Provincial Health
Services Authority

Digital Health Canada CEF Spring Symposium:

Digital Enablement in the Care Environment

Red Fish Healing Centre for Mental Health & Addiction

Presenters

Kathryn Embacher — *Provincial Executive Director, Adult Mental Health and Substance Use, BCMHSUS, PHSA*

Prab Gill — *Chief Clinical Information Officer, Clinical Informatics, PHSA Clinical Informatics*

Rebecca Hahn — *Executive Director, Patient and Staff Experience and Measurement, BCMHSUS, PHSA*

Dr. Nick Mathew — *Medical Director, Complex Mental Health and Substance Use Services, PHSA*

Megan Stowe — *Chief, Regional Digital Solutions, PHSA*

Welcome and
Land Acknowledgment:
Belle Beach-Alcock

Provincial Health
Services Authority

Land acknowledgement

I acknowledge with gratitude, that we are gathered on the traditional, ancestral and unceded territories of the kʷikʷəƛ̓əm (Kwikwetlam) First Nation.

The kʷikʷəƛ̓əm (Kwikwetlam) First Nations who have nurtured and cared for the lands and waters around us for all time. I give thanks for the opportunity to live, work and support care here.

Provincial Health Services Authority

Agenda

1. About Red Fish Healing Centre & Unique Model of Care

2. Our Digitally-Enabled Mental Health Services

3. Virtual Health & Digital Innovation

About Red Fish Healing Centre & Unique Model of Care

Presenters: Kathryn Embacher, Dr. Nick Mathew

θəqiʔ ɫəwʔənəq leləm

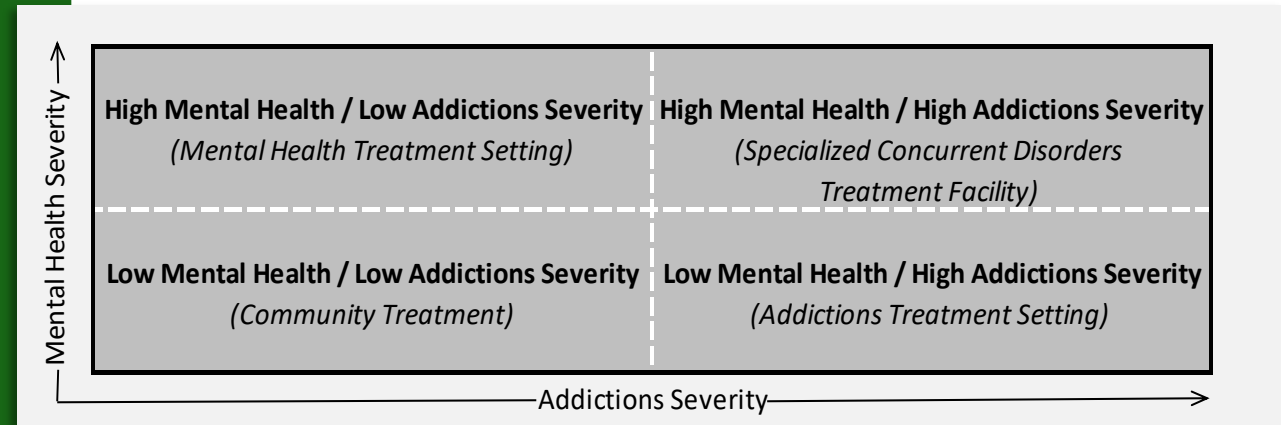səmiq̓ʷəʔelə (suh-mEE-kwuh EL-uh) – The Place of the Great Blue Heron
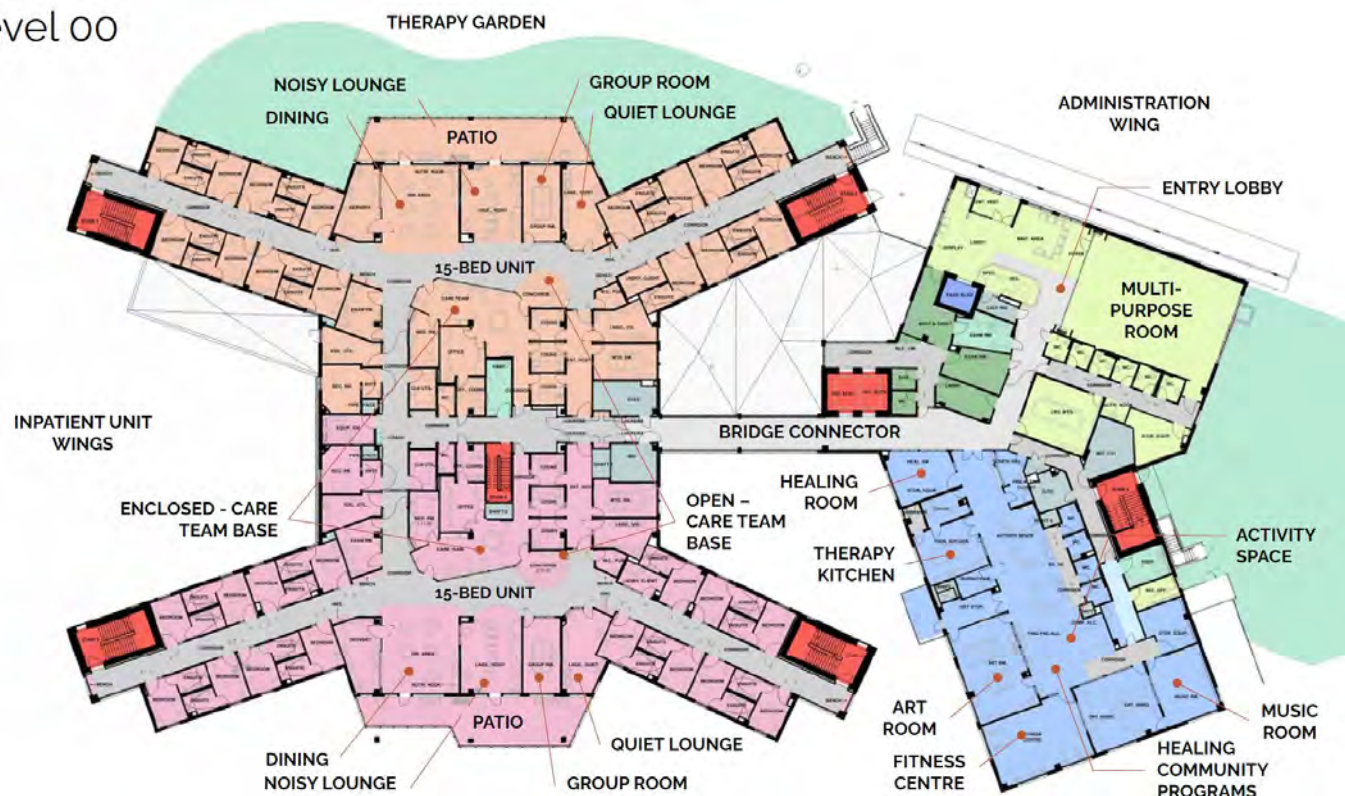
Coquitlam, BC., Canada

