Risk behavior, effect on HIV-infection and neuropsychiatric consequences of substance use

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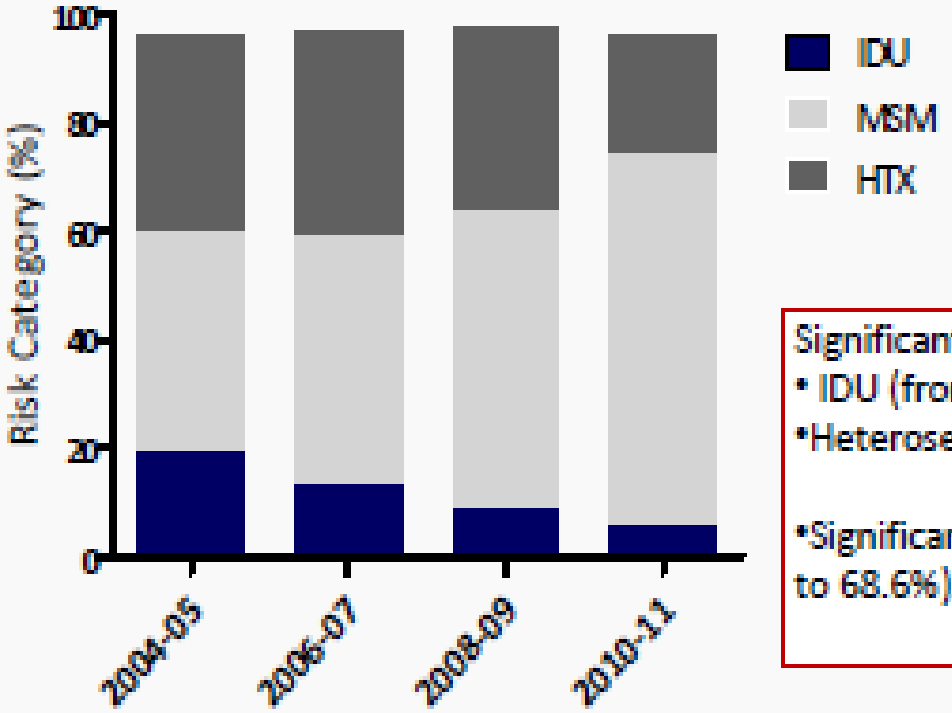
Concerns and actions

- STIs and AHC in MSM HIV positive patients
- ChemSex and clinical problems
- What are we doing and what else can we do?

HCV superinfection - Icona cohort

Changes in risk behaviors for HIV/HCV acquisition during the study period



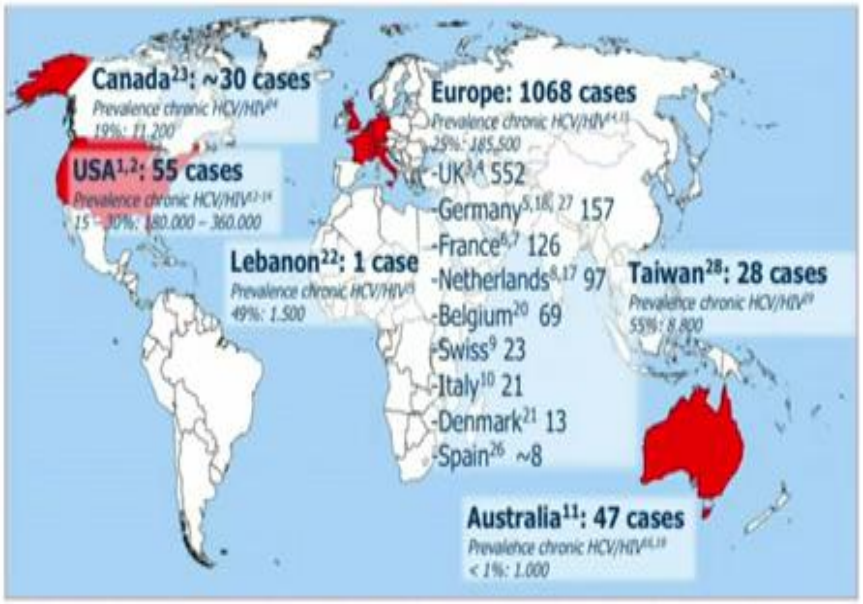
Significant decreases in the prevalence of:
- IDU (from 19.2% to 5.6%)
- Heterosexual (from 36.4% to 21.9%)

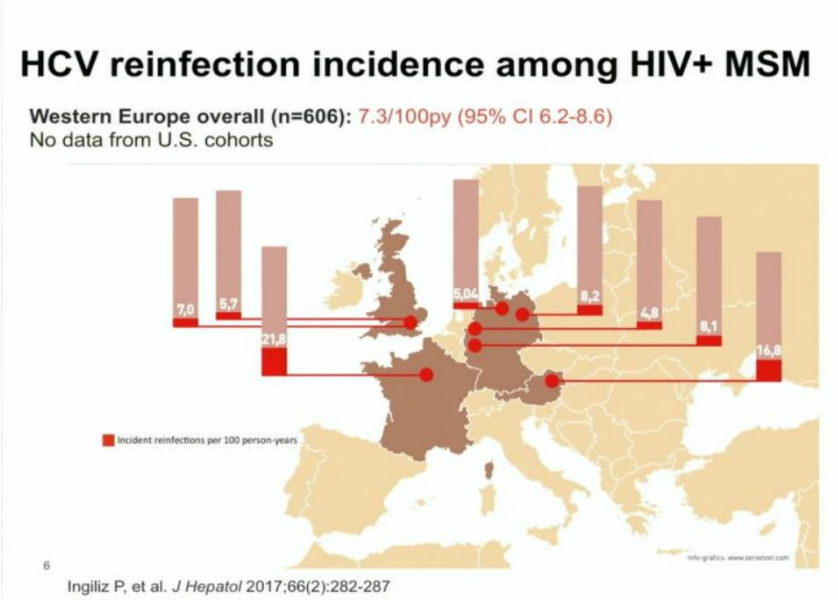
- Significant increase in MSM (from 40.6% to 68.6%).

Puoti M. Paper #638. CROI '13

Epidemiology AHC

- An outbreak of acute hepatitis C among HIV-positive men who have sex with men (MSM) in the last decade has been shown to be sexually transmitted





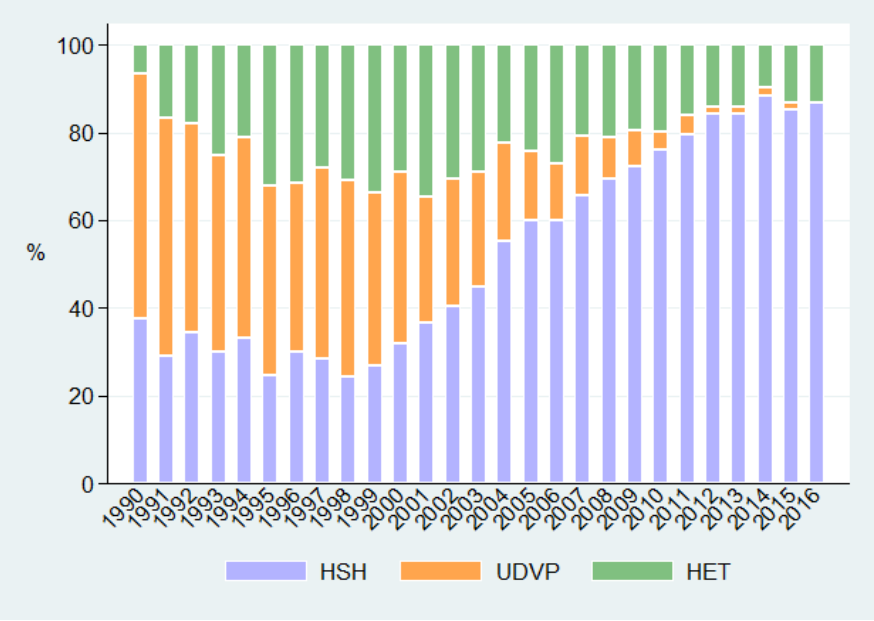
Boesecke C. Infect Dis Clin North Am. 2012
Iglitz P et al . J Hepatol 2017

van de Laar TJ, J Infect Dis 2007; Gotz HM AIDS 2005 ; Danta M . Curr Pharm Des 2008 ; Serpaggi J AIDS 2006; Luetkemeyer A J Acquir Immune Defic Syndr 2006; Matthews GV . Clin Infect Dis 2009; Giraudon I Sex Transm Infect 2008; van de Laar TJ Gastroenterology 2009;

Hospital Clinic Cohort

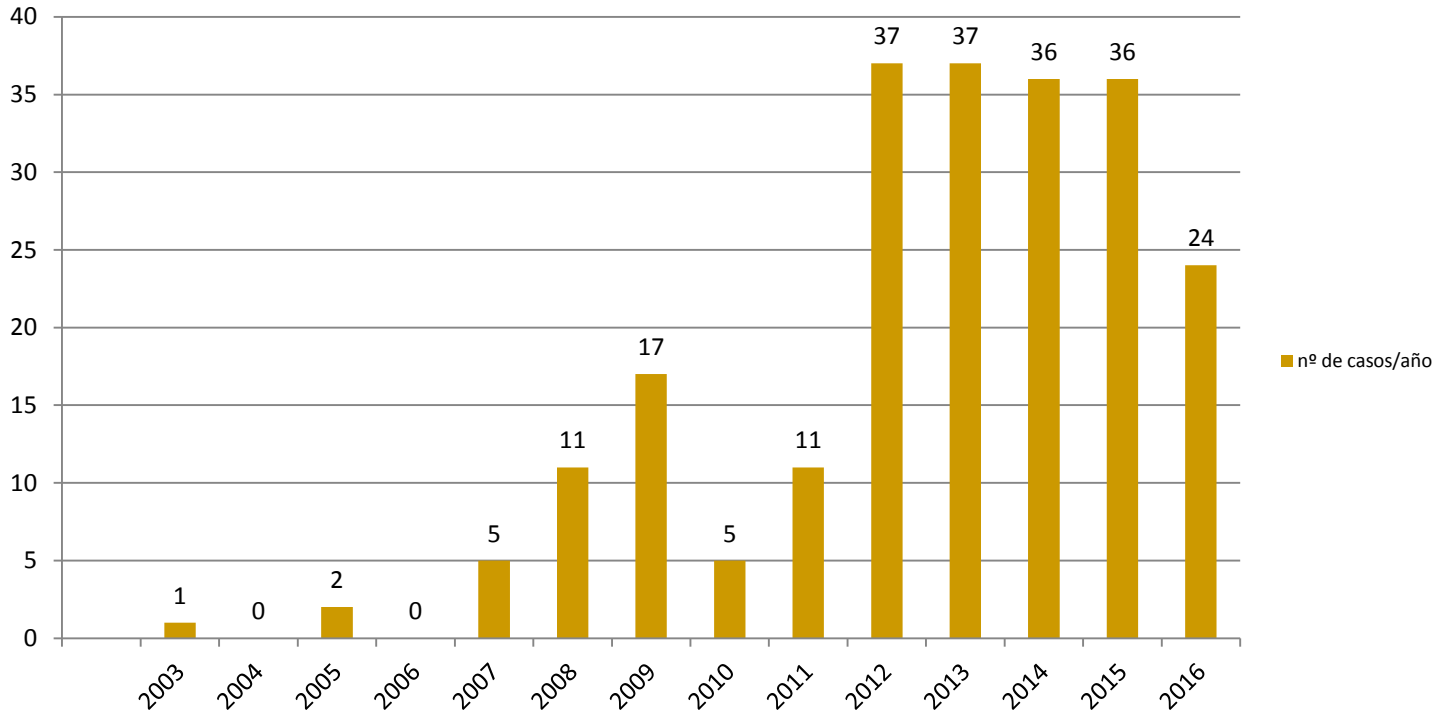
- Population area of influence: 700.000 people

- HIV active patients in our hospital: 5497
  - Annually, 350 new patients join the service



Route of HIV infection in the patients who are incorporated annually into our hospital cohort

Incidence of AHC at Hospital Clínic BCN



Martínez-Rebollar M, Laguno M, in preparataion

AIDS RESEARCH AND HUMAN RETROVIRUSES
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Low Rate of Sustained Virological Response in an Outbreak of Acute Hepatitis C in HIV-Infected Patients

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Enferm Infecc Microbiol Clin. 2015;33(1):3–8

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Original

Brote epidémico de hepatitis aguda C en pacientes infectados por el virus de la inmunodeficiencia humana

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Phylogenetic analysis of an epidemic outbreak of acute hepatitis C in HIV-infected patients by ultra-deep pyrosequencing

Noelia Caro-Pérez[a], María Martínez-Rebollar[b], Josep Gregori[c,d], Josep Quer[c], Patricia González[a], Martina Gambato[a], Neris García-González[e], Fernando González-Candelas[e], Josep Costa[f], Juan Ignacio Esteban[c], Josep Mallolas[b], Xavier Forns[a], Montse Laguno[b,1], Sofía Pérez-del-Pulgar[a,*,1]

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AHC at Hospital Clinic

January 2003-December 2016

- N: **222 cases** in **193 patients**
  - **189 M (MSM),** 1 H (IDU), 3 W (1 HET, 1 nos, 1 IDU)
- Median age 42 years (DS 7)
- Symptoms : 31%
- 20 cases **spontaneous clearance** (9%)
- **Treatment response**: 69 % patients treated PEG-INF+RBV. **SVR: 65%**
- 27 episodes of **reinfection. Reinfection rate: 12.3 /100 PY**
- **50% other STI associated (Syphilis, Chlamydia-LGV)**
- **Phylogenetic sub study**: **16 clusters of transmission**. Local network in Barcelona and related to an international HCV transmission network.

Martínez-Rebollar M, Laguno M, in preparation

Risk factors related to increasing incidence of AHC in MSM HIV+ patients

- Higher VL HCV in blood and semen
- Increased susceptibility of rectal mucosa in HIV patients
- Presence of ulcerative STI
- HAART and decreasing risk perception
- **“Chemsex**”: use of drugs (methanfetamine, GHB, mephedrone and others) to enhance sexual experience, MSM.
  - Facilitating long sexual sessions with multiple partners that can extend over several days.
  - Rising reported rates of slamming (injecting) and the consequential traumatic sexual practices.

Increasing evidence of HIV, AHC, STIs and other complications associated with Chemsex use

- Associations with sexual-risk behaviour (Colfax & Guzman, 2006; De Ryck, Van Laeken, Noestlinger, Platteau, & Colebunders, 2013; Drumright et al., 2007; Heiligenberg et al., 2012; McCarty-Caplan, Jantz, & Swartz, 2014; Pappas & Halkitis, 2011; Prestage et al., 2009; Santos et al., 2013; Sewell J , 2017)
- Association with facilitacion HIV: (Buchacz et al., 2005; Macdonald et al., 2007; Plankey et al., 2007; Prestage et al., 2009; Ostrow et al., 2009;)
- Association with facilitacion STI and AHC (Hirshfield, Remien, Walavalkar, & Chiasson, 2004; Ottaway Z, 2017; Hegazi A, 2017)
- Potencial risk of serious overdose and death (Hockenhull J, 2017; Caldicott, Chow, Burns, Felgate, & Byard, 2004; Liechti & Kupferschmidt, 2004).
- Drug-drug interactions (Pichini S, 2016; Bracchi M, 2015)

Original research article

INTERNATIONAL JOURNAL OF STD & AIDS

International Journal of STD & AIDS
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journals.sagepub.com/home/std
SAGE

Chemsex and the city: sexualised substance use in gay bisexual and other men who have sex with men attending sexual health clinics

A Hegazi[1], MJ Lee[1], W Whittaker[3], S Green[2], R Simms[2], R Cutts[1], M Nagington[3], B Nathan[2] and MR Pakianathan[1]

- 30% disclosed recreational drugs (57% Chemsex)
- Those disclosing chemsex had a higher incidence of :
  - Acute bacterial STIs (AOR 2.83 CI 1.79-4.47; $p < 0.001$)
  - Rectal STIs (AOR 3.10 CI 1.81-5.32; $p < 0.001$)
  - **Hepatitis C (AOR 15.41 CI 1.50-158.17; $p = 0.021$)**
  - Chemsex was associated with having more sexual partners, transactional sex, group sex, fisting, sharing sex toys, injecting drug use, higher alcohol consumption and the use of 'bareback' sexual networking applications ($p < 0.004$).

Incidence of HepC among HIV + MSM, 2000–2015

Incident HCV infection by baseline demographics

	N of event	Person Years	Incidence/100PY	CI.lower	CI.upper	IRR	p value
Overall	149	12573	1.185	1.002	1.391	-	-
Age							
≤30	37	2796	1.323	0.932	1.824	1	-
31-40	57	4755	1.199	0.908	1.553	0.906 (0.589-1.409)	p=0.642
41-50	46	3826	1.202	0.88	1.604	0.909 (0.577-1.441)	p=0.666
>50	9	1196	0.753	0.344	1.429	0.569 (0.241-1.2)	p=0.126
Race							
White	105	8202	1.28	1.047	1.55	1	-
Black	15	1254	1.197	0.67	1.974	0.934 (0.505-1.613)	p=0.807
Other	28	2918	0.96	0.638	1.387	0.75 (0.475-1.146)	p=0.176
Hispanic							
No	110	8978	1.225	1.007	1.477	1	-
Yes	39	3595	1.085	0.771	1.483	0.885 (0.598-1.287)	p=0.516
Meth/IDU use (ever)							
None	21	4424	0.475	0.294	0.726	1	-
Meth only	86	5991	1.436	1.148	1.773	**3.024 (1.860-5.132)**	**p<0.001**
IDU only	2	32	6.296	0.762	22.743	**13.167 (1.497-53.965)**	**p<0.001**
Meth+IDU	17	739	2.301	1.341	3.684	**4.896 (2.401-9.644)**	**p<0.001**

[10] Chaillon A, et al. In preparation

UC San Diego
School of Medicine

Antoine Chaillon1, Christy M Anderson1, Thomas C Martin1, Edward R. Cachay1, David L. Wyles1, Davey M. Smith1, Susan J. Little1, Richard S. Garfein1, Natasha Martin1. Abstract 134 CROI February 13–16, 2017 | Seattle, Washington

ChemSex use in Barcelona

Poster P1.06

BCN checkpoint
HOMBRES · SEXUALIDAD · SALUD

Chemsex en la cohorte Barcelona Checkpoint: un fenómeno con tendencia al alza asociado a un aumento del riesgo de infección por VIH

Los datos sobre chemsex de la cohorte Barcelona Checkpoint muestran que se trata de un fenómeno minoritario (6,4%) pero con tendencia al alza, observándose un incremento en el consumo de sustancias asociadas al chemsex en los últimos años.

XVIII Congreso Nacional sobre el sida e ITS
··· Sevilla, 22-24 de marzo de 2017 ···
"VIH y VHC: dos epidemias convergentes"

SLAMMING: ACTITUDES, USOS, CUIDADOS Y RIESGOS EN UN GRUPO DE HOMBRES GAIS Y BISEXUALES QUE HACEN CHEMSEX EN LA CIUDAD DE BARCELONA

Percy Fernández Dávila[1,2], Cinta Folch[1], Víctor Galán[3], Ana I. Ibar[3]; Xavier Roca i Tutusaus[3]; Xavier Majó i Roca[3], Luis Villegas[2], Jordi Casabona[1]

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El slamming es una práctica todavía minoritaria entre quienes hacen ChemSex; aunque se la percibe en ascenso.

CHEMSEX Y SU RELACIÓN CON LA INFECCIÓN POR EL VIH EN UN GRUPO DE HOMBRES GAIS Y BISEXUALES DE LA CIUDAD DE BARCELONA

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A pesar que no se puede afirmar una relación directa entre ChemSex y el VIH, los datos del estudio parecen mostrar que existe una asociación. El potencial impacto del ChemSex sobre el TAR y la salud es algo que se conoce pero que no se tiene muy presente. Se

Risk factors data - Hospital Clinic

- **27 episodes** in 25 patients

-1 patients with 3 reinfections

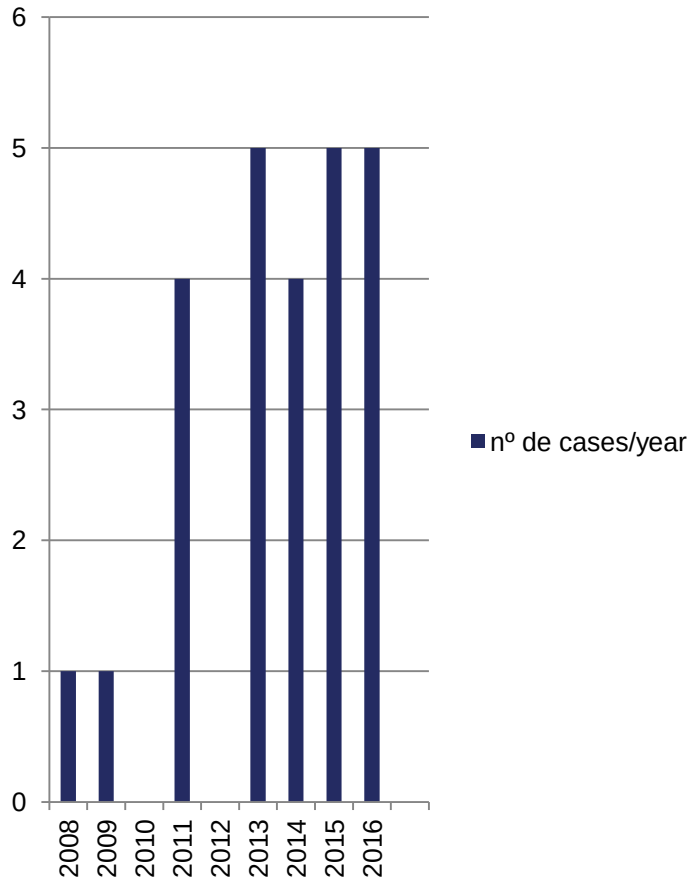
  - 25 M (MSM)

