Drug Facilitated Sexual Assault (DFSA) Study: Building Evidence to Improve Services and to Inform Public Awareness Campaigns

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Outline of Presentation

- Ontario Network of Sexual Assault/Domestic Violence Treatment Centres
- DFSA Study
  - Rationale
  - Objectives
  - Main study findings
- Impact on Practice/Policy
- Campaign Development
35 hospital-based centres across Ontario
Provide 24 hour-a-day, 7 day-a-week post-sexual assault care, including

- crisis intervention
- physical assessment and treatment of injuries
- prophylactic medication for pregnancy and sexually transmitted infections, including HIV
- counselling or referral to counselling and other community agencies for ongoing support
- collection of medicolegal evidence (e.g., documentation of injuries, collection semen/sperm)
Primary Prevention vs Tertiary Prevention

**Primary Prevention Initiatives**

- Main goal is to protect people from developing/experiencing a health concern in the first place. For example:
  - Immunization against infectious diseases
  - Regular exams and screening tests to monitor risk factors for illness

**Tertiary Prevention Initiatives**

- Main goal is to prevent future health challenges and maximize quality of life. For example:
  - Patient support groups
  - Rehabilitation programs
  - Counselling programs
The goal of the DFSA study was to develop a tertiary prevention program to be implemented across all 35 centres. Focus of prevention program:

- To help victims in recovery with the goal of preventing future occurrence of DFSA
- To improve current DFSA services and external campaign messages
- Aim to improve the forensic and health care response provided sexual assault victims/survivors
In Ontario:

- Anecdotal observation among front-line SADVTC health care providers of rise in DFSA cases in recent years
- No systematized response to victims/survivors of DFSA at SADVTCs
- Limited number of laboratories province-wide with capacity to test for wide range of drugs at trace levels
- Centre for Forensic Sciences (CFS) not funded to provide testing of blood, urine, or biological samples to determine if DFSA may have occurred when police not involved in a case
- Growing number of unconfirmed reports of drugs being used by assailants to induce disinhibition, sedation, and amnesia to facilitate rape
Need for a Tertiary Based DFSA Standard Program of Care: Background of DFSA Study

- Little research aimed at substantiating claims of widespread use of sexual assault-facilitating drugs
- No published prospective studies with toxicological and male DNA findings
- Victims/survivors of drugging live with anguish of not being able to recall all of the details of what has happened to them (Abarbanel, 2001; Fitzgerald & Riley, 2000; Sturman, 2000)
- This adds to post-sexual assault feelings of powerlessness, lack of control, and humiliation (Abarbanel, 2001)
- “[F]rustrated attempts to remember ‘what actually happened’ and the fear of the ‘unknown’ can become a fixation for the survivor” (Sturman, 2000)
Objectives

- To measure the prevalence of DFSA
- To determine the profile of DFSA victims/survivors
- To establish factors associated with DFSA
- To evaluate the DFSA program of care

Based on Research Findings: To establish a campaign to improve public awareness regarding DFSA
Participating Sites:

- **Guelph** Wellington Care and Treatment Centre for Sexual Assault and Domestic Violence
- **Hamilton** Health Science Centre Sexual Assault/Domestic Violence Care Centre
- **Kenora** Lake of the Woods District Hospital Sexual Assault/Partner Abuse/SAFEKIDS program
- **Ottawa** Hospital Civic Campus Sexual Assault and Partner Abuse Care Program
- **Renfrew** Victoria Hospital Regional Assault Care Program
- **Scarborough** Hospital Grace Campus Sexual Assault Care Centre/ Domestic Violence Program
- **Toronto** Women’s College Hospital Sexual Assault/Domestic Violence Care Centre
Delphi method, a systematic, iterative means of determining the parameters of a phenomenon, used to define cases of suspected DFSA:

- Victim/survivor presents within 72 hours of being sexually assaulted and gives at least one valid reason for suspecting that s/he has been intentionally drugged (e.g., total or partial amnesia, conscious paralysis, slurred speech) and sexually assaulted (e.g., woke to find clothes had been removed, unexplained vaginal or anal bleeding)

