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EFFECTS OF THE LIBERALIZATION OF THE SALE OF SYRINGES ASSESMENT REPORT

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This report presents the research results of an assessment of the effects of the liberalization of the sale of syringes. The study started on December 1987 and data were collected in five French cities during the first four months of 1988. It was designed as "street study" and conducted among IV drug users who were not in treatment at the time. This is the main reason why this sample may be different from those drawn from hospitals and jails.

The street study employed the ethnographie method. This method is quite interesting in that the collected data are more reliable and more representative. Data is always related to the methods and the setting of their collecting. In-treatment samples are not representative of drug users as a whole. Moreover data collected in a therapeutical or penal field depend on some aspects related to the working of those institutions and data interpretation may be distorted by a prevalent medical belief.

Firstly we have to say that we do not consider drug users as ill persons living a permanently careless life and being by definition unable to change their life hygiene or even being opposed to improve their situation.

The advent of AlOS is certainly not likely to improve drug users' lot, but it impacts as a radical change in drug users' environment and this change is more materialized by the liberalization of the sale of syringes. Drug users' life style is considered to represent a coherent set of answers to a given environment. As acquired characteristics those answers can change and become adapted to new conditions. In the following, such changes in the context of the liberalization of the sale of syringes are described

1. METHODOLOGY

1. Selection of the street sample.

In each of the following five locations a street sample was selected: in Paris, the metropolitan suburbs Créteil and Maison Alfort, Metz, Bordeaux and Marseille. The reasons for this selection were on one hand the geographical distribution of locations and their difference in size, and the other hand the relations we had established previouon sly with fieldworkers in each of these locations.

Fieldworkers were required to contact IV drug users only, that is to say - in France - mainly heroin users. We asked to select people of different age, different social and cultural origin and with different life styles. For instance, in Paris a few regular prostitutes were contacted as weil as a few more discrete persons working in showbusia good ness. Through this sampling, we certainly have account of actually most current pratices.

The snowball sampling method was employed so that each interviewed person could introduce the fieldworker to another drug user. In Paris we thus had the opportunity to deeply investigate the district of "La Goutte d'Or". We now have a coherent and representative sample of the "street action" in this district, as one of the districts we studied in Paris.

We were given the opportunity of working at the location of Narcotics Police of Marseille by Superintendant B. GRAVET, Director of the Central Office for the Repression of Illegal Substances Traffic. In Marseille, drug users could thus be contacted at the time of their arrest, or during Police custody. For a proper situational assessment, it was important to find out about policemen's attitudes and practices.

2. Selection of the control sample.

absence of comparable studies in France, and of Given the any systematic data collection on this matter the control was selected in hospitals and in treatment centers sample located in the five cities: in Paris, hôpital Laennec, Association Charonne, and Centre de Postcure des Loges in Etretat which attracts drug users from Paris; in the hôpital Henri Mondor in Créteil and Centre suburbs. Spécialisé pour Mineurs in Emerainville; in Bordeaux. Charles Perrens: in Marseille, Intersecteur hôpital Spécialisé and in Metz Centre Hospitalier Spécialisé. These institutions - which regularly attract drug addicts represent a good sample of French medical institutions.

3. Data collection.

A questionnaire was especially designed for this study and given to 157 out-of-treatment subjects and 123 in-treatment subjects. The aim was to get general data about age, sex, socio-cultural origin and socio-professional situation, drugs of use, history and frequency of use, medical and legal history, practices related to purchase and use of syringes and condoms.

According to our work method since several years now (INGOLD INGOLD 1988), the work was founded on the complementaand rity between quantitative data _ collected with а questionnaire and qualitative data as findings of a close styles and of the observation of drug users' street life analysis of semi-directive taped interviews. 37 of all the we collected taped interviews have been completely transcribed.

A last methodological point has to be underlined. It is related to the difficulty in rigorously evaluating

this case sharing or not sharing syringes is behaviour. In not a simply and directly reachable notion. As a practice, it refers as much to an intention as to a complex set of environmental conditions. Sharing or not sharing is depenthe context. A given subject who asserts never dant on sharing syringes may be very likely to specify afterwards that he gives old syringes to a friend, or that he regularly uses his spouse's equipment. "Never" may also be limited to spatio-temporal conditions (at home, in the day and so sorne on...). The different elements constituting sharing or not sharing practices were distinguished: frequency of drug use, well as modalities in purchasing drugs and syringes as subjects' representations of AlOS and seropositivity.

4. The study among pharmacists.

The assessment of liberalization of the sale of syringes has to take into account pharmacists' attitudes and practices. during the same period information was collected in So A special questionnaire designed for pharmacies. was pharmacists. It aimed to evaluate the modalities of the free sale of syringes, and the possible difficulties pharmacists could have. 61 pharmacists took part in this study. Some of them went so far as to propose introducing us to their others (14) who are mainly located in Paris clients. Sorne refused to take part in the study without giving any further explanations.

II. GENERAL CHARACTERISTICS OF THE POPULATION

1. Age and sex.

The 157 street sample subjects are between 18 and 37 years old. The mean age is 27 years. They are older than the subjects in treatment (their mean age being 25 years). The ratio of males and females cornes close to the usually described ratio: 33% of females and 67% of males.

2. Nationality.

street sample subjects are French in 89% of the cases. Young people coming from migran groups are 28%. The most frequent countries of origin are Algeria, Morocco and Italy. This reault is similar to what is uBually described in other samples.

3. Parents' marital status.

The majority of the subjects' parents are married. In 21% of the cases they are divorced or separated. Nevertheless, the high frequency of dissociatedfamilies, widowed mothers or fathers and unknown parents has to be underlined. On the average, subjects have three brothers or sisters,

4. Parents' profession.

All social backgrounds of origin are represented, yet the middle and the disadvantaged categories are the most frequent.

5. Subjects' home.

In half of the cases (50%) subjects have a personal home. In 33% of the Cases they live at their parents' home. 11'117% of the cases they have nb fixed address.

6. Family status.

Most often subjects are single (60%). In 10% Of the cases they are divorced or separated and in 30% of the cases they live as a steady couple. It must be underlined that 26% of the subjects have one or several children. 7. Schooling level and professional situation.

Primary school level was reported in 16% of the cases. High school level was reported in 71% of the cases but most had dropped out. 13% of the subjects had some university education. 50% of the subjects had professional no education. Half of the subjects are "inactive". They work in 39% of the cases and they are mostly often workers, laborers. Unemployment (22%) and employees or unqualified precarious situations (disability, illness, lack of any social integration, prostitution) are very frequent.

8. Drugs of use.

The most frequent drugs of use are heroïn (99%), cannabis (52%), cocaïne (25%), tranquilizers and barbiturates (20%), codeine (18%) and alcohol (6%). The same distribution has among subjects in treatment. Alcohol was taken been found into account only in the case of heavy and regular use. of the time beer was drunk in great quantities. Most Generally speaking, polydrug use has been found in 55% of the cases and most often heroïn, cocaïne, cannabis and prescription drugs were associated. This rate of polydrug use is frequently connected with the length of addiction.

In the majority of the cases (65%) the first heroin use dates back to the period between 1977 and 1982. It is often related to a severe addiction (43%). In other cases heroïn use is less frequent: several times a week (36%), once a week or less (21%). Cocaïne use is similar to what has been described among imprisoned drug users: a secondary drug of use most often injected in association with heroïn.

9. Medical and legal history.

Most subjects know of the existence of a network of treatment centers, but only 60% of them have sought

When detoxification was done treatment. under medical control it was most often performed in treatment centers hospitals (42%),with the (45%).in general help of a physician (40%), or in private general a psychiatrie This fact confirms the great importance of hospital (26%).the non-specialized sector in taking care of drug addicts. But it has to be to underlined that in a medical institution detoxification does not necessarily imply medical a follow-up. Most often detoxification is isolated. Imprisonments are also very frequent (52%). Subjects are very often multiple offenders (2,4 imprisonments by person on average). A less than 6 months stay in jail is usual. In the cases the last imprisonment dates back to the 49% of period between 1986 and 1988.

10. General characteristics of the in-treatment sample.

123 IV drug users were sampled from hospitals and treatment centers in Paris, the metropolitan suburbs, Bordeaux, Etretat, Metz and Marseille. In the following some outstanding differences between both samples are described.

distribution by sex is 68% of males and 32% of females. The They are mainly heroïn users and polydrug users (58%) as the street sample subjects. The mean age is slightly lower (25 years) and heroïn use is a bit more recent. In 67% of the heroïn use dates back to the period between 1980 and cases 1985. This last point is not surprising and corresponds to has already been described about treated drug addicts. what They are most often severely addicted -what is not different street sample- and have had many previous detoxificafrom tions. They are less often imprisoned (29% against 52%).

III. NEEDLE SHARING AND HEALTH DATA

1. Needle sharing.

52% of the street sample subjects reported that they only used syringes they had purchased and that they never shared them. This fact is very important and shows that interviewed are quite aware of the risk related to needle drug users sharing. Although we cannot be certain it seems that this new attitude has progessively emerged since 1985, that is to say long before the liberalization of the sale of syringes. In the other cases (48%) it was reported to continue sharing needles, or to sometimes use syringes they had not purchased themselves. This high rate shows that the knowledge of the risk of HIV infection is not sufficient to change behaviour. Those seropositive or not seropositive subjects think that some precautions are sufficient (for example, limited sharing with some person(s)), or that those precautions were not necessary in their own case (for example, a seropositive person sharing with another seropositive person). 3% of the subjects never purchased the syringes that they used. Here of course the risk of infection (and of spreading the virus) is at the top level. Those preliminary findings show that drug users could widely benefit of specifie information and prevention actions.

40% subjects in treatment reported of the that they purchased the syringes they used and did not share them. The others (40%) continue to share: 17% purchase and share, 35% sometimes syringes they purchase and 8% never purchase use syringes they use. Taken as a whole, treated and not treated seen as changing their behaviour towards can be subjects restricted needle sharing. Nevertheless, treated drug users seem to share needles more often than not treated subjects (60% against 40%). It means first that at resorting to treatment is not by itself sufficient to effect behaviour changes. Furthermore it should be emphasized that it seems to be more difficult for younger - and undoubtedly more fragile - subjects to adapt themselves to the new requirements of reducing risks of infection. Drug use is less regular among teenagers but needle sharing seems to be more frequent.

2. Needle single use.

Needle single use is not frequent and was only reported by 31% of the subjects. Subjects using a needle ten or more times are not exceptional. But on the average a needle is used four or five times. This finding is similar in the control sample. Here again there is a high risk situation because sterilizing needles is not a current practice. Many IV drug users do not know that the most effective and simple means consist in washing the needle twice with bleach and then rinsing it with water.

3. Condom purchase.

Condom use is not frequent and not regular. A quarter of the street sample subjects purchased one or several condoms and this purchase was aimed to protect them against HIV infection. Nevertheless, dates of the first condom purchase are rather recent: 1987 and 1988 in the majority of the cases. Condom purchase is only a bit more frequent in the in-treatment sample.

4. Abcesses, hepatitises and HIV.

As expected hepatitises and abcesses are very frequent and were respectively reported in 23% and 42% of the cases. We have to point out that it is a minimum assessment particularly regarding hepatitis which is renowned for going unnoticed.

Most subjects (76%) have been tested for seroprevalence. It

confirms they are widely anxious regarding AlOS. In 72% of the cases tests were performed between May 1987 and January 1988.

43 of 120 tested subjects are seropositive and 6 have AlOS. So the rate of infected IV drug users is 40%. This seroprevalence is higher than in Chicago (30%) and lower than in New York (about 50%). These findings could be called alarming without exaggeration.

The situation is almost similar in the in-treatment sample. Previous abcesses and hepatitises (respectively 15% and 54%) are related to the very high frequency of HIV seropositivity: among 102 tested subjects 2 have AlOS and 45 are seropositive. Thus the rate of infected IV drug users among the tested subjects is 46%.

However we think that these percentages have to be discussed further: they have been calculated by only taking into account tested subjects. Consequently, numbers are increased. If the total number of healthy carriers and ill persons is referred to the whole of both samples the total percentage of infected subjects is 35% - which is still a great number but according to our opinion closer to the reality.

5. Seroprevalence test.

Performing а test was decided in somewhat different circumstances in the street sample and in the in-treatment sample. Most often it was decided ta be tested in hospitals and women mainly decided on the occasion of pregnancy checkups. More of the street sample subjects were tested in jail, by general medical physicians and in various circumstances (gift of blood, military hospital, community clinic and so on...). Treated subjects were most often tested in traditiohealth structures nal and particularly in treatment centers.

6. Information on the free sale of syringes.

were asked when they had heard of this measure for Subjects the first time. Except one subject who reported not to know about it, a11 others had heard about it very quickly: the majority in Mayor June 1987 or even earlier. In more than cases (56%), this measure came to be known by half of the the media (TV, radio and newspapers). In other cases it came be known by word of mouth. The quite significant role of to pharmacists should also be underlined. They obviously well contributed to spreading the information. The speed of its circulating shows how long-awaited this measure had been.

7. Modalities of syringes purchase.

Syringes were regularly purchased in 62% of the cases, occasionally in 24% of the cases, very occasionally in 7% of the cases, and never in 7% of the cases. These data are of course related to needle sharing.

Most often (52%) syringes are purchased one by one, possibly in pairs (64%). But 26% of the subjects purchase syringes in quantities of 10 and sometimes of 20 or 30. Except in a few cases (10%), only the syringe is purchased and no other product (prescription drugs or cosmetics).

Purchase is generally made in any drugstore (62%) or preferably in the same one or several drugstore(s) (31%). But 7% of the subjects purchase syringes always in different drugstores. This indicates some uneasiness which a not insignificant number of subjects feel with this step.

There is no significant difference between both samples and between males and females. This step is an individual one and almost everybody (87%) goes and purchases one's own equipment for oneself.

IV. PHARMACIES.

Generally speaking pharmacies were randomly selected, but in order to ensure some range, stratified according to their size, with or without a self-service department, integrated or not in a shopping center. All districts of Paris were visited. The distribution of pharmacies which accepted fieldworkers is as following:

Paris			31
Metropolitan	suburbs	••	10
Metz			11
Bordeaux			9

This sample does not claim to be absolutely representative of French pharmacies yet it undoubtedly conveys actual practices with regard to the free sale of syringes. Moreover fieldworkers were often very welcome, and some pharmacists insisted on bearing deeper witness to their own practices and difficulties. In Paris one pharmacist spontaneously offered to introduce us to his regular clients.

Findings confirm that syringes were sold to drug users before May 1987, at least in 23% of the cases. At this time syringes were sold with vaccins and serums or alone. Nevertheless, after May 1987, 8% of the visited pharmacists refused to sell syringes to drug users.

Sale frequency is rather high in the 56 pharmacies which reported the sale of syringes. In half of these, syringes are sold once or several times a day. In other cases frequency is lower: several times a week (30%), once a week or less (9%) and once or twice a month (11%). Frequency is higher in the Paris region where 65% of the pharmacies sell syringes everyday. As expected in the main locations for traffic and prostitution in Paris 100 syringes a day are currently sold.

According to pharmacists' opinion sales are stable or increasing. A more detailed analysis of the data indicates that this feeling of an increase is more often present in Paris than in the other cities and more often present in Bordeaux than in Metz.

Pharmacists reported that most often single syringes are sold (87%). In a few cases packages of ten syringes are sold (13%). One syringe costs between 2 and 3,20 FF. But in 16% of the pharmacies the price is 5 FF. In the case of one such pharmacy which is located in the Paris district of "La Goutte d'Or", a public notice on the door indicates that a prevention association in the district is given 2 FF out of the 5 FF price for one syringe.

Most often syringes are sold without anything else, except a few times with prescription drugs. Only 6 pharmacists reported they sold condoms to syringes' clients. The pharmacists' description of their clients is quite similar to what we know furthermore: they are young (from 22 to 25 years old) and more often males than females. Prescription drugs which are purchased together with syringes by clients are most currently Neocodion and Elixir Parégorique. But it is important to underline that syringes' purchasers and prescription drugs' purchasers are different clients.

Liberalization was effected very quickly: in May 87 in 52% of the cases and during the next two months in 29% of the cases. In the other cases, it was effected between September and December 87. Precocity of applying the liberalization of the sale of syringes is related to usual sale frequency. This indicates clearly that drug users and pharmacists get very quickly adapted to this new measure. At the same time,

and as expected, the sale of other products containing a syringe sharply decreased.

Pharmacists were systematically interviewed on difficulties they might have with drug users. It turned out that such difficulties mainly concerned polydrug users asking for Neocodion, Elixir Paregorique and other prescription dregs (particularly tranquillizers). Syringe clients are described as being discreet, polite and not staying on at the shop. But a few pharmacists complain about the clients because of unpleasant experiences they have had with polydrug users' group or because of difficulties they have had beforehand with drug users in general.

However these complaints are not frequent and occur when pharmacists are reluctant to sell syringes, when they sell syringes at a higher price or when they exclusively sell ten syringe packets.

Overall the pharmacists' complaints are not automatically related to the measure of liberalization of the sale of syringes. During our visits we could measure that syringe purchasers and prescription drugs purchasers are really drug users. Often different clients even though both are alcoholic and clearly older, down-and-out. sometimes prescription drugs clients typically correspond to over 30 years old heroïn users who are not socially integrated, are not detoxified and live in poverty.

Pharmacists' difficulties are reported to be mainly due to aggressiveness although it is considered to be drug users' decreasing since May 87. Aggressiveness is most often connected with pharmacists' refusing to sell A and B classified prescription drugs without prescription. In a few cases the relation between pharmacist and drug user is really difficult: "they are still threatening and violent", you refuse medicines without precription they become "When

threatening and sometimes you have to call the police", "They are arrogant especially when they get withdrawal", "They are not easy. They are unhappy if 1 sell ten syringe So 1 sell one by one", "Here we are quiet. The packets. police are staying just on the other side of the street". These difficulties are often real and underline the fear overcome - from previous burgleries, pharmacists have to and downright attacks. 20% of reported verbal threatens difficulties concern theft or more exactly pilfering. But it evaluate the difference between facts difficult to is (shoplifting) and value judgments that pharmacists project on this population (eg "They are thieves").

A last reported difficulty (20%) concerns drug users' behaviour in the shop, "They are quite undesirable clients. Before free sale 1 could throw them out. 1 refused to give them anything. Now 1 am required to do it", "They are not very presentable / It leaves much to be desired / It's disturbing / It's the limit / What do they take people for?", "... deplorable behaviour 1... tiresome as clients / the creeps to clients / they disturb clients / they give they are in a hurry and want to be served immediatly." But this is not a general feeling. On the contrary, one can also hear: "They are rather nice, not bad guys, polite", "they are discreet", "they try to explain, to talk."

have to be related to the These exasperating complaints often evoked ethical problem of selling prescription drugs as а substitution for drug of addiction. This is the question of a reasonable threshold which is answered by each pharmacist in his own way. It is reasonable to say that for users and pharmacists have the time being drug made a the tricky process of the liberalization of the success in sale of syringes. This process contributes, furthermore, to a clarification of each other's roles and limits. This contributes to a greater easing of tension between the parties. However, in this new situation and directly related to illegal drug use, their lack of training and their desire to better understand what is being done in terms of prevention among this population.

V. NATURAL HISTORY OF INJECTING: PRACTISE AND SPEECH

1. The first heroïn use.

Generally heroïn is first snorted and not injected. When it is first injected somebody else almost always performs it. Self-injecting first use is quite exceptional. First use generally occurs in a group whose members also use heroïn and most often snort it. It is only later and with different persons that the first heroïn injecting occurs.

2. A necessary learning.

Change from snorting to injecting is explained as an economical necessity: "By snorting you need more heroïn, by injecting you need less." With the same quantity of heroin injection effect is more intense. When heroïn use the increases above a limit it becomes necessary to inject it in order to maintain drug effects, "1 didn't feel anything more forced to shoot it." When change to snorting, 1 was by injecting occurs it is done in various time frames: from several weeks to several years. But however it may occur it is first done with outside and personalized help.

First injecting is generally done by a close friend and sometimes a mate: in any case by somebody who has a precise and often tender memory, who inspired confidence or at least was invested with some prestige. Even in the case of a first self-injecting experience, partners were present. Learning is necessary. Even if the substance is known by those who snorted it before, technical knowledge of equipment and its use remains to be learned. As one subject explains: "If you are not shot by anybody at first you can't know how to prepare it. You can't guess... Injecting yourself in the vein is not obvious". Another subject who after six months of snorting tried to inject himself: "It turned out to be a fiasco! It was a flop! 1 didn't find the vein. It was in shambles. 1 shoved everything beside. Zero! Negative! Missed! The next day a friend of mine fixed me."

3. The first shot.

Most subjects reported they were ill. Vomiting, feeling of sickness, torpor, half-sleep have left a rather unpleasant memory. Some of them reported they felt afraid and others they had no time to appreciate it: "The first time, say, l hadn't time to appreciate... Well, 1 knew 1 was high but l really realize it." A few speak of pleasure and the didn 1t "flash" which happens just after injection of the drug. But divided. The term "flash" moreover remains opinion is the strongly connoted to the experience of the 1970' period. It a term that is less frequently used, " (About the first is shoot) It is a big flash... I'm annoyed because 1 repeat terms 1 heard, 1 don't like this gibberish."

In retrospect to the first injection, other points are mentioned as important differences from snorting. The speed of effect is put forward or - if there was no snorting before - quality or quantity of injected drug. Finally if there is a memory of this occasion it seems mainly to be the memory of a set and setting, III have a good memory of it but not so much due to the shoot because we got ill, we vomited and so on... What I liked was the set, the people I stayed with, that's what I liked!"

4. Self-injection: a point of no return.

Change to self-injection institutes a break in life. Selfinjecting introduces one to another practice, another form of heroïn use. Representations of this change imply an idea of loss: loss of a set, of an ambiance described as being idea of constraint, a feeling of regret. Change happy, an to self-injecting often occurs in the occasion of an absence separation. "My friend was not here and well, 1 got or а afraid. 1 had to do it, 1 did it. It hurt me, 1 stood up. should never have done it." It appears more clearly for women in the context of a separation. After they have to become self-sufficient. But it may also occur when subjects lose their initiation status, "It is a chain, you have to follow... 1 didn't even dare to look at the needle. 1 said to myself: Go on! I'm going to do it!"

Nevertheless, self-injecting is also related to the first withdrawal time. It sends the subject back to himself/herself, to his/her tireness and his/her lonliness. Whatever it could be about - whether modalities of changing or what it opens onto - the speech changes in tonality. It expressed sadness, indeed distress and almost the idea that a point of no return had been transgressed.

5. The gesture: making a hole in one self.

First injecting is reported as being significantly distinguished from prior snortings if only because of intensity of felt effects. Further analisis of the usual practice makes this distinction become injecting more pronounced. There emerges a qualitative difference between snorting and injecting. Both practices are mutually exclusive: either you inject or you snort. The substance is not taken into account even though the quality of the heroîn is sometimes in hindsight mentioned to justify one or the other practice. Usual injecting implies more involvment: "A junk who snorts is not a real junk. A junk who snorts will always wangle an easy detoxification. A junk who injects doesn't easily get detoxicated."

At level of injection, gesture is distinguished in itself

from implement and substance. It takes on an existence itself; for example the typical occurence of drug addicts injecting themselves water. Gesture is seeked and appreciate for itself. Skillfulness and clumsiness are evoked. Know-how increases the gesture maker's standing, "1 myself shot very hard persons. 1 sometimes fixed M. who still loathes **it.** 1 was absolutly not apprehensive. In contrary 1 shoot very well, 1 don't hurt."

Here speech becomes epic bringing the body into play piece by piece: foot, arm, vein, nerve or tendon, blood. "When l pulled out blood it was good that is I was in the veine But when 1 wanted to shoot ... 1 haven't still understood. The Needle was jammed, 1 could not shoot. So 1 pulled out blood again, 1 was going to do it again, 1 couldn't. 1 pulled out again and 1 saw that needle began to fill up, ok? 1 was less seing if 1 was inside or note It was mad! And 1 and less felt like shooting, ok? Oh la la! 1 lost a lot because l it beside, because in fact 1 went out of the vein, 1 shoved went inside and so on...lt became an unbearable shamble. It was dangerous. Fortunately 1 have been lucky!"

From this point of view infections and abcesses do not take part in register of illness. An abcess is а visible and palpable wound, the result of a missed gesture. It is not a question of needle hygiene but of the fact that the needle could not be adapted: too big or too small a needle and gesture becomes uneasy. Nevertheless the pleasure they is somewhat a problem to them. Here precisely the idea feel of something abnormal, of vice, indeed of something pathological emerges, "1 felt like doing it, 1 felt like ashamed to making a hole, it's incredible... I'm say that and 1'm not because 1 think it's the same for all junkies: to make a hole in one's skin, in one's arms even with shit. Because in 86 only shit could be found in Bordeaux."

6. The implement.

Seventies needle sharing had In the become а current practice. Syringes were scarce, initiation into good needle use progressively disappeared and the number of new heroin users suddenly increased. Ali those facts contributed to make needle sharing a usual necessity for heroïn users. A syringe which had not been shared before stopped being considered as a personal - indeed close - object. It gained in exchange value as hygienic measures were reduced to a minimum.

During that time, hygienic measures - when there were some remained very basic, "It was in the middle of the night, no possibility to find new equipment. Everything was dirty, water was dirty, all was really in awful conditions. We just warmed the needle in the flame after having rinsed it in water of the gutter, saying to ourselves: weil, at least it's minimized! "

syringes were purchased in drugstores before May 1987. But Heroïn users could purchase single syringes in a few pharmacies but most commonly they were given syringes with vaccines According to general or serums. opinion new syringes were hard to obtain. Vaccines were expensive. Their 30 FF. Several vaccines were reported, price was about mainly Ribomunyl. Only the needle was kept, the vaccine was thrown away. One of the drug users' difficulties lay of repetition of this purchase. Face with the course the in pharmacists' reluctance or refusal they developed strategies aimed to make belief they were a diabetic's grandson or a handyman (for example: "We told them we needed to put glue out-of-reach places..."). However while doing this they in also dreaded to be given over the police, "and to moreover, it was forbidden to carry a syringe on oneself. 1 almost flipped. I said to myself: aren't they going to cali

the police?"

Another common possibility was to be in touch with a nurse, a male nurse or a hospital staff member. Glass syringes used the seventies came from this source. In a few cases, in hospital members belonged to heroîn users' groups, and used heroln themselves. But here again the availability of syringes went on as long as the relation went on. Syringes might also have been stolen in hospitals or in pharmacies. Sometimes needles were found at home when a parent's disease regular injections. It is also reported required that needles were bought from a diabetic. Finally syringes might have been brought back from Amsterdam, but a regular traffic never existed. Sharing was a standard practice, and for a adequate, allowing everybody group one syringe was to inject. The syringe was only a means, an implement, and as AIDS was unknown it was always possible to borrow long as one. By the way, many subjects do not remember where the needle they used for their first heroln injection came from.

This situation had very concrete effects on injecting practices. On one hand equipment was often not adapted to too big needles which left tracks, too small the use: needles which slipped on the skin. Intramuscular or intraneedles dermic were used to practice intravenious injecting. On the other hand - given the difficulty to get new needles - it was necessary to prolong their use. In one way or another the needle was sharpened till it became worn current practice consisted in using the down. The most scraper of a box of matches. There were various tricks, "I fixed with completely unlikely and horrible whatsits, often with intramuscular needles. Well, it's not obvious, you are using а pale... Often we did up old needles, we made some assemblies such as cutting anti-rabies vaccines needles and on, trying to readapt. It was rather putting other ones way, that's what causes bumped disastrous. And, by the veins. drug addicts are less ruined by needles than Now

before." Using worn or not adapted equipment undoubtedly contributed to physical damages among IV drug users. Moreover, being scarce and expensive, syringes had gained in exchange value. For example, the owner of a syringe could get a little heroîn in exchange for lending his syringe.

It would seem that the situation began to change from 1983-85 when the first AlOS cases came to be known among drug users. At this time seroprevalence tests were not reimbursed by social insurance and very few drug users knew wether they were seropositive or not. Moreover - as it has been shownsyringes were not easily available. For these mainly economical reasons the situation became particularly critical 1987, when the liberalization of the sale of in February announced. This announcement contributed by syringes was itself to the drug users' awareness of danger. Some of the subjects who had begun heroïn use in 1980 reported that they had taken a few precautions against hepatitis at that time: warm to rinse the needle, to boil it or simply to it. "we boilt water and put the needle into it during ten minutes because at that time we were afraid of hepatitis... But it would seem that ten minutes are not enough to destroy the hepatitis virus. Maybe that's why 1 got one in 1983."

VI. ACTUAL BEHAVIOURS

1. Purchase of syringes.

The liberalization of the sale of syringes, together with reimbursment of a seroprevalence test by the social the insurancehas modified the situation. As soon as those became on behaviours. known they had effects measures Purchasing syringes in pharmacies soon became a normal practice, even if needle sharing did not disappear.

The wider availability of syringes - and their cheap price has contributed to discontinue the habit of keeping old needles, and the connected practices intented to prolong their use: "If you're able to afford to buy a quarter, you can surely buy 3 or 4 syringes at 2,50 FF !" In small provincial towns the situation has evolved slower and the fear of being spotted as a drug addict remains: "Rather than going into details of what's a drug users' syringe 1 ask for a vaccine."

Needle sharing goes on but is more limited. According to general opinion you are still frequently requested to lend syringe. But configurations of practices have been vour modified. Representations relating to the traditional or of needle sharing is disappearing, "... ritual side not sharing even with closest persons, even by knowing full well they're not ill, you see, coming to say to oneself: anyway it's a needle per person and that's it." Subjects mention two things regarding needle use: first their own awareness of danger for themselves and second the more or less responsible behaviour they are consequently obliged to have towards the others. This change in representations induces the trend of changing practices: to warn that you are seropositive before lending your needle, to ask the other wether he is before borrowing his one, to give the needle instead of lending it, "1 use my own one, my wife does the same. 1 mean that even between us we don't share needles. Except people who come and tell me: you absolutely have to lend me your needle. Well, 1 give it to them and 1 say: you look after yourself as you want, you boil water, you do what you want, but afterwards you put it in your pocket. I myself don't take back a needle they used." Seropositive subjects may syringe only to lend their another also seropositive subject, or seronegative subjects may borrow it only from All those combinations another seronegative subject. indicate that behaviours are changing and also reveal the need of information among this population.

It remains that with a drug users' life style it could be

more urgent to inject than to take time to get a new syringe, for instance late in the night when pharmacies are closed, or when there are withdrawal symptoms. On the other hand, some of the subjects have more radically changed their behaviour: "my syringe, 1 take care of it. 1 keep it in a little case in order to have it safe. I have a friend, who cornes to my place, he has his name written right on the syringe. I fastened a piece of paper with scotchtape. So I'm sure of what's mine and 1 put apart. So l'm it sure to recognize it." To have one's own equipment, to keep it on oneself permanently indicate an undoubted evolution not without effect on the concrete conditions and the setting of drug use.

Among those who reported that their behaviour has changed, said the same time to use heroîn less frequently, it sorne "Now 1 may be using no drug at all during one or two days. 1 Neocodion. And so I never have withdrawal, if you want, use to the point where you take a needle and shove it in your even if you know it has been used by 30 million guys arm before." The risk of AlOS and the availability of syringes intervene in the management of addiction in a synergie way.

2. Relations with pharmacists.

Subjects were asked about relations they had with pharmapresent a common feature: cists. The answers as а whole there are some parallels between the talk about pharmacists and speech about dealers - independently of the positive or negative side of representations relating to them. May the likeable, relation be disagreeable indifferent, talk or relates pharmacists and dealers in a similar tonality whether acquaintance is made with the one or the other: "1 buy heroîn from somebody 1 know weil (...) In Bordeaux some pharmacists are my friends and give me syringes". Or there a similar critical in both cases: "I have relations of a is buyer to a seller (with dealers), 1 hate them, 1 tell myself I'm prostituting myself because 1 go and steal to give them my money while my mother needs it (...) Some pharmacists instead of selling a syringe - say no or only sell packages of ten syringes to earn more money, you see. 1 think they're bastards". Or finally, in one case as well in the other there is only a simple commercial relation, "when 1 purchase syringes 1 never have any problem with the pharmacists (...) with dealers When 1 give them some money they warmly welcome me, of course. 1 don't have any problem with dealers."

Subjects have an obliged relation with dealers to get heroïn, and with pharmacists to get syringes. By this very fact pharmacists and dealers are in power over IV drug no recourse against diddling dealers or users. There is pharmacists' refusal to sell syringes, "Knowing that anyway need syringes, that it isn't possible not to use people them, so it's a downright refusal to sell. so it's a statutory offence. In a word 1 don't see me lodging a complaint because a pharmacist refuses to sell me а syringe."

first case relations are not a problem. Coing to the In a dealer or to the pharmacist is considered as a commercial The deal is brief and without trouble in both cases. step. If he is refused а syringe the subject goes to another tries to find elsewhere if the dealer has pharmacy as he not any drug. Sometimes emphasis is put on a more qualitative side of relations, "The pharmacist knew l used drugs but he didn't care because it's my own business. And so 1 was very polite to him, he was very polite to me, there was a mutual respect."

In a second case relations are particularly good. Drug users and pharmacists may communicate, "... She was very kind because 1 often talked with her. When you go and buy a syringe it's possible to talk about your problem. She is against all that, she is upset because we are like that..."

Finally in a third case relations are bad. Refusing to sell syringes or the exclusive sale of packages of ten syringes are put forward especially since there is nothing to counteract this. Relations are described in their most negative side, "In fact the worst thing there could beunfortunately it exists that's pharmacists who sell syringes only to earn money, whose prices are more expensive than the authorized price and who are almost worse than the last of dealers. Because finally they earn money with people who anyway have no choice, who are obliged to buy needles. So they are almost dealers. At this level they are worse than dealers."

Women have generally better relations with pharmacists as well as with dealers. Most of them began using heroîn with a friend or a husband who took care about getting heroîn and syringes. So they are later - and often after a separation in a position where they have to get heroîn and syringes on their own. They do not very much appreciate these tasks which they consider necessary drudgeries and accordingly are more conciliating with pharmacists.

But anyway drug users have ambigous feelings - attraction repulsion - for pharmacists. This is particularly and expressed in the idea that pharmacists play a role in connection with spread of HIV. Pharmacists may be identifying medical doctors whose dutY consists in protecting with public health. "Well really, they are under Hippocratic oath. By refusing to sell syringes they contribute to spread rather serious disease. So according to my opinion they а break their oath. They shouldn't be allowed to practice it's completely contradicting their dutY which is because to protect everybody's health whoever it may be, drug users or not."

Most often those protests reveal the negative representation that drug users have of themselves. Speech expresses a certain degree of bitterness and distance from oneself, "To go and get a syringe at the pharmacy is more than to need a shot."

3. Condom use.

Drug users' sexual life is limited, sometimes intermittant but it would be wrong to think that they refrain from sexual The often occasional prostitution of males and relations. taken account. females has also to be into It allows to obtain heroîn wether it is an obvious subjects prostitution or a longer-term prostitution with dealers.

All interviewed heroin users know the risk of HIV sexual

transmission and know that condoms use is the only effective precaution. Nevertheless condoms are still not widely used by this group. Most subjects consider condom use only under certain conditions, and postpone such a possibility: "If I were seropositive...", "If one day I should meet a guy and at last it were serious...It will depend. I don't know myself. It obviously isn't simply to say: I'm seropositive..."

Furthermore the problem of insufficient information, or of wrong information cannot be reduced to a simple risk denial: "I was told that between seropositive persons it is no good. For example, a seropositive guy who makes love with a seropositive woman is no good. Is that true? Nobody knows."

