA) was founded in 1977 and had as its goal to inform and influence the general public on the nature of the disease of alcoholism and to establish treatment and counseling services. Thus the emphasis was placed on the disease concept and the treatment of alcoholism was seen as a health care

issue as opposed to a social problem. SAA's treatment for addiction was started that same year, 1977. SAA built Vogur Hospital, the National Center of Addiction Medicine, in 1980 with donations from the Icelandic people to serve as a national center for addiction treatment. Vogur Hospital thus gained the recognition of the nation as the main addiction treatment facility, a welcome addition to the services provided by the National Hospital. The availability and salience of treatment options grew dramatically and high rates of available treatments have been maintained ever since (Olafsdottir & Helgason, 1988). This high rate of available treatment is also unique to Iceland. The WHO have estimated world-wide that there are 1.7 beds per 100,000 population available for the treatment of drug and alcohol use disorders, with Iceland ranking the highest, with 52, 4 beds according to the report on Resources for the Prevention and Treatment of Substance Use Disorders (WHO, 2012).

Since its establishment SAA has become the leading treatment facility of alcohol and drug dependence in Iceland with more than 22.402 patients (15.880 males and 6.522 females (29.1%)) being treated at Vogur Hospital over the past three decades, a significant proportion of the nation (10,5 % males over 15 years of age and 4.4% of women of the same age). Approximately 1800 individuals are admitted each year to Vogur Hospital, with about 600 newcomers annually with roughly 2400 admissions yearly or 6-7 patients daily. This accounts for a large proportion of the treatment addiction services in Iceland. At the University Hospital Psychiatric Ward, about 500-600 patients are admitted yearly, mostly patients with concomitant mental (50%) or other physical disorders (38%) (Birgisdottir, 2013). Other facilities that provide rehabilitation services are outside of mainstream health-care.

Services at SAA's facilities, National Center for Addictive Medicine.

Most patients start their treatment in detoxification at Vogur Hospital. They are mostly self-referred. During the average stay of 7-10 days, patients are detoxified, mental and physical diseases are stabilized and psycho-education is started and the process of motivation for change begins. Personnel consist of healthcare professionals working full time, most are certified, as well as students in training. These include medical doctors, registered nurses and nurses' aids and certified addiction counselors. In addition to Vogur Hospital with its 60 beds for adults and 11 beds for adolescents, SAA runs two inpatient rehabilitation centers each with 30 beds with services tailored to specific groups (women, older men, younger men), three outpatient units, two in the capital Reykjavik and one in a town on the north coast, Akureyri, a recovery house with 20 beds for IV users without a home, and a social center.

After detoxification at Vogur Hospital, a majority of patients or two-thirds, continue treatment and rehabilitation. One-third goes for further therapy in a residential setting (4 weeks) and one-third to intensive outpatient (4 weeks) after detoxification. Recognizing that better outcomes are related to adequate treatment length (NIDA, 2009) residential treatment is the treatment of choice and treatment providers collaborate with the patient and aim for the more intense treatment options when possible and appropriate. Residential treatments are delivered in non-hospital settings outside of the city. Treatment consists of daily group therapy sessions and psycho-education as well as individual counseling and if needed (total of 60 hours of treatment). Self-help meetings are facilitated in order to help patients gain community-level support to support recovery and maintain abstinence after formal treatment ends. with an additional 3 months of weekly sessions (additional 12 hours

treatment). The follow-up phase of the inpatient option, consists of biweekly sessions for 3 months (24 hours total) followed by weekly sessions for up to 9 months (36 hours total). Group therapy and individual counseling sessions are based on principles and techniques of cognitive behavioral therapy and motivational interviewing and are delivered by certified addiction counselors. Treatment protocols have been based on NIDA recommendations (XXX) and training of staff based on materials available based on an evidence-based approach to treatment. Recognizing that addiction is a chronic disease, readmissions are not uncommon and are welcomed. About half of the patients that have come for treatment over the past three decades have been admitted only once to the hospital, and the majority, 78%, three or fewer times. A subgroup of patients need more assistance and about 4% have been admitted more than 10 times.

Another important aspect emphasized in SAA treatment services is relapse prevention and follow-up treatment is provided for up to one year as described above, with less intense outpatient services following the more intense options to closely monitor progress and support relapse prevention.

SAA offers a wide range of treatment options tailored to various levels of disease severity and different needs of patients. Treatment has become more tailored to specific needs over the years, and diversified. SAA offers detoxification and stabilization, variety of differently intensive options depending on for example gender and age, opioid maintenance therapy is offered, adolescent treatment and rehabilitation both inpatient and outpatient, specialized treatment for women, for men >55 year and for relapse prone men, treatment is offered for gambling, and counseling, education, groups as well as intense treatment courses are offered to families dealing with addiction. For the most severely affected patients there is a

possibility of long-term inpatient rehabilitation, few months, and an intensive outpatient therapy with assisted housing. Particular emphasis during the last decade has been placed on counseling one of the high-risk groups in a preventive effort, i.e. the children of patients growing up with the addiction.