- Participants in the Delphi process were: our Advisory Group (2 toxicologists, a forensic biologist, a physician examiner), program coordinators from 7 participating sites, and members of the research team

- Forms/tools developed and piloted and front-line staff trained

- All sexual assault clients seen during the study period aged 16 years or older screened for DFSA

- Clients meeting DFSA criteria provided standardized program of DFSA care
Urine and rectal, vaginal and oral swabs collected using DFSA Mini Kit
  (contained an ice pack, urine container, swabs and drying boxes, shipping boxes, labels and seals)
Pre-numbered stickers put on all samples by on-call nurse examiner and stored in freezer
Specimens put in boxes and pre-labeled envelopes by designated study nurse and sent to London Laboratory Services Group (LLSG) (urine) and Centre of Forensic Sciences (CFS) in Toronto (swabs) for processing
Urine specimens screened for CNS active substances: alcohol (ethanol), cannabinoids, cocaine, opiates, GHB, amphetamines, benzodiazepines (e.g., flunitrazepam [Rohypnol®], diazepam), MDMA (Ecstasy), ketamine, and anti-depressants, cough suppressants, muscle relaxants, anticonvulsants at LLSG
Oral, rectal, and vaginal swabs tested for presence of male DNA at CFS
Laboratory results mailed to Study Coordinator and faxed to relevant SA/DVTC
Victim/survivor contacted by designated follow-up nurse with results
Screening and Supplemental Data Collection forms mailed to Study Coordinator
## Results

\[ N = 977 \]

<table>
<thead>
<tr>
<th>Eligible participants</th>
<th>Excluded:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>882 (90.3%)</strong></td>
<td><strong>95</strong></td>
</tr>
</tbody>
</table>
| **Suspected DFSA**    | **Under age 16**<br>**184 (20.9%)**<br>**698 (79.1%)**<br>**Declined to participate**<br>**Not sexually assaulted**<br>**79**<br>**6**<br>**10**

<table>
<thead>
<tr>
<th>Excluded:</th>
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<tbody>
<tr>
<td><strong>Under age 16</strong></td>
</tr>
<tr>
<td><strong>Declined to participate</strong></td>
</tr>
<tr>
<td><strong>Not sexually assaulted</strong></td>
</tr>
<tr>
<td>Reason</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Amnesia</td>
</tr>
<tr>
<td><strong>total</strong></td>
</tr>
<tr>
<td><strong>partial</strong></td>
</tr>
<tr>
<td>Loss of consciousness/blacked out</td>
</tr>
<tr>
<td>Hangover/symptoms inconsistent with amount of alcohol/drugs knowingly consumed</td>
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<tr>
<td>Dizziness/lightheadedness</td>
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<tr>
<td>Confusion</td>
</tr>
<tr>
<td>Drowsiness</td>
</tr>
<tr>
<td>Nausea/vomiting</td>
</tr>
<tr>
<td>Impaired motor skills</td>
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<tr>
<td>Slurred speech</td>
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</tbody>
</table>
Time to Presentation (Hours)

- <= 1: 3%
- 2 - 6: 10%
- 7 - 12: 16%
- 13 - 24: 31%
- 25 - 72: 40%
## Client Characteristics

<table>
<thead>
<tr>
<th>Living Situation</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alone</td>
<td>17</td>
</tr>
<tr>
<td>With Family</td>
<td>41</td>
</tr>
<tr>
<td>With Non-relatives</td>
<td>21</td>
</tr>
<tr>
<td>With Partner</td>
<td>9</td>
</tr>
<tr>
<td>Shelter/Homeless/Institution</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alcohol/Drug Use Prior to DFSA</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol consumed prior to assault</td>
<td>86</td>
</tr>
<tr>
<td>Prescription medication consumed in 72 hours before examination</td>
<td>29</td>
</tr>
<tr>
<td>Over-the-counter medication consumed in 72 hours before examination</td>
<td>26</td>
</tr>
<tr>
<td>Street drugs consumed in 72 hours before examination</td>
<td>26</td>
</tr>
<tr>
<td>Demographic Characteristics</td>
<td>Proportion (%)</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>25 years or under</td>
<td>59</td>
</tr>
<tr>
<td>Female</td>
<td>96</td>
</tr>
<tr>
<td>Students</td>
<td>40</td>
</tr>
<tr>
<td>Unemployed</td>
<td>61</td>
</tr>
<tr>
<td>White</td>
<td>65</td>
</tr>
</tbody>
</table>
Assault Characteristics