Seronegative and seropositive persons are in different situations. In the first case, it is a matter of not becoming infected. Subjects protect themselves by not having IV drug users as sexual partners or by being faithful to a

partner. To have no sexual relations out of the single couple seems to them like an adequate precaution, ''l'm with a woman, 1 don't have to take any precaution. She doesn't (heroîn). She doesn't do any damned stupid thing. touch it She's a healthy person. If there is some problem it'll be because of me. So being careful 1 don't see why it should to me." In the second case - through lack of regular happen condom use - it is a matter of responsability and guilt, "I'm afraid to have a love affair with a woman who doesn't know drugs, you see, because 1'm seropositive. Well, 1'11 take precautions of course. But I'm afraid because if it's a her serious affair. 1'11 be obliged to tell 1'm seropositive. She won't necessarily accept to go on."

When both partners are heroîn users and seropositive, condom use is not considered as necessary. The only precaution finally lies in a regular medical follow up: "my mate is also a healthy carrier. Well, in fact we don't take a lot of precautions because we don't care. 1 mean that I've been myself a healthy carrier for four years, l've never had any any fever. We're supposed ganglions or to risk being infected again. Our levels don't increase, we've been together for two years, our levels haven't increased."

Generally speaking, even though a few subjects reported to condoms systematically, the precautions use taken are limited and modeled on the general population's behaviour. Singles and drug users are distrusted, "Well really, l'm somewhat in control of the situation. I'm not yet single, completely crazy and living in the street": "of course, if 1 had a problem - 1 mean a serious problem- if 1 had relations with an addict woman, 1 would ask for informations or 1 would ask her straight: are you healthy?"

VII. Alos AND ITS REPRESENTATIONS

1. The seroprevalence test.

under which tests were If consider the circumstances we performed it appears that most of the subjects came for consultation for reasons other than testing (for example, dental problems, somatic illnesses, and SO on). None of implied testing up until recently. Consultathese reasons tions gave the opportunity to approach the question of drug and to a test prescription. Women consulting for use. led pregnancy are a similar case. Ali subjects referred to such a mediating opportunity, whether they had provoked it or they were still waiting for it. In the case of subjects who had not seroprevalence test and who do not know asked for a whether they are seropositive behaviour is or not. this explained by a lack of information about the conditions of testing and secondly by fear, "1 don't want to know, 1 would twice more depressive and knowing that 1 may die by one be or two months... Weil, 1 don't know, it gives me а pain in the arse. 1 don't know how 1 would react. As 1 know myself a little bit -1 know l'm rather depressive, l'm afraid of many things - weil, I think it could be fatal news... To end my days straight away rather than to see myself dying."

When explaining their reasons for getting the tested, seronegative subjects - seropositive or referred to anxiety about their their mate, "1 family or was in hospital and said to myself: while I'm about it... because, weil, there was still a lot of gossip in the drug users' set beginning to loose my wits. Imagine 1'd get it and 1 was without knowing and 1 had sexual relations with women... And for my family... it would be enough if 1 shaved and bled and my father took the razor by mistake... They also referred to the possibility or the plan for having children.

It is a commonly held idea that children of seropositive

parents are very likely to be seropositive at birth and to die at a very young age. All those reasons justify why one would want to know, yet they are only based on relations to others. Knowing for oneself as a drug user is not seen as an adequate reason, "Not for me because, well, if 1 don't have to suffer 1 don't care. But if 1 had a child... and then he had to die at the age of 5...that's the only thing."

2. AlOS.

AlOS is not contract as a disease essentially related to drug addiction. Orug addiction still includes by itself the possibility of a fatal outcome - an overdose - and of some such as hepatitis B or septicaemia. When serious diseases interviewed on the topic of AlOS subjects willingly spoke about hepatitises they had or overdoses they "did" - things which can be more or less controlled, and which are related the accidental field conditions or to an excessive and to disorderly practice, "Well, you destroy yourself when you take drugs, but to die is something else. 1 think there's a big difference between destroying oneself and dying. It isn't the same. If you desire to kill yourself, well, you take more than usually, you put it all into the spoon and how you die. There is no any relation, and I myself that's don't desire to die." By referring to an overdose subjects death. But "to do" an overdose does not mean to be evoked ill. Some subjects reported that they fled from the hospital as they woke up. They consider that they went near as soon death but without having been ill.

the feeling of being ill is spontaneously In general expressed as being associated with withdrawal or at least with a lack of heroïn. To be ill is sometimes associated with the fact of using a substitution substance such as Elixir Paregorique or codeine in various forms. Nevertheless, heroln use is not associated with the fact of being in good health. Distinctions between being ill and not

ill takes the place of distinction between being ill being and being in good health. But the former distinction does subjects to have clear indicators of health and not allow illness. The lack of a clear representation relating to a curing progress, or relating to the awareness of being in good health leads some subjects to consider that they are permanently ill, "Physically l've always been ill anyway you know, nervous **people...** Since 1 was small 1've had health problems, always, 1 had a lot of diseases. That's because I'm a very nervous person, very anxious and very afraid but a very extreme point. And there I've gone again for some to time, for l've been detoxified from codeine." It is no more the point to recover but rather maintain one's condition in order not to become ill - to maintain one's normal conditions, which does not mean to be welle

Nevertheless, drug addicts have a lot of health problems: hepatitises, abcesses, dental or other problems are most of the time self-treated and are possibly given very late medical attention.

AlOS questions turn the order of representations upside AlOS is considered a serious disease - certainely down. related to injecting but not inherent in drug addiction. Cancer appears as a preferential reference in so far as the idea of fate, of fatal outcome is implied but also as an example of a disease everybody can be affected by, and a disease which is actually expected to be cured in some The idea of remission is sometimes expressed, "I've cases. known somebody who was pre-AlOS. He already found himself He was high a11 day. As he was pre-AIDS he was dying. weight! loosing weight and loosing His parents told him: here is a plane ticket. Go in the sun, go to Africa, here is an address. He went there - to Martinique. And there he doesn't take any more heroin. He has recovered again from a pre-AlOS condition to a healthy carrier condition within a period of six months. That's really a question of morale, 1 don't know, as many cancers."

situation created by AlOS The new and the change of practices related to needle use creates an awarness evolving of illnesses. A representation of health emerges, "1 had a checkup in hospital and I was told that I was in very good health, 1 didn't have any symptoms of wathever disease it may be... 1 was really very happy when 1 was told that I'm in perfect health because frankly 1 thought deep down l was and 1 didn't want to know it. Excuse my saying rotten "rotten", 1 mean "ill"..." In representations hepatitis is considered as a disease sometimes associated with AlOS or at least with the idea of a serious health problem. Talks about hepatitis - as about AlOS - make a distinction between being ill and being in apparently good health. Hepatitises among drug users (41 and 54% in both are very current samples) and some subjects reported that they have always taken precautions against this disease. But in most cases no care was taken. Now it seems that behaviours are happens 1 changing, "Now it have a little hepatitis, it something like hepatitis. WeIl. decreases a and decreases, | still have to do a blood test. I said to my friend: It isn't worth it that you get a hepatitis too. We don't know how your liver will react. Therefore each of us has his own syringe. And then we systematically throw them break them and we throw them away." The awareness away. We of AIDS as being a serious illness changes representations relating to health and illness. For many subjects AlOS is an unknown disease, with a fatal prognosis and which is a matter for fate or even God, "I've myself only been in touch with the virus. But it's here. But for now it's completely controlled by antibodies. It doesn't do anything, it doesn't work. May God abolish it! May God do it in!"

