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# Hospital-Based Inhalation Overdose Prevention Services in Vancouver, British Columbia

Presenter: Piper Dickhout  
Co-authors: Brittany Dennis, Seonaid Nolan,  
Naomi Watt, Ian Haynes, and Serena Eagland



## Regional Context: British Columbia (BC), Canada

- Public Health Emergency declared in 2016 for deaths related to the toxic drug supply in BC
  - Presence of **synthetic opioids** (e.g. fentanyl and its analogues), **benzodiazepines**, and **sedatives** (e.g. xylazine) in the unregulated supply has substantially impacted morbidity & mortality in Canada
- Toxicity, prohibition, and criminalization of substances persists as important drivers of this crisis

~ **51,000** apparent  
opioid toxicity deaths  
since January 2016 in  
Canada

## Regional Context: British Columbia (BC), Canada

- To date, **over 16,000** British Columbians have died due to the toxic drug supply
  - **Averaging 7 deaths per day**
- Grassroot efforts paved the way for the rapid scale-up of harm reduction initiatives such as Overdose Prevention Sites (OPS) to allow for individuals to use substances in a safe and secure environment

Unregulated Drug Deaths by Month, 2014-2025

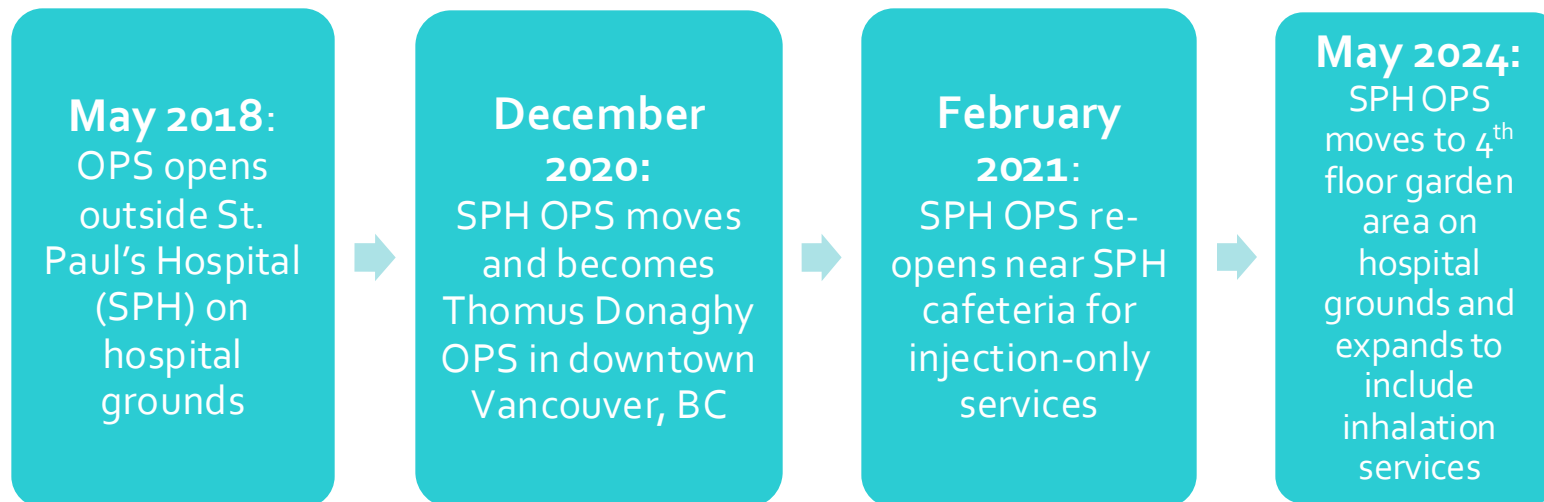
Month	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
January	23	43	86	148	134	93	79	188	217	230	219	152
February	38	31	58	125	108	86	79	176	203	196	204	
March	28	32	76	130	158	120	120	173	185	215	215	
April	29	34	73	155	137	81	130	188	176	240	192	
May	40	41	51	149	118	94	176	174	214	198	195	
June	29	34	72	130	116	75	189	178	156	202	198	
July	26	40	74	122	150	72	187	197	202	225	198	
August	37	53	65	127	126	83	163	202	191	199	203	
September	32	50	63	97	139	63	143	161	193	190	189	
October	35	53	77	98	119	79	174	214	209	215	155	
November	28	52	140	111	131	81	169	215	202	230	154	
December	25	66	162	104	127	62	157	229	234	241	149	
<b>Total</b>	<b>370</b>	<b>529</b>	<b>997</b>	<b>1496</b>	<b>1563</b>	<b>989</b>	<b>1776</b>	<b>2295</b>	<b>2382</b>	<b>2581</b>	<b>2271</b>	<b>152</b>