The Red Fish Healing Centre

- Opened in **October 2021**

- **105 bed** inpatient facility

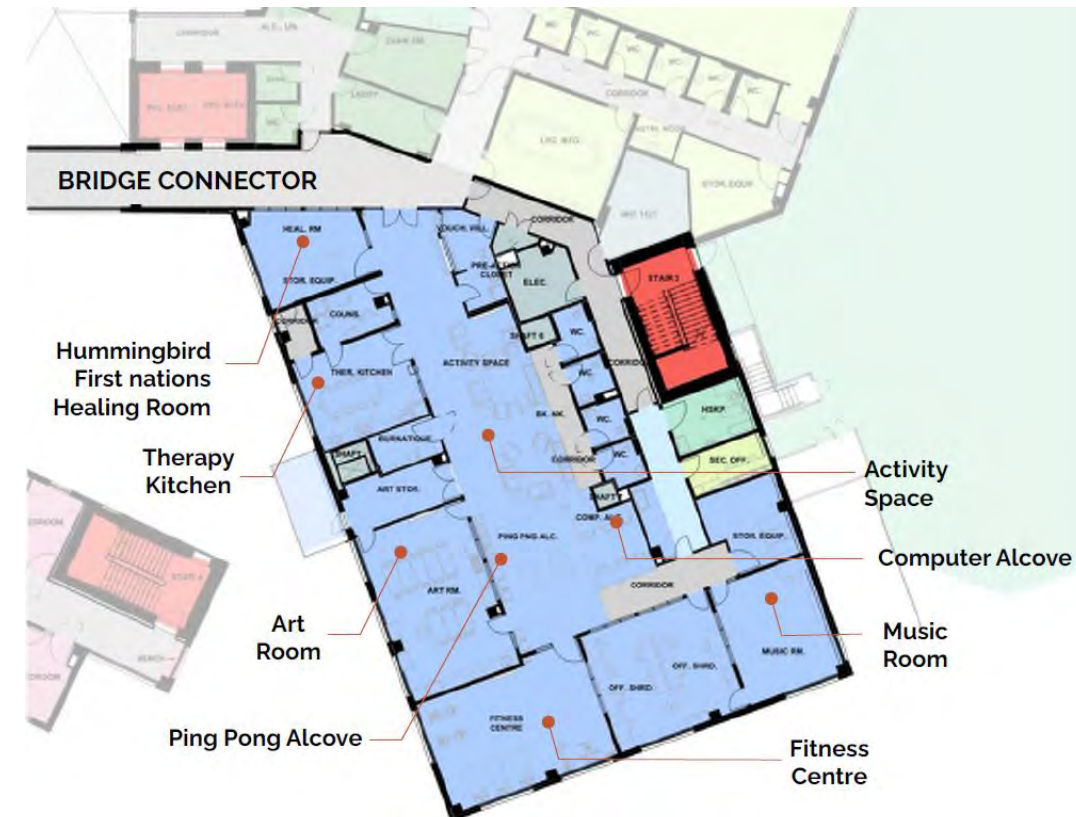- **7 Units**

About Red Fish Healing Centre Clients

- Complex physical, mental health and addiction needs
- Vulnerability to homelessness, victimization, domestic violence, trauma, poverty, incarceration and social isolation
- Experiences of trauma and adverse childhood experiences (ACEs)
- Shorter life expectancy than that of the general population, mostly due to preventable causes
- Increased likelihood of repeat emergency department visits and hospitalization

Mental Health Severity ↑		Addictions Severity →
High Mental Health / Low Addictions Severity *(Mental Health Treatment Setting)*		**High Mental Health / High Addictions Severity** *(Specialized Concurrent Disorders Treatment Facility)*
Low Mental Health / Low Addictions Severity *(Community Treatment)*		**Low Mental Health / High Addictions Severity** *(Addictions Treatment Setting)*

Provincial Health Services Authority

THERAPY GARDEN

NOISY LOUNGE
DINING
GROUP ROOM
QUIET LOUNGE

PATIO

ADMINISTRATION
WING

ENTRY LOBBY

MULTI-PURPOSE
ROOM

15-BED UNIT

INPATIENT UNIT
WINGS

BRIDGE CONNECTOR

HEALING
ROOM

OPEN –
CARE TEAM
BASE

ENCLOSED - CARE
TEAM BASE

ACTIVITY
SPACE

THERAPY
KITCHEN

15-BED UNIT

ART
ROOM

MUSIC
ROOM

PATIO

FITNESS
CENTRE

DINING
NOISY LOUNGE
QUIET LOUNGE
GROUP ROOM

HEALING
COMMUNITY
PROGRAMS

Healing Community

"səmiq̓ʷəʔelə" – meaning Place of the Great Blue Heron – is within the ancestral and core territory of kʷikʷəƛ̓əm. This 244-acre site is home to several of B.C.'s mental health and substance use programs and a unique ecosystem of trees, plans and wildlife.

BRIDGE CONNECTOR

Hummingbird
First nations
Healing Room

Therapy
Kitchen

Activity
Space

Computer Alcove

Art
Room

Music
Room

Ping Pong Alcove

Fitness
Centre

First of its Kind Integrated Model of Care

Publicly funded

Treating disorders concurrently

Indigenous-specific medicines and ceremonies

Recovery oriented approach

Evidence Based and Data Driven

Person and Family Centred

Team Based

Seamless and Integrated

Trauma Informed

Culturally Safe and Humble

Recovery Oriented

MENTAL WELLNESS

MEANINGFUL LIFE

SUBSTANCE-FREE LIVING

FAMILY & INTIMACY

PHYSICAL WELLNESS

ADDRESSING MALADAPTIVE BEHAVIOURS

Therapeutic Group Programming

MEANINGFUL LIFE

- Employability
- Skills Development groups
- Spirituality groups
- Indigenous groups
- Discharge planning and community reintegration

PROBLEM BEHAVIORS

- Comfort Planning and Care Planning
- Contingency Management
- Money Management
- Overdose Prevention
- Anger Management

PHYSICAL WELLNESS

- Bootcamp, Gym time
- Physiotherapy group
- Dietician group/cooking
- Pain Management
- Medication Management

MENTAL WELLNESS

- CBT for Depression, Psychosis, and Anxiety
- Seeking Safety (men, women)
- DBT Skills
- Insight Oriented psychoeducation
- Grounding
- Cognitive Remediation
- Metacognition for psychosis

SUBSTANCE FREE LIVING

- CBT for Relapse Prevention
- Mindfulness relapse Prevention
- Matric Relapse Prevention
- Drug Awareness (Naloxone)
- SMART Recovery
- Motivational Enhancement
- 12 step/LifeRing
- Smoking Cessation

FAMILY AND INTIMACY

- Process group
- Sexual health
- Annual family celebration events
- Relationships
- Community reinforcement and family therapy

British Columbia's Current Toxic Drug Crisis

According to the BC Coroners Service, **unregulated drug toxