

Central Adelaide Local Health Network

Chemsex Prevalence, Characteristics and Associated Risk Profiles of MSM in South Australia

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BACKGROUND

Chemsex (chemical sex) or sexualized recreational drug use

Intentional combining of sex with particular non-prescription drugs¹

- Facilitation/enhancement of the sexual encounter and sexual arousal
- Euphoria, increased energy and dis-inhibition, increased sexual stamina
- Sex lasting entire weekends.

1. Bourne A, et al Sex Transm Infect 2015;91:564-568



Drugs typically involved

- Crystal Meth (crystal methamphetamine)
- Mephadrone (Meow Meow, Drone, MCAT)
- GHB (gammahydroxybutyrate) /GBL (gamma butyrolactone) i.e. liquid ecstasy, liquid X
- Ketamine
- MDMA, poppers and erectile dysfunction drugs – used in sexualized context.



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Chemsex

- Common in MSM
- Increased risk taking behaviors²
- An important public health issue amongst MSM
- MSM - most HIV transmissions in Western countries
- UK - gradual increase in last decade to same level as peak in early 1980's³
- Facilitation increased HIV incidence, STI transmission/acquisition
- Lack of control during sex
- Subgroup of MSM who practice Chemsex - highest risk of HIV acquisition and transmission⁴

- At population level
 - use of Chemsex drugs by MSM is still low
 - increase in HIV negative MSM attending for nPEP - episodes of condom-less anal sex.⁵
- MSM engaging in Chemsex - typically use sexual health clinics compared to substance use services
 - need for culturally sensitive Chemsex support services⁶.
- Important to identify high risk MSM in sexual health clinics
 - Interventions to decrease STI and HIV transmission in this group
 - Inform better clinical pathways, preventative health promotion, well-being interventions

AIMS

➤ To determine

- ◆ Prevalence of Chemsex among MSM
- ◆ Characteristics and risk profiles of the group of MSM who engage in Chemsex
- ◆ Associations between Chemsex and STI including HIV diagnoses in MSM

in South Australia.



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METHODS

- Cross-sectional cohort study of MSM recruited from 3 clinical sites in South Australia over a period of 6 months (February to August 2017)
- Ethics approval was obtained - HREC /17/RAH/10
- Clinical based sample recruited from
 - ◆ **Adelaide Sexual Health Centre** (the only public sexual health clinic in South Australia)
 - ◆ **O'Brien Street Practice** (high case load MSM and HIV general practice in Adelaide)
 - ◆ **SAMESH** (South Australia Mobilization and Empowerment for Sexual Health), a non government organization with drop in and appointment clinics.



- Completion of study questionnaire
- The questionnaire - paper and electronic versions
- Voluntary and anonymous completion by participants retaining confidentiality.
- Data collection on socioeconomic characteristics, sexual partners and practices, HIV, STI, PEP and PrEP and Chemsex
- Data entered into a secure database
- Assembly and analysis of data base with SPSS package
- Proportion of respondents reporting Chemsex and associated factors – assessed
- Pearson's chi – squared test
- Multivariable logistic binomial regression analysis



RESULTS

**Sample size =
410**



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Socio-demographic characteristics of the sample

Variable	N	%
Age		
15-25	128	31.2
26-35	133	32.4
36-45	69	16.8
46-55	56	13.7
56-70	24	5.9
Employment		
Not employed	138	33.7
Employed full or part-time	272	66.3
Born in Australia	311	75.9
ATSI background	8	2.0
State		
SA	382	93.2

Participants were

- Mostly young with approximately 2/3rds less than 35 years of age
 - Employed fulltime or part time
 - Australian born and living in South Australia
- 2% of the participants identified as Aboriginal or Torres Strait Islander.

Sex partners and practices

Variable	N	%
Number of partners (last 6 months)		
0-1	76	18.5
2+	334	81.5
Where had sex		
Only locally	190	46.3
Only interstate or overseas	17	4.2
Locally and outside SA	203	49.5
Had sex in "Sex on Premises" sites	125	30.5
Had sex in sauna	102	24.9
Had sex at beats	28	6.9
Had sex in Ram Lounge	8	2.0
Had sex in all of the above places	15	3.7
Hooked up for sex online	24	5.9
Hooked up for sex on mobile apps	212	51.7
Hooked up for sex both online and on mobile applications	81	19.8
CLAI (Condomless anal intercourse)		
Did not have CLAI	135	32.9
Had CLAI	275	67.1
Group sex (last 6 months)		
Never	237	57.8
Once/a few times	146	35.6
At least monthly	27	6.6
Were paid for sex (last 6 months)		
No	390	95.1
Yes	20	4.9

In the previous 6 months: -

- 81.5% reported multiple sexual partners (>/= 2 partners)
- 46.3% had sex locally in South Australia
- 30.5% reported sex in "Sex on Premises" sites with 24.9% reporting sex at the sauna
- 51.7% hooked up for sex on mobile apps, 19.8% hooked up for sex online and on mobile apps.
- 67.1% had condomless anal sex.
- 42.2% engaged in group sex
- 4.9% were paid for sex