# St. Paul's Hospital's (SPH) Overdose Prevention Site (OPS)

- Substance use in BC hospital settings is common
  - Risky substance use behaviours reported to adequately treat pain or withdrawal due to historically abstinence-based hospital policies
  - People who use drugs (PWUD) are up to **3x more likely to self-initiate discharge** from hospital
- In 2018: SPH opened **the first hospital-based nurse- and peer-led OPS** in North America



## Timeline of OPS Development at SPH:





# Expansion of Services

## Factors that contributed to expansion of OPS:

### 1. Evolving needs of patients

- Increasing toxicity of supply
- Shift to inhalation as main route of consumption

### 2. Organizational need

- Code blue calls in response to suspected drug poisonings reached unprecedented numbers (**96** in the year preceding expansion)
- **922 minutes** of healthcare provider code blue response time in year preceding
- Less-than-optimal work conditions due to being an uncovered space (i.e. inclement weather)

### 3. Changes in governmental policies

- May 2024: Provincial government implements Substance Use and Addictions Management in Hospitals policy forbidding patients using personal substances outside of a designated OPS
- SPH OPS team was given an 11-day timeline to build, hire, and create policies for inhalation services that had never been offered in an acute care setting in North America



# SPH OPS's Operational Framework & Services Provided

## Staffing Model:

- Peer-focused: 6 Peer Support Workers and 1 Peer Coordinator with lived and/or living experience per shift
- Clinical support and support integrated into hospital system provided by a Clinical Nurse Educator



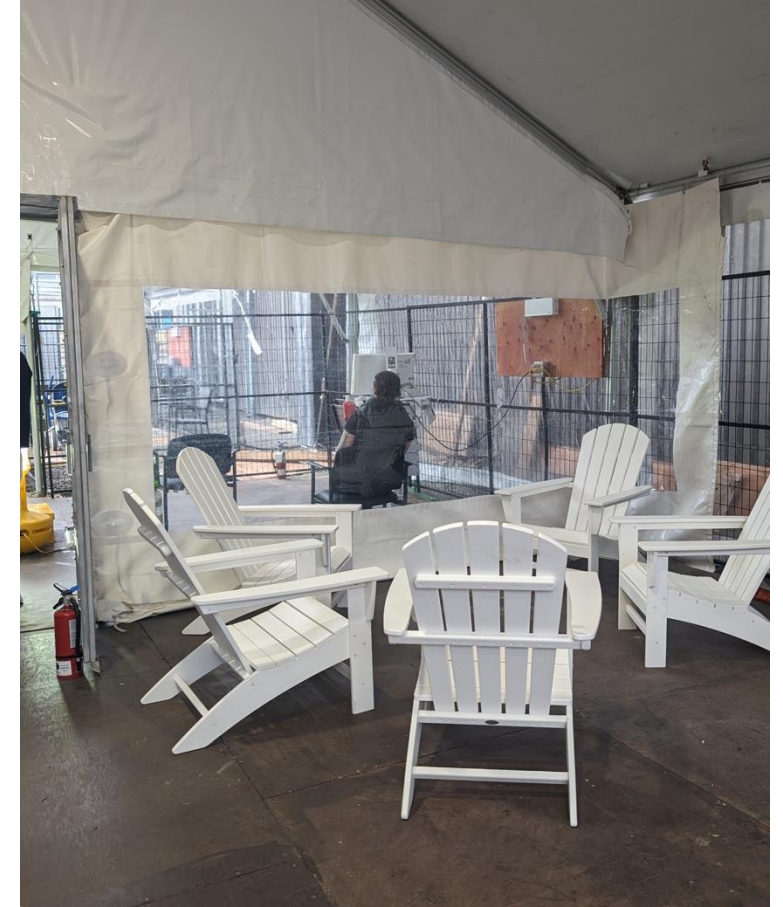
# SPH OPS's Operational Framework & Services Provided

## Services offered:

- Witnessed injection and now inhalation as of May 2024
- Overdose management and intervention
- Take-home naloxone kits and training
- Access to safer drug supplies including clean injection and inhalation
- Safe needle disposal
- Peer support
- Harm reduction education
- Drug testing for fentanyl and benzodiazepines

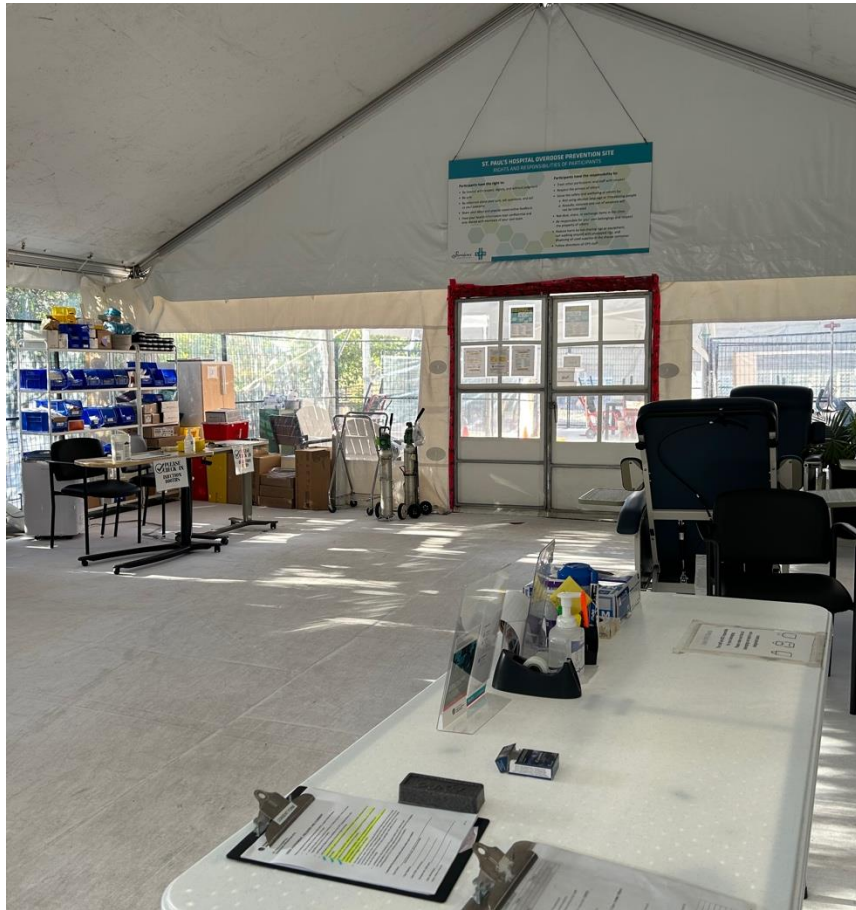
## OPS Environment:

- Open social layout to use substances together and build community
- Integrated directly in a hospital setting with access to a Code Blue/Critical Care Team in the event of severe/complex overdoses (i.e. not reversed by oxygen/naloxone)





# SPH OPS's Check-in Space (L) and Injection Space (R)





# SPH OPS's Inhalational Spaces



# Program Evaluation

**Through BC's Ministry of Health Innovation Pathway Program, our team was given a timely opportunity to evaluate the expanded scope of OPS services by:**

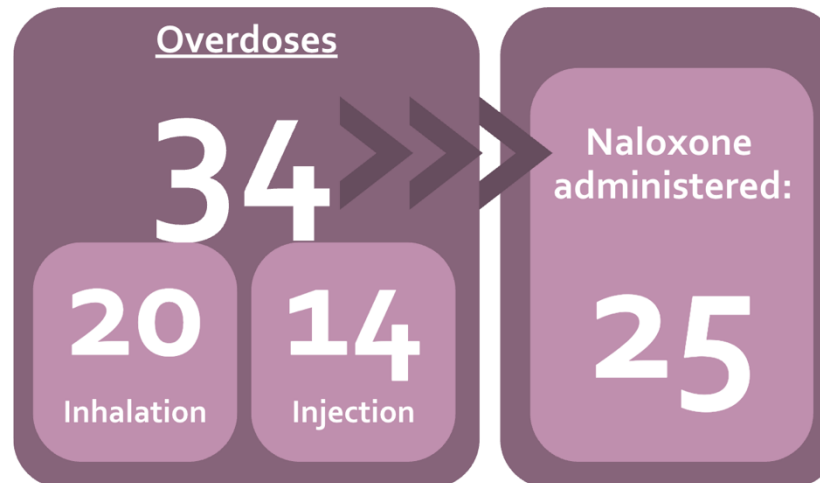
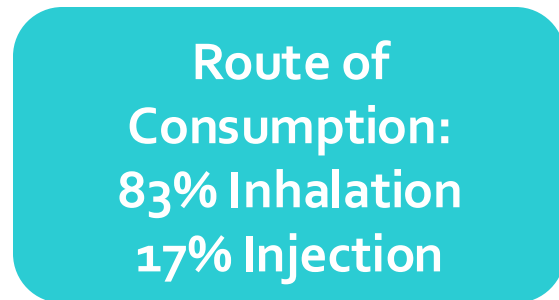
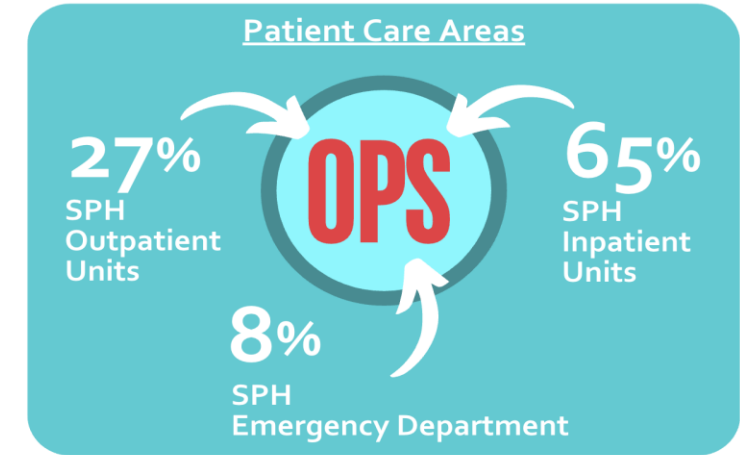
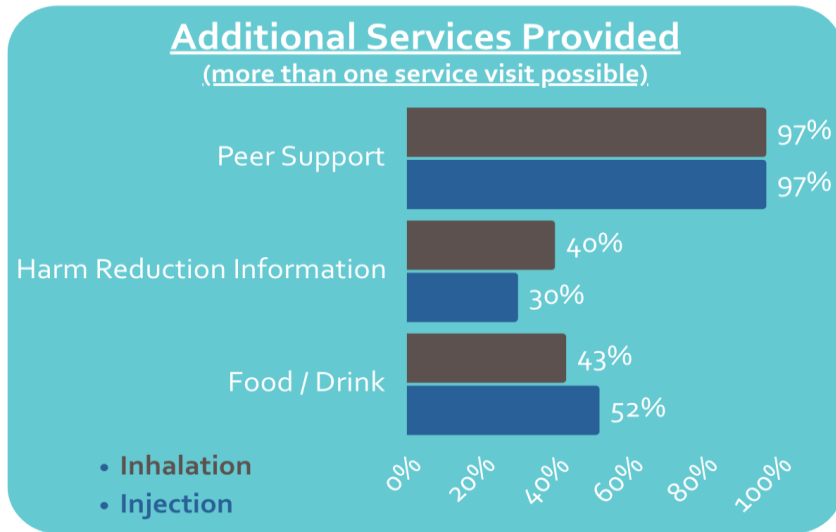
1. Describing trends in uptake of supervised inhalation services over time;
2. Characterizing clients' uses and experience of the OPS;
3. Report adverse events (e.g. overdose, code blue calls, etc.)

**Data collection tools that were developed and/or used to address Objectives 1-3 listed above were:**

1. SPH's Code Blue Database & SPH OPS Program Metrics Dashboard
2. Quality Improvement Client Satisfaction Surveys
3. Quality Improvement Staff Satisfaction Surveys

# Program Measures: Code Blue, Patient Safety and Learning System Metrics (PSLS) Data

As of April 8<sup>th</sup>, 2025:





## Program Measures: Code Blue, Patient Safety and Learning System Metrics (PSLS) Data

Following implementation of inhalational services at SPH's existing OPS (May 2024-Feb 2025):

- A **62% reduction in overdose-related code blue events** was observed (81 events pre-implementation vs. 31 events post-implementation)
- The length of **total code blue response time was correspondingly observed to be reduced by 65%** (922 minutes pre-implementation vs. 324 minutes post-implementation)
- There has been a **60% decrease in reports of people using substances in areas of the hospital that aren't the OPS**

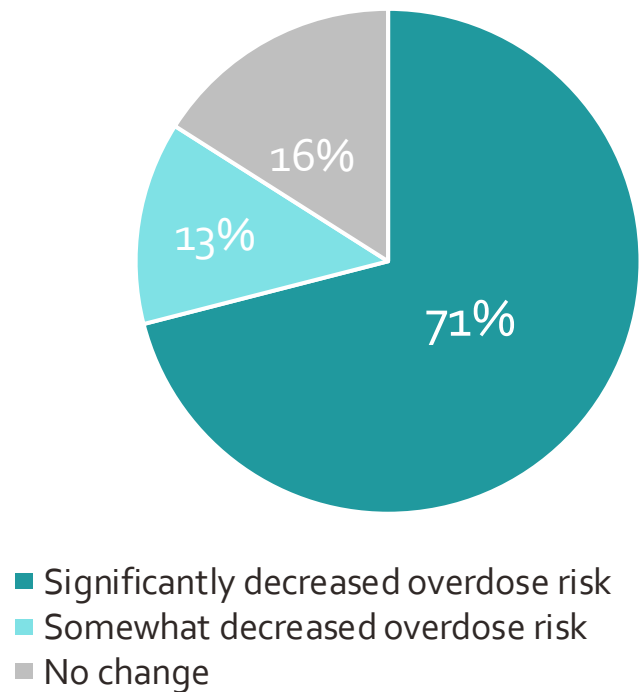
# Client Satisfaction Survey Results (N=100)

Demographics	n (%)
Median age [IQR]:	48 years [39-53]
Gender identity:	
Man	71 (71%)
Woman	24 (24%)
Gender-diverse	10 (10%)
Ethnicity:	
White	62 (62%)
BIPOC	38 (38%)
Hospital status:	
Inpatient	62 (62%)
Emergency Department	9 (9%)
Outpatient	15 (15%)
Essential Visitor	13 (13%)

Substance Use	n (%)
Primary substances consumed at OPS:	
Fentanyl	69 (69%)
Crystal Methamphetamine	69 (69%)
Cocaine	21 (21%)
Illicitly-manufactured fentanyl with suspected contaminants (e.g. Benzo-dope/Benzo-down)	21 (21%)
Route of consumption at OPS:	
Inhalation	87 (86%)
Injection	22 (22%)

# Client Satisfaction Survey Results (N=100)

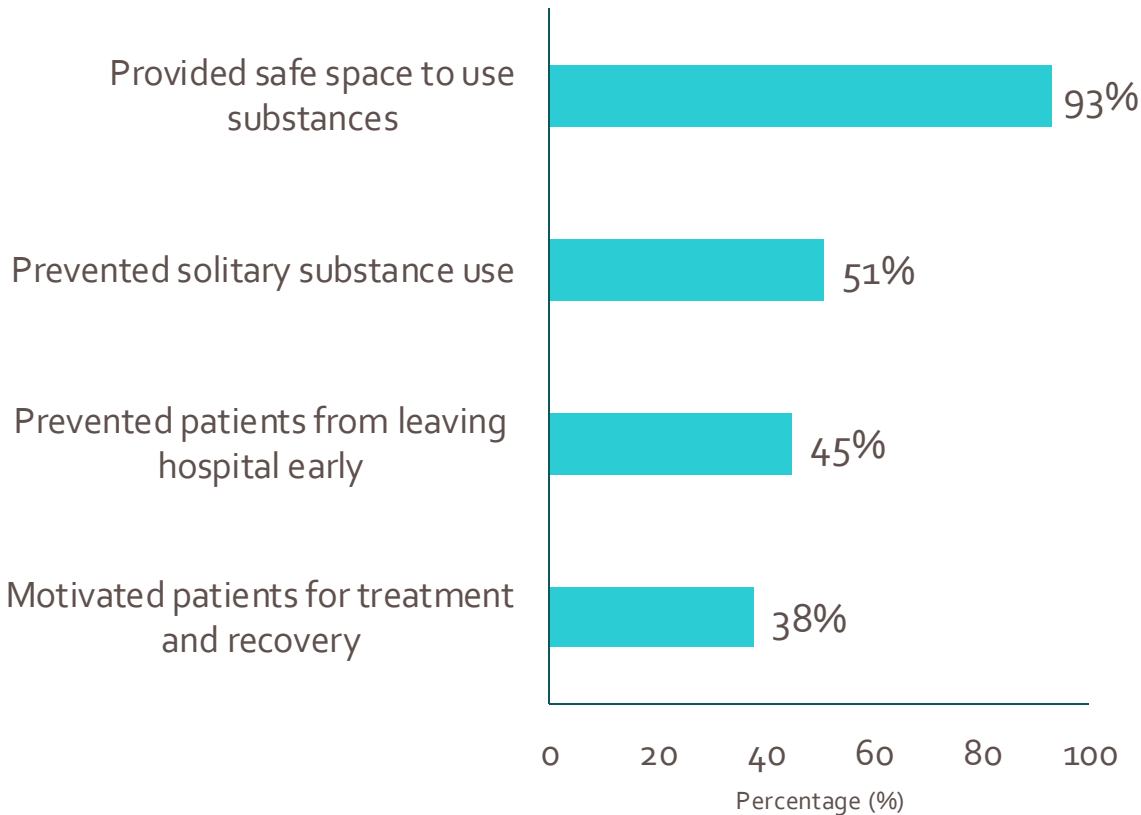
Perceived impact of access to hospital-based OPS on overdose risk (N=100)



**Primary barriers identified to accessing SPH OPS (N=100):**

- Overnight closures (n=65, 65%)
- Wait-times (n=15, 15%)

Factors that access to OPS aided during hospital stay (N=92)





# Staff Satisfaction Survey Results N=23

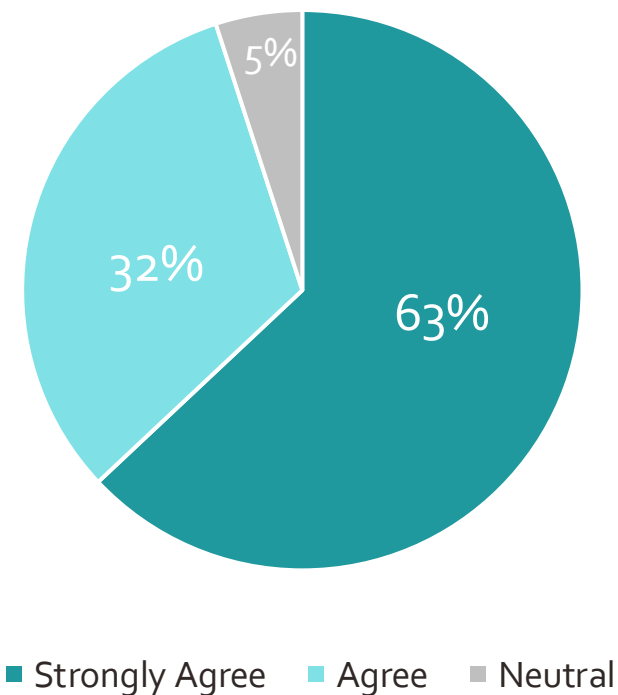
Demographics	<i>n</i> (%)
<b>Median age [IQR]:</b>	45 years [39-53]
<b>Gender identity:</b>	
Man	8 (35%)
Woman	15 (65%)
Gender-diverse	1 (5%)
<b>Ethnicity:</b>	
White	18 (86%)
BIPOC	8 (35%)
<b>Experience in substance use care:</b>	
No prior work experience	8 (35%)
< 1 year	2 (9%)
1-5 years	7 (30%)
6-10 years	3 (13%)
> 10 years	3 (13%)