Because SAA has been a lynchpin in addiction treatment delivering a high proportion of treatment to all Icelanders, the treatment cohort is nearly population wide and representative of the Icelandic treatment-seeking population. Clinical data have been gathered in a systematic way over the past two decades providing diagnoses based on the DSM-III-R/ DSM-IV as well as other clinical information. This database, which is unique, provides important information and allows for tracking trends in the patient population. To name a few, the make-up of the patient population has changed with the proportion of women increasing over the years, as well as patients becoming younger than before. The majority of patients are treated for alcohol dependence, but the proportion of these patients has given way to other substances over the years. In 2012 forty-one percent of patients had a primary diagnosis of only alcohol use disorder alone. while more than half the patients were also diagnosed with other substance use disorders in addition to alcohol or , 21% cannabis, 13% amphetamine; Iceland has never had a problem with heroin, however, opioids are abused, with about 4% of the patient population seeking treatment for opioid dependence. About 80 patients currently receive opioid maintenance therapy, mostly with buprenorphine but some with methadone.

The abuse of amphetamine has been a growing problem in Iceland. Less cocaine is available due to its high price but over the past decade the number of patients seeking treatment for amphetamine dependence has almost tripled and in 2012, 39% of all of patients seeking

treatment at SAA had diagnosis of amphetamine dependence in 2009, i.e. 600-700 patients reporting at least weekly use over the past 6 months (SAA report, 2010). In addition to the marked increase in amphetamine addiction, amphetamines are also being used intravenously thus markedly increasing the risk for hepatitis and HIV. SAA is seeing most of the injectors as it is estimated that 90% of IV users have sought treatment at SAA. The prevalence of hepatitis C was studied among IV amphetamine users that entered treatment at SAA between 1991 and 2006 and it was found that approximately 30% were infected. Infections were related to the frequency of injection - 14% of patients that injected amphetamines less than ten times in the previous year were infected while among those who injected regularly, 60% were infected. Outside this population of amphetamine injectors, hepatitis C infections are rare in Iceland as is HIV, though the situation could change rapidly if injecting use continues and spreads. Currently the abuse of methylphenidate, mainly provided by medical subscription has rapidly risen the past years, and Iceland is second only to the US in the medical consumption per capita of methylphenidate from 2004-2009 (Kaye & Drake, 2012). The other iv substance used in Iceland is also prescription drug, mainly opioids.

The use of amphetamines by adolescents is another area of great concern as use in this age group has steadily grown over the past 15 years. For example, among those aged 19 or less and seeking treatment at SAA, over 92% have tried amphetamines and over 60% reported using amphetamines weekly for six or more months. Previously, regular users in this age group entering treatment at SAA were few (less than 30 per year before 1995) but the numbers recently doubled, and sometimes tripled, with admissions ranging between 100-150 regular teen-aged users annually, mostly 18 or 19 years of age.

Looking at all diagnoses, primary and otherwise, the proportion with cannabis addiction has doubled over the past 20 years and now about 35% of the overall patient population in treatment meet diagnostic criteria for cannabis dependence. Among those younger than 25 cannabis is the main substance of abuse but multiple drug use is the rule, 76% of those 19 years old and younger meet criteria for cannabis dependence and 62% for amphetamine dependence (2009). Thus international trends are reflected in the patient population.

Treatment Outcomes.

Studies on treatment outcomes have been very few in Iceland. In an Icelandic study on the genetics of addiction (Tyrfingsson et al. 2010) survey data collected on abstinence rates of 920 patients previously seeking treatment at SAA, showed that 59% had been abstinent for the past year, and for the and 51% for the past two years. Twenty-seven percent reported having used alcohol or other drugs during the past month. This gives an indication of treatment success in regards to abstinence rates. These rates of remission of disease are quite good considering the chronic nature of the disease. This is an area in need of further research.

The outcome of Vogur hospital, which is so readily accessible, can be evaluated by the drop-out rate. About 20% of all admissions do not finish the recommended length of stay (average 10 days), but 70% do get discharged with a plan of next step of care, inpatient or outpatient, which is regarded a successful completion of the stay.

In regards to principles of addiction treatment, SAA's treatment (NIDA 2012)in Iceland has most of the suggested principles. It provides a comprehensive treatment approach for a medical disease of the brain, a variety of options at different levels of care. It offers

medically assisted detoxification and a well structured psychosocial treatment approach. The motivation and intent of the patient is re-evaluated repeatedly, and treatment planning negotiated according to changing patient's needs. It emphasizes a continuum of care like with other chronic diseases, where relapses are seen as a need for increased treatment. The access of treatment is exceptional, as no specific referral is needed and admission is free of charge. Subgroups of patients receive special treatment options such as adolescents, women, older, relapse prone, opioid dependent and pregnant women get immediate care. Collaboration with specialty care is very good, such as psychiatric, infectious disease, emergency room and social services. Screening for blood born infections is thorough, other medical and mental disorders are treated as needed and referral to special care is seen through. 12-step self-help groups are introduced and encouraged. Families get special treatment outpatient.