HIV, STI, PEP and PrEP

Variable	N	%
Ever tested for HIV	376	91.7
HIV status		
Positive	47	11.5
Negative	319	77.8
Unknown	44	10.7
Had PEP in the last 6 months	48	11.7
On PrEP	26	6.3
Diagnosed with an STI in the last 12 months		
Any	125	30.5
Gonorrhoea	56	13.7
Chlamydia	69	16.8
Mycoplasma	2	0.5
Syphilis	16	3.9
Hep B	4	1.0
Hep C	3	0.7
Herpes	8	2.0
Genital warts	17	4.2
NSU	3	0.7
Scabies	4	1.0
Crabs	14	3.4
Other	3	0.7

- 91.7% reported ever being tested for HIV. 8.3% had never been previously tested for HIV
- 11.5% were HIV +ve, 77.8% HIV -ve
- 11.7 % had nPEP the preceding 6 months
- 6.3% were on PrEP
- 30.5% were diagnosed with a STI preceding 12 months - 16.8% chlamydia and 13.7% gonorrhoea

Variable	N	%
Substances used in Chemsex		
Crystal meth	58	14.2
GHB/GBL	19	4.6
Methadone	1	0.2
Ketamine	7	1.7
Other	71	17.3
Reasons for Chemsex		
To get more aroused	53	12.9
To have sex for longer	38	9.3
To become less inhibited	39	9.5
For fun	76	18.5
To get a buzz/to get wired/to feel on top of the world	39	9.5
To explore /experiment/to see what it is like	37	9.0
For party and play	42	10.2
Others wanted me to use it	14	3.4
To feel more confident with myself	23	5.6
To feel more worthwhile	10	2.4
When do you use drugs?		
In planned organized group parties/sex	22	20.0
When the opportunity arises randomly	88	80.0
Want to stop taking drugs	37	33.6

Sexualized recreational drug use (Chemsex) in this population: -

- 14.2% - reported having used crystal methamphetamine
- 4.6%GHB/GBL
- 0.2% mephadrone
- 1.7% ketamine
- 17.3% other drugs (amyl, MDMA, erectile dysfunction drugs, alcohol, marijuana).

Reasons for sexualized recreational drug use included

- Mostly for fun (18.5%)
- Party and play (10.2%)
- To have sex longer 9.3%
- To be less inhibited (9.5%).

Majority use the drugs when the opportunity arises, 20% in planned organized parties. About a third want to stop taking drugs.

Comparison of men who used substances during sex (Chemsex) and those who did not

Variable	Used substances during sex in the last 6 months (CHEMSEX)				Pearson's chi2 p-value
	Yes		No		
	N	%	N	%	
Total	120	100	290	100	
Sociodemographic characteristics					
Age					
15-25	32	26.7	96	33.1	0.211
26-35	40	33.3	93	32.1	
36-45	17	14.2	52	17.9	
46-55	23	19.2	33	11.4	
56-70	8	6.7	16	5.5	
Employment					
Full or part-time	78	65.0	194	66.9	0.712
Pension/SS/student/unemployed/other	42	35.0	96	33.1	
Born in Australia	103	85.8	208	71.72	0.002
ATSI background	5	4.17	3	1.95	0.037
State where participants live					
SA	111	92.5	271	93.5	0.729
Other states, overseas	9	7.5	19	6.6	
Behavior					
Had a regular male partner (more than 3 months)	40	33.3	127	43.8	0.05
Number of partners (last 6 months)					
0-1	14	11.7	62	21.4	0.021
2 and more	106	88.3	228	78.6	
Where had sex					
Only locally	49	40.8	141	48.6	
Only interstate or overseas	6	5.0	11	3.8	
Locally and outside SA	65	54.2	138	47.6	
Had sex in "Sex on Premises" sites	57	48	68	23.5	<0.001
Had sex in sauna	44	37	58	20.0	<0.001
Had sex at beats	17	14	11	3.8	<0.001
Had sex in Ram Lounge	3	3	5	1.7	0.605
Had sex in all of the above places	8	7	7	2.4	0.037
Hooked up for sex online	5	4	19	6.6	0.349
Had CLA in the last 6 months	93	77.5	182	62.8	0.004
Group sex (last 6 months)	42	35.0	195	67.2	<0.001
Never	60	50.0	86	29.7	
Once/a few times	18	15.0	9	3.1	
At least monthly					
Were paid for sex (last 6 months)	10	8	10	3.5	0.037
HIV/STI, use of PEP and PrEP					
Ever tested for HIV	115	96	261	90.0	0.051
HIV status					
Positive	27	22.5	20	6.9	<0.001
Negative	82	68.3	237	81.7	
Unknown	11	9.2	33	11.4	
Had PEP in the last 6 months	18	15.0	30	10.3	0.182
On PrEP	15	12.5	11	3.8	0.001
Diagnosed with an STI in last 12 months	51	42.5	74	25.5	0.001
Gonorrhoea	30	25.0	26	9.0	<0.001
Chlamydia	26	21.7	43	14.8	0.092
Mycoplasma	1	0.8	1	0.3	0.518
Syphilis	5	4.2	11	3.8	0.859
Hepatitis B	1	0.8	3	1.0	0.850
Hepatitis C	1	0.8	2	0.7	0.877
Herpes	1	0.8	7	2.4	0.292
Genital warts	6	5.0	11	3.8	0.577
NSU	1	0.8	2	0.7	0.877
Scabies	4	3.33	0	0	0.002
Crabs	6	5.0	8	2.76	0.256