Role at SPH OPS:	<i>n</i> (%)
Peer Navigator/Peer Support Worker/Peer Witness	15 (66%)
Nurse	6 (26%)
Peer Coordinator	1 (4%)
Operational Leader	1 (4%)

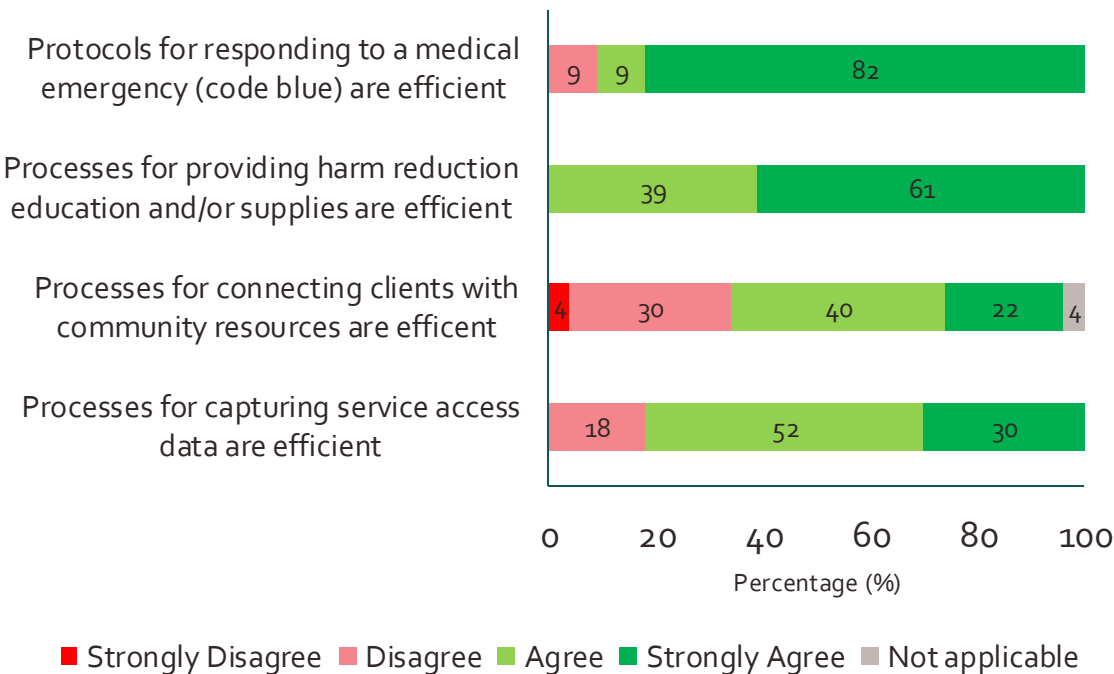
# Staff Satisfaction Survey Results N=23

## Agreement in overall job satisfaction (N=22)

\* One survey response left blank (n=1)



## Agreement in workflow efficiency (N=23)



### Primary additional supports that would aid in role at SPH OPS (N=15):

- Mentoring/additional training related to ensuring a culturally safe environment for Indigenous patients (n= 12, 80%)
- More check-ins with managerial staff (n= 6, 40%)
- Formal training specific to the unit (n= 7, 47%)



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**Contact:**  
[piper.dickhout@bccsu.ubc.ca](mailto:piper.dickhout@bccsu.ubc.ca)