VIII. ELEMENTS OF DISCUSSION AND CONCLUSION

1. Needle sharing.

Quantitative and qualitative data show very clearly that drug users' behaviour is actually changing and that the liberalization of the sale of syringes has had many effects. We estimate that 52% of the IV drug users do not share needles any more and purchase them in drugstores.

A change of behaviour dates back to the years 1983-85 and has become more pronounced by the fact of the liberalization of the sale of syringes. It remains that nearly half of the heroin users continue to share according to various modalities. This is not surprising. In the same way as in hospital - where informations are necessarly staying given - does not lead ipso-facto life to hygiene improvement, the availability of syringes cannot by itself majority of subjects to change their quickly lead the behaviour radically.

This measure lacks of an appropriate message and the means to convey it. In some treatment centers care teams see to it to give qualified information to IV drug users - that is to say personalized information, trying to take into account each subject's specifie situation. But besides the fact that these initiatives reach only a few drug users, it has to be said that these institutions are in general not really able to *convey* such a message.

2. Worn syringes.

Subjects of both samples were asked what they could do with used syringes. Their answers are rather alike. In 28% of the cases destroyed or wrapped syringes are thrown into places where it is not possible to get them back - into trash cans or sewers. In 45% of the cases syringes are thrown into the same places without any precaution. In 25% of the cases they are thrown anywhere. Sometimes (2%) they are kept or given.

What becomes of used syringes is an unavoidable public health problem: is it possible to increase the availability of syringes without running the risk of accidental infection because of syringes thrown into public or household places?

Exchange programs - especially in the United Kingdom - do not give any quite satisfying answer at present. They result in a reduction of the availability of syringes. In G.V. STIMSON's assessment report these programs are said to succeed in drawing new and young clients but not in keeping them.

3. HIV infection.

A great number of drug users have been in contact with HIV. Nevertheless, according to our opinion their number has been overestimated by the press. This number - around 40% at an average considerably varies with the region.

Indeed, in this population infection is the result of needle sharing. We have tried to find other factors wich could play a role in seropositivity distribution.

Sex: To our surprise seropositivity is similarly distributed among males and females in both samples.

Drug use frequency: It remains difficult to appreciate it mainly in a retrospective way. Concerning that question we could expect regular heroïn users to share needles more frequently than occasional ones. This is not the case. In fact, needle sharing is more frequent among occasional heroïn

and mainly among the youngest. This is understandable users if it is taken into account that regular heroîn users - who are actively involved in addiction - are also well organized. Being well informed and having noticed the reality of among their friends, they take care of having their illness own equipment even when drugstores are closed. On the other hand. occasional heroîn users do not make this a routine. Being often badly informed and using drugs whenever they opportunity, they find themselves more easily in have an situations where needle sharing is necessary. This also applies to drug addicts during and after detoxification. The latter - even when conducted under medical controldoes not a improvement.

Social background of origin: no correlation.

All things being considered the only significant differences are connected with needle sharing practice and lenght of Long-standing drug users -who share needles the addiction. most often - are more likely to be infected than others. lines subjects who got one or several Along the same hepatitises in their past are more often (60%) infected. The long-standing and severely addicted heroîn users fact that are not seropositive suggests that these subjects undoubtedly limited needle sharing to some close persons in order to-when AlDS did not yet exist - protect themselves against infectious diseases in general and hepatitis in particular. This is in accordance with former heroîn users' whom addiction management goes trough a statements. for relative education to the method of drug use and the way of life with drugs.

4. Tertiary prevention.

Here we refer to the Paris seminary on April 28-29, 1988, "Research and tertiary prevention in the field of drug addiction and AlDS". The main point is to understand that

specificity of tertiary prevention goes trough a rigorous analysis of target groups' representations of health, illness and addiction. Besides the fact that informations must be personalized - this point has been well applied by the homosexual community - they can be understood, accepted integrated only if preliminary work is done. Here and American work (W. WIEBEL, J. WATTERS) is of the greatest interest. It is shown that risk is always relative, that it must be presented as it is and that a good perception of the risk in question is а necessary condition to behaviour change and the best adaptation. This point - which is not this report's subject - will be developed in the Paris seminary proceedings and constitutes one of our future work axis in this field.

5. Conclusion.

This study put us into a position to be directly confronted with IV drug users who are actually seropositive, ill or afraid to be. AIDS has disrupted many heroîn users' way of life. Being tired and distressed, staying in hospitals from time to time, being sometimes completely lonely and sleeping in cellars, their life has got down to evolve to the rhythm of their revolts and despairs.

often gave us the opportunity to obtain for This research some drug users support or the means to work their way into treatment centers and the hospitals network. Fear of AIDS on the one hand and the liberalization of the sale of syringes other hand have effectively contributed to change on the behaviour and attitudes, but there are limits sorne to the drug users' ability of adaptation. Illness and poverty put many young people in an unbearable position.

The liberalization of the sale of syringes, which has the value of a socialization initiative for drug addicts, also corresponds to new needs and emerging requirements.

FIGURES

Figure 1 Distribution by ages

Figures 2, 3, 4 and 5 Dates of first seroprevalence test.

Figures 6, 7 and 8 Practises relating ta syringe use and HIV status.

Figure 9 Year of first heroîn use and HIV status.

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Niant pas H. 1. V. Pratiques ser'ingues et HIV H. 1. V. SIDA fait faire négatif. positif. Echantillon total d'examen. total sample Н F F н F F н 16 3 26 34 6 41 - Utilisent des seringues qu'ils ont achetées et ne les prêtent pas. Use syringes they have do not lend them. bought and 7% 1% 24% 15% 147% - Utilisent des seringues qu'ils 6 6 ont achetées et les prêtent. Use synnges they have tought and level them. 13.5% 0.5%5% - Utilisent des seringues, soit 19 10 17 14 2 1 qu'ils ont achetées, soit qu'ils ni ont pas achetées. Use syringes they have bought or not. 11 % 11 % 11 % 1% 34% 2 3 2 5 - Utilisent des seringues qu'ils n'ont pas achetées. Use syringes they have not bought. 1% 3% 1% 0,5% 1 5,5% Total % N= 275 21% 44% 32% 3% 1 **100%**

- Ne pratiquent plus l'injection: H.I.V. positif: 1 homme H.I.V. négatif: 1 homme + 2 femmes Tableau 6 ₁

IREP 1988

<u>Pratiques</u> seringues <u>et HIV</u> Echantillon de terrain <i>field s'ample</i>	N'ont pas fait faire d'examen. H F	H.1.V. négatif. H F	H.1.V. positif. H F	SIDA h f	
- Utilisent des seringues qu'ils ont achetées et ne les prêtent pas. Use syringes the have bought and do <u>not</u> lend them.	12 3 10%	29 1 5 28%	16 4 12%	2 J 1 2%	52%
- Utilisent des seringues qu'ils on.t achetées et les prêtent. Use Syringes Hey have bought and lend them.	4	5 J 3	- 4 2,5%	-	10%
- Utilisent des seringues, soit qu'ils ont achetées, soit qu'ils n'ont pas achetées. Vie syringes they have bought or not.	10 8 12%	$12 \qquad 5 \\ 11 \% \qquad 5$	$11 \downarrow 6 \\ \downarrow 11 \%$	$1 \qquad 1 \qquad 1 \qquad 1 \qquad 1 \qquad 1 \qquad 1 \qquad 1 \qquad 1 \qquad 1 \qquad$	35%
- Utilisent des seringues qu'ils n'ont pas achetées. Use syringes they have not begi	€ ↓	$1 \underbrace{\downarrow}_{1\%} 1$	1 1 1%	- 1 1%	3%
Total % N= 157	24,5%	45%	26, 5%	4%	100%

N'ont pas H. 1. V. H. 1. V. SIDA Pratigues seringues et HIV fait faire négatif. positif. Echantillon des institutions d'examen. 14 - treatment simple Н F F Н F Н F Н 4 12 11 18 - Utilisent des seringues qu'ils ont achetées et ne les prêtent pas the syringes they have bo, ht and do not lend them. 40% 3% 17% 20% - Utilisent des seringues qu'ils 3 6 3 ont achetées et les prêtent. Use syringes they have burght 1.5% 7% 1% 17% 7.5% 12 9 2 3 6 8 1 - utilisent des seringues, soit qu'ils ont achetées, soit qu'ils n'ont pas achetées. use sy inges they have bought on not. 9% 12% 1% 1 **35%** 13% 2 2 4 - Utilisent des seringues qu'ils n'ont p,as achetées. The finges they have not boughé-1 8% 1.5% 5% 1,5% $N \equiv 118$ 38% 2% total % 45% 15% 1 100%

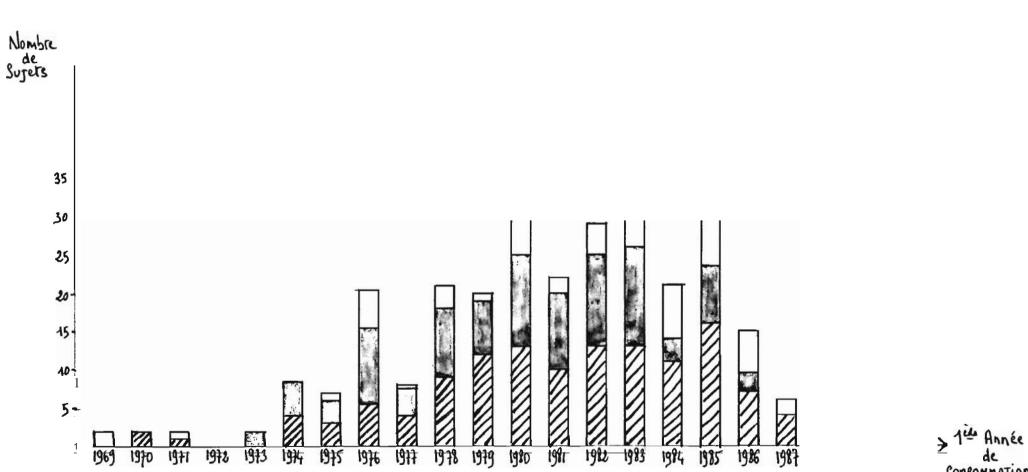
_Ne pratiquent plus l'injection: H.i.V. positif: 1 homme

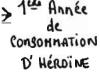
Tableau

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ANNÉE DE PREMIÈRE PRISE D'HÉROINE ET STATUT H.I.V. ÉCHANTILLON TOTAL: 277 Sujets 1988

SUJETS N'AYANT PAS ÉTE TESTES SUSETS SEROPOSITIES + SIDA SUJETS SERONEGATIFOS





J.R.E.P. 1981

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BIBLIOGRAPHIE SELECTIVE

- BROWN L.S., EVANS R., MURPHY O., PRIMM B.J. : "Drug use patterns: Implications for Acquired Immunodeficiency Syndrome", Journal of the National Medical Association, Vol.78, No.12, 1986, 1145-1151.
- CHAISSON R.E., MOSS A.R., ONISHI R., OSMOND O., CARLSON J.R. : "Human Immunodeficiency Virus Infection in heterosexual Intravenous drug users in San Francisco", American Journal of Public Health, Vol.77, No.2, february 1987, 169-172.
- 3. DES JARLAIS D.C., FRIEDMAN S.R., HOPKINS W. : "Risk reduction for Acquired Immunodeficiency Syndrome among intravenous drug users", Annals of Internal Medicine, Vol.103, No5" November 1985.
- DES JARLAIS O., FRIEDMAN S.R. "AlOS among intravenous drug users: current research in Epidemiology, Natural History and Prevention", Community Work Group Proceedings, June 1986, NIDA.
- 5. FRIEDMAN S.R., DES JARLAIS D.C., SOTHERAN J.L. "AlOS health education for intravenous drug users", Health education Quaterly, 13 (4), Winter 1986, published by John Wiley and sons, Inc.
- 6. HARTNOLL R., DAVIAUD E., POWER R. : "Addicts can change", Druglink, Mars/Avril 1987, Londres.
- INGOLD. F.R. INGOLD, S.; Complémentarité 7. et méthodologique des approches quantitatives et dans le la toxicomanie. qualitatives champ de Bulletin de Méthodologie Sociologique. CNRS, 1988.

(à paraître)

- 8. HARTSOCK P., : "AIDS among American Indians", Epidemiology of drug abuse and issues among native American populations, CEWG Proceedings, Phoenix, December 1987, NIDA.
- KAPLAN C., MORIVAL M., STERK C. : "Needle exchange IV drug users: a comparison of background characteristics, needle and sex pratices and AIDS attitudes", CEWG Proceedings, New York, June 1986, NIDA.
- KRISTAL A.R. : "The impact of the Acquired Immunodeficiency Syndrome on patterns of premature death in New York City", Journal of the American Medical Association, Vol.255, No.17, May 1986.
- MURPHY S. : "Intravenous drug use and AIDS: Note on the Social Economy of needle sharing", in Contemporary Drug Problems, Vol.XIV, No3, Fall 1987, Federal Legal Publications, Inc. 1988.
- 12. PARRY A. : "Needle swop in Mersey", Druglink, Mars/Avril 1987, Londres.
- 13. "Recherches et Prévention tertiaire dans le champ de la toxicomanie et du SIDA", Actes du séminaire international de Paris, 28-29 avril 1988, IREP, (à paraitre).
- 13. RUTLEDGE J. : "Policy implications of AIDS", CEWG Proceedings, New York, June 1986, NIDA.
- 14. SERRANO Y. : "AIDS Prevention Efforts", CEWG Proceedings, New York, June 1986, NIDA.
- STIMSON G.V., ALLDRITT L., DOLAN K., DONOGHOE M. : "Injecting equipment exchange schemes: A preliminary report on research", February 1988, Monitoring Research

Group, Sociology department, University of London Goldsmiths' College.

- 16. STONE BURNER R. : "Increasing mortality in intravenous narcotic users in New York City and its relationship to the AIDS epidemic", CEWG Proceedings, New York, June 1986, NIDA.
- 17. WATTERS J., NEWMEYER J., FELDMAN H., BIERNACKI P.: "Street-based AIDS prevention for intravenous drug users in San Francisco: Prospects, options and obstacles", CEWG Proceedings, New York, June 1986, NIDA.
- WATTERS J.K., CHENG Y.T. : "HIV-1 infection and risk among intravenous drug users in San Francisco: Preliminary results and implications", in Contemporary Drug problems, Vol.XIV, No3, Fall 1987, Federal Legal Publications, Inc. 1988.
- WATTERS J.K. : "Street-based outreach model of AlDS prevention for intravenous drug users: Preliminary evaluation", in Contemporary Drug Problems, Vol.XIV, No3, Fall 1987, Federal Legal PUQlications, Inc. 1988.