MSM who engaged in Chemsex during the previous 6 months (N=120) were more likely

- To be born in Australia
- To be of ATSI background
- To have 2 or more partners
- To have had sex in 'sex on premises sites' sauna, beats
- To have hooked up for sex both online and on mobile applications
- To have had condom less anal sex and group sex
- To have been paid for sex in the last 6 months.
- To be HIV positive
- To be on PreP
- To be diagnosed with a STI in the last 12 months, of significance, gonorrhoea and scabies

Factors associated with Chemsex

Variable	N reported Chemsex	% reported Chemsex	PR ¹ (95% CI)	APR (95%CI)
Total	120	29.3		
Age				
15-25	32	26.7	1.00	1.00
26-35	40	33.3	1.16 (0.84-1.61)	1.07 (0.75-1.53)
36-45	17	14.2	0.99 (0.66-1.48)	0.68 (0.43-1.09)
46-55	23	19.2	1.57 (1.04-2.35)	1.14 (0.70-1.86)
56-70	8	6.7	1.27 (0.72-2.26)	0.86 (0.47-1.58)
Born in Australia				
No	17	17.2	1.00	1.00
Yes	103	33.1	1.67 (1.20-2.31)	1.45 (1.02-2.06)
ATSI background				
No	115	28.6	1.00	1.00
Yes	5	62.5	2.42 (0.99-5.92)	1.79 (0.56-1.02)
Had a regular male partner (more than 3 months)				
No	80	32.9	1.00	1.00
Yes	40	24.0	0.77 (0.59-1.00)	0.75 (0.55-1.02)
Number of partners (last 6 months)				
0-1	14	18.4	1.00	1.00
2 and more	106	31.7	1.53 (1.07-2.18)	0.95 (0.63-1.45)
Had sex in sauna, beats or Ram Lounge				
No	112	28.4	1.00	1.00
Yes	8	53.3	1.93 (1.01-3.69)	0.79 (0.39-1.61)
Hooked up for sex both online and on mobile applications				
No	77	23.4	1.00	1.00
Yes	43	53.1	2.23 (1.63-3.05)	1.70 (1.19-2.43)
Group sex (last 6 months)				
Never	42	17.7	1.00	1.00
Once/a few times	60	41.1	2.02 (1.53-2.66)	1.86 (1.35-2.57)
At least monthly	18	66.7	3.88 (2.30-6.56)	2.30 (1.23-4.29)
Were paid for sex (last 6 months)				
No	110	28.2	1.00	1.00
Yes	10	50.0	1.78 (1.01-3.13)	1.24 (0.66-2.33)

In the multivariate regression analysis, Chemsex in the last 6 months was significantly associated with

- Being born in Australia
- Hooking up on line and on mobile applications
- Engaging in group sex once/a few times or at least monthly
- Being HIV +ve (APR = 2.46; 95%CI: 1.62-3.73)
- Taking PrEP

PR – p revalence ratio (un-adjusted), based on bivari-ate log-binomial regression
 APR – adjusted prevalence ratio, based on multivariate log-binomial regression

DISCUSSION

- To our knowledge - first study of chemsex in a clinical cohort to be conducted in Australia.

Significant key factors associated with Chemsex in the cohort

- Being born in Australia
- Having hooked up online and mobile applications
- Group sex
- Being paid for sex
- Being HIV positive and
- Being on PrEP.



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The group of MSM who engaged in chemsex and who tended to have had CLAI - more likely

- To be HIV positive (self reported to be on treatment with undetectable viral load)
- To be on PrEP,
- To be diagnosed with a STI in the previous 12 months - gonorrhea and scabies - of significance.

Interestingly, association with having used PEP - NOT significant.

14.2% of the cohort used crystal meth in the context of Chemsex

STRENGTHS

- Clinical based cohort
- Investigation Chemsex/sexual practices in clinical practice in context of HIV prevention
- Identification of patient cohort with very high risk drug use in the context of sex

LIMITATIONS

- Cross –sectional study
- Self reporting by the cohort
- The issue of missing answers



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CONCLUSIONS

- **Chemsex - a key predictor to CLAI**
- **South Australian born MSM who engage in Chemsex - tend to have CLAI**
- **South Australian HIV positive MSM - more likely to engage in Chemsex**



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