54% assaulted by a Known Assailant*

Last Known Location:
- 32% assaulted club/bar/lounge
- 19% assaulted assailant’s home
- 12% assaulted victim’s home
- 18% assaulted someone else’s home

Last Known Activity:
- 31% socializing club/bar/lounge
- 17% attending a party
- 16% visiting someone

*20% unknown
Assault Context: Suspected Mode of Drugging

Suspected Mode of Drugging

- Recreational Drug: 26%
- Non-alcoholic Drink: 9%
- Alcoholic Drink: 10%
- Unsure: 55%
Overview of Toxicological Findings

Suspected DFSA 184 (20.9%)

- Urine for toxicology collected and analysed: 178 (96.7%)
- Urine for toxicology collected, not analysed: 3 (1.6%)
- Urine not collected: 3 (1.6%)

Drugs only detected: 80 (44.9%)
Alcohol only detected: 23 (12.9%)
Alcohol and drugs detected: 32 (18.0%)
No alcohol, no drugs detected: N = 46 (24.2%)
Drugs/alcohol detected on toxicological screening
N = 135 (75.8%)

<table>
<thead>
<tr>
<th>Unexpected drugs</th>
<th>No unexpected drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>87</strong> (64.4%)</td>
<td><strong>48</strong> (35.6%)</td>
</tr>
</tbody>
</table>

Cases with ‘unexpected CNS active drugs’ were those in which the participant did not report a history of CNS active drug consumption and at least one CNS active drug was found or a CNS active drug was found that was different from the one(s) s/he reported having voluntarily consumed.
**Types of Unexpected Alcohol and Drugs Detected**

<table>
<thead>
<tr>
<th>CNS Active Substance</th>
<th>N = 87 (64%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Street Drugs</strong></td>
<td></td>
</tr>
<tr>
<td>Cannabinoids</td>
<td>35 (40)</td>
</tr>
<tr>
<td>Cocaine</td>
<td>28 (32)</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>12 (14)</td>
</tr>
<tr>
<td>MDMA</td>
<td>8 (9)</td>
</tr>
<tr>
<td>Ketamine</td>
<td>2 (2)</td>
</tr>
<tr>
<td>GHB</td>
<td>1 (1)</td>
</tr>
<tr>
<td><strong>Analgesics</strong></td>
<td></td>
</tr>
<tr>
<td>Morphine</td>
<td>7 (8)</td>
</tr>
<tr>
<td>Codeine</td>
<td>6 (7)</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>5 (6)</td>
</tr>
<tr>
<td>Methadone</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>1 (1)</td>
</tr>
</tbody>
</table>

Note. More than one unexpected drug could be found in a sample.
### Types of Unexpected Alcohol and Drugs Detected

<table>
<thead>
<tr>
<th>CNS Active Substance</th>
<th>N = 87 (64%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzodiazepines</td>
<td></td>
</tr>
<tr>
<td>Lorazepam</td>
<td>6 (7)</td>
</tr>
<tr>
<td>Other Diazepam</td>
<td>7 (8)</td>
</tr>
<tr>
<td>Flunitrazepam (Rohypnol®)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Antidepressants</td>
<td></td>
</tr>
<tr>
<td>Citalopram</td>
<td>6 (7)</td>
</tr>
<tr>
<td>Venlaflaxine</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Desipramine</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Amitriptyline</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td></td>
</tr>
<tr>
<td>Quetiapine</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Alcohol</td>
<td>1 (1)</td>
</tr>
</tbody>
</table>