The treatment at SAA has preserved the traditional inpatient rehabilitation, under pressures of delivering treatment in an outpatient setting only in the brief term. The relatively short inpatient treatment (1-5 weeks) is delivered in a context of longitudinal care with prolonged aftercare in outpatient settings (12 months). However, staying in treatment is the most important aspect of any therapy, and at SAA it has been that inpatient settings are more conducive to adherence to treatment and are thus vital to ensure good treatment outcomes. A big proportion of addicted people seeking help are prone to drop out of outpatient treatment as the initial intervention.

References

- Birgisdottir, K. (2013). Gender differences in rates of concurrent alcoholism with major depression generalized anxiety. (In Icelandic). Kynjamunur samsláttar alkóhólisma við þunglyndi og almenna kvíðaröskun. Unpublished BS thesis, University of Iceland.
- Directorate of Health (2003). Alcohol and other substances of abuse: Various statistics. (Áfengi og önnur vímuefni: ýmsar tölulegar upplýsingar). Report of the Council on the prevention of alcohol and drug abuse (Áfengis og vímuefnaráð). Reykjavík, Iceland.
- Directorate of Health (2012). Smoking among Icelanders 1989-2012 Electronic version. (In Icelandic: Reykingar Íslendinga 1989-2012 [Rafræn útgáfa]. Retrieved from <http://www.landlaeknir.is/>
- Hasin, D. S.; Stinson, F.S., ; Elizabeth Ogburn, E., Bridget F. Grant, B.F., (2007). Prevalence, Correlates, Disability, and Comorbidity of DSM-IV Alcohol Abuse and Dependence in the United States: Results From the National Epidemiologic Survey on Alcohol and Related Conditions. Arch Gen Psychiatr.;64(7):830-842. doi:10.1001/archpsyc.64.7.830.
- Kaye & Darke, (2012). The diversion and misuse of pharmaceutical stimulants: what do we know and why should we care? Addiction, 107, 467-477
- Makela, K. (1986) Attitudes towards Drinking and Drunkenness in Four Scandinavian Countries. Annals of the New York Academy of Sciences Volume 472, Issue 1, 21-32
- Makela, K. (1981). Scandinavian Drinking survey: construction of composite indices of Drinking attitudes and personal experiences related to drinking. Oslo: National Institute for Alcohol Research.
- NIDA 2012, NIH, NIDA; Principles of Drug Addiction Treatment, a research-based guide, third edition, revised 2012, NIH Publication NO.12-4180. Retrieved from <http://www.drugabuse.gov/publications/principles-drug-addiction-treatment>
- NSDUH (2010). Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings. U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Substance Abuse and Mental Health Services Administration Center for Behavioral Health Statistics and Quality. Retrieved from <http://www.samhsa.gov/data/nsduh/2k10nsduh/2k10results.htm#7.3>
- Olafsdottir H (1998). The dynamics in shifts in alcoholic beverage preference: effects of the legalization of beer in Iceland. Journal of Studies on Alcohol, 59:107–114.
- Olafsdottir H (2002). Legalizing beer in Iceland. In: Room R, ed. The effects of Nordic alcohol policies: analyses of changes in control systems. Helsinki, Nordic Council for Alcohol and Drug Research:95–116.

Olafsdottir, H. and Helgason, T. (1988). Admissions for treatment of alcohol and drug abuse 1975-1985. The Icelandic Medical Journal, 74, 165-7.

SAA (2010). Annual report (2007-2010). SAA: Reykjavík, Iceland

Statistics Iceland (2013). Iceland in figures 2013 (Landshagir). Retrieved from <http://www.statice.is/pages/916>

Stefansson JG, & Lindal E. (2009). The prevalence of mental disorders in the Greater-Reykjavik area. The Icelandic Medical Journal 2009; 95: 559-64.

Tyrfingsson, T., Thorgeirsson, T. E., Geller, F., Runarsdottir, V., Hansdottir, I., Bjornsdottir, G., . . . Stefansson, K. (2010). Addictions and their familiarity in Iceland. Ann N Y Acad Sci, 1187, 208-217.

United Nations' Human Development Index (2013). Human Development Report 2013: The Rise of the South - Human Progress in a Diverse World. United Nations Development Programme Retrieved from http://hdr.undp.org/en/media/HDR2013_EN_Summary.pdf

World Economic Forum (WEF) (2013). The Global Gender Gap Report 2013: Insight Report. Retrieved from <http://reports.weforum.org/global-gender-gap-report-2013/#=>

WHO (2012). Alcohol in the European Union: Consumption, harm and policy approaches. WHO Regional Office for Europe. Retrieved from http://www.euro.who.int/_data/assets/pdf_file/0003/160680/e96457.pdf

WHO 2013. Status Report on Alcohol and Health in 35 European Countries 2013. Retrieved from http://www.euro.who.int/_data/assets/pdf_file/0017/190430/Status-Report-on-Alcohol-and-Health-in-35-European-Countries.pdf