  - Mean age of patients 44 years
  - Symptomatic: 31%
  - 2 cases **Spontaneous HCV clearance** (7%)

- **Risk Factors:**

-Unprotected anal sex	**66.7%**
-Chemsex	**61.9%**
-ETS	**51.9% (Syphilis 80%)**

- **Rate of Reinfection:** **12.3/ 100 py**



Martínez-Rebollar M, Laguno M, in preparation

What are we doing?

1. **Early diagnosis and treatment as prevention (Early HepC trial), to approach the AHC epidemic in high risk population** (low SVR to classic treatment and high rate of reinfection)

2. **Prevalence study of ChemSex in our cohort :** to give answer to an increasing number of patients referring substance use in sexualized context at daily clinic.

3. **Global collaborative study** (ViiV grant): **Diagnosis of HIV and other STD in high risk population (ChemSex users)**

4. **Referral circuit** Psychological/ Psychiatric and local NGO (STOPSIDA), to manage consumption, reduce harm and psychiatric treatment if needed to cover the increasing demand of patients to manage substance use.

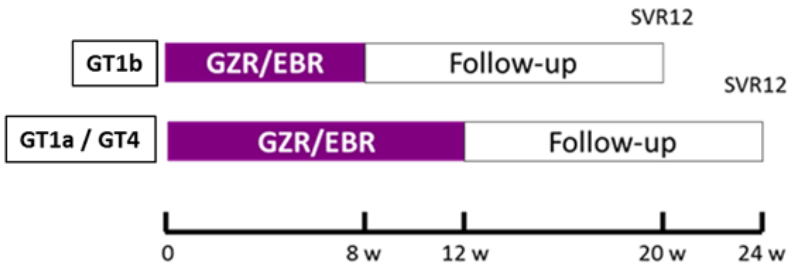
What are we doing?

1. **Early diagnosis and Treatment as prevention: “Early HepC trial”**

   Important number of patients with recent hepatits C, with no fibrosis but risk behaviour

   “**Eficacy of GRZ/EBR in Early Chronic Hepatitis C in HIV/HCV Co-infected patients”** EudraCT number: 2016-001536-36

   Early chronic hepatitis C: More than 6 months to 4 years.
   Genotype 1 and 4
   Fibroscan < 8 Kpa
   N: 80
   Two centers study



What are we doing?

2. Prevalece study of Chemsex in our cohort:

Anonimous Survey in HIV Day Care Hospital, pending to extend to PEP clinic, STD clinic, Emergency Room service and local NGO (STOPSIDA)

Survey: shorter, translated and adapted survey from *56 Dean Street*

N: 1058 (From 20th Feb to 23rd May)

N: 200

M: 161 MSM: 69% disclose subtance use in sexualised context.

Future/ What are we going to do?

3. Global collaborative study : Diagnosis of HIV and other STD in high risk population (Chemsex users)

Duration: 3 years

Objectives:

1. To train health workers at the hospital's non-HIV/ infectious disease departments (Medical ER, Surgical ER, STD clinic and PEP clinic) to identify Chemsex activity in high risk population and to contact the HIV Unit. Training will be given to help health workers to better understand Chemsex and HIV-STD signs and symptoms

2. Provide rapid diagnostic screening for HIV and other STDs to MSM that are participating in Chemsex.

3. To start a closely follow-up of these identified patients during at least two years in order to early diagnose of HIV, HCV and other STI and to provide early treatment.

And what else can we do?

-I believe that the management of these patients requires a multidisciplinary approach to cover clinical, psychological, psychiatric and social consequences.

- To create a multidisciplinary group formed by HIV clinicians, Emergency doctors, Dermatologists, Psychiatrists, Psychologists, Social workers and Specialist Nurses, working together.

-More involvement and teamwork with local NGOs, and primary care centers.

-Facilitate access to information and training to patients and health care professionals

-Use new technologies to disseminate information and give access to control and treatment to as many patients as possible.