Note. More than one unexpected drug could be found in a sample.
Overview of Biological Findings

Suspected DFSA 184 (20.9%)

- DNA swabs collected and analysed 150 (81.5%)
- DNA swabs collected, not analyzed 6 (3.3%)
- DNA swabs not collected 28 (15.2%)

- Male DNA detected 64 (42.7%)
- No male DNA detected 86 (57.3%)
## Male DNA Findings by Post Assault Characteristics

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Total Biological Findings N=150 (%)</th>
<th>Male DNA Found Yes N=64 (%)</th>
<th>Male DNA found No N=86 (%)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washed/Destroyed clothing/bedding</td>
<td>19(12.7)</td>
<td>5(7.8)</td>
<td>14(16.3)</td>
<td>0.123</td>
</tr>
<tr>
<td>Urinated</td>
<td>137(91.3)</td>
<td>57(89.1)</td>
<td>80(93.0)</td>
<td>0.394</td>
</tr>
<tr>
<td>Defecated</td>
<td>63(42.0)</td>
<td>21(32.8)</td>
<td>42(48.8)</td>
<td><strong>0.049</strong></td>
</tr>
<tr>
<td>Washed/bathed/showered</td>
<td>65(43.3)</td>
<td>22(34.4)</td>
<td>43(50.0)</td>
<td>0.056</td>
</tr>
<tr>
<td>Brushed teeth</td>
<td>83(55.3)</td>
<td>28(43.8)</td>
<td>55(64.0)</td>
<td><strong>0.014</strong></td>
</tr>
<tr>
<td>Douched</td>
<td>6(4.0)</td>
<td>4(6.3)</td>
<td>2(2.3)</td>
<td>0.402</td>
</tr>
<tr>
<td>other</td>
<td>6(4.0)</td>
<td>3(4.7)</td>
<td>3(3.5)</td>
<td>0.701</td>
</tr>
</tbody>
</table>
**Prevalence of Unexpected Male DNA**

<table>
<thead>
<tr>
<th>Consensual Sex</th>
<th>Total Biological Findings</th>
<th>Male DNA Found; Yes N=64 (%)</th>
<th>Male DNA Found; No N=86 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>47 (31.3)</td>
<td>34 (53.1)</td>
<td>13 (15.1)</td>
</tr>
<tr>
<td>No</td>
<td>103 (68.7)</td>
<td>30 (46.9)</td>
<td>73 (84.9)</td>
</tr>
</tbody>
</table>

*Cases with ‘unexpected male DNA’ were those in which the participant did not report a history of consensual sexual intercourse in the week prior to being sexually assaulted.*
Feedback from Clients - Survey

Overall Satisfaction with DFSA Care:

- Very satisfied: 86%
- Satisfied: 14%
- Unsatisfied: 0%
- Very Unsatisfied: 0%

Client 1: “I was very well taken care of.”
Client 2: “Everything was very good and professional.”
How satisfied were you with the DFSA Study care offered?

Very satisfied (17%)
Satisfied (67%)
Unsatisfied (17%)
Very unsatisfied (0%)

“Biological testing took a lot longer than expected leaving clients in the difficult position of waiting longer than promised at initial testing.”

“[Forms] should be streamlined into service … [t]oo much duplication of question style and paperwork.”
Summary

- Suspected DFSA common among sexual assault treatment centre clients
- Victim/survivors overwhelming young women
- Unexpected CNS active drugs found in approximately two-thirds of those cases positive for drugs/alcohol
- Unexpected CNS active drugs most commonly identified on toxicological screening not those typically considered ‘date rape drugs’
- Male DNA was unexpected in almost half of cases in which it was found
- Health care provider and client respondents overwhelming satisfied with DFSA Program of Care
New Standard of sexual assault care developed
ECHO, a provincial agency, released “Policy in Action” brief
  recommends to LHINs and Ministry of Health and Long-Term Care that the new Standard be implemented in all Sexual Assault/Domestic Violence Treatment Centres across Ontario

Provincial Advisory Group established to ensure implementation
First standardized, evidence-based Drug-Facilitated Sexual Assault Program of Care of its kind
New Standard will substantially improve services provided to women who have been sexually assaulted in Ontario
Can also serve as a model for practice worldwide
Standardized screening of each sexual assault victim/survivor to determine if a suspected drugging and sexual assault has occurred

**Screening modified to record:**
- use of voluntary drugs up to two weeks prior to sexual assault (particularly for marijuana)
- approximate time and date of sexual assault
- more details about circumstances of sexual assault (e.g., plied with alcohol, amount of alcohol consumed)

**Screening questions incorporated into existing nursing documentation tools**
If DFSA suspected, a supplemental data collection form completed as well as DFSA Mini Kit

Instructions modified so that particular swabs (e.g., vaginal swabs) for male DNA not collected in cases in which clients report that type of consensual sexual activity (e.g., vaginal penetration) in week prior to sexual assault

All suspected DFSA clients would be offered prophylactic treatment for the prevention of pregnancy and STIs, including HIV

Completed DFSA Mini Kit shipped to appropriate testing laboratory

Client informed of results by SADVTC follow-up health care provider
Media attention often aimed at so-called “date rape drugs”. In particular, drugs such as GHB, MDMA, ketamine, and flunitrazepam (Rohypnol). Findings of this study suggest cannabinoids and cocaine to be the most common drugs found in urine samples of clients who believed themselves to have been intentionally drugged.
Current Canadian Prevention Campaigns

Current Campaigns across Canada are aimed at both men and women to bring about DFSA awareness.

- “What’s Consent Got To Do With It?” (Vancouver, British Columbia).
- “Protect Yourselves”. Newfoundland & Labrador Sexual Assault Crisis & Prevention Centre Inc. (Newfoundland and Labrador)
- “Don’t Be That Guy” Sexual Assault Voices of Edmonton, (Edmonton, Alberta)

Campaigns aim to target potential offenders, whereas most DFSA awareness campaigns have focused on bringing awareness to potential victims.

Research is telling us that targeting the behavior of victims is not only ineffective, but also contributes to how much they blame themselves after the assault. That’s why our campaign is also targeting potential offenders.
Vancouver: “What’s Consent Got To Do With It?”

Edmonton – Sexual Assault Voices: “Don’t Be That Guy”

Newfoundland and Labrador Campaign Posters: “Protect Yourselves”
Recommendations for Campaigns/Education/Outreach

A future campaign strategy will be developed based on:
- Evidence based research findings
- Victim and health care provider feedback on DFSA standards of care

Campaign Strategy - 3 Levels of Approach

1. Program Awareness
   - Posters and brochures on DFSA and DFSA care will be provided to public service providers who have frontline contact with potential DFSA victims/survivors
   - Additional information included in brochures will outline the referral process and how to access care services
Recommendations for Campaigns/Education/Outreach

2. Message to General Public
   - Through media campaigns communicate message to the general public that drugs involved in DFSA are often not those typically considered ‘date rape drugs’
   - DFSA training program should be developed and delivered at the Server Intervention Program (SIP) for bar/club staff
   - Public service messages should be broadcast widely with the information that victims/survivors of sexual assault who suspect they have been drugged should go to a SADVTC as soon as possible
   - Educational materials about DFSA will be made available in community health centres, drug treatment centres, bars and nightclubs, as well as in university and college campuses and the workplace
   - Educational materials will be at an appropriate literacy level and in multiple languages and formats (print, electronic, etc.)
   - And include information about:
     - Possible additive effects of using drugs and alcohol
     - Safeguarding drinks and using caution when accepting drinks from others
     - What constitutes consent to sexual activity

4. Role of the Bystander
   - Education materials will target individuals that may be present during the time of an assault. Information provided will highlight what indicators bystanders should look for, ways they can support a victim when DFSA is suspected, and who to contact
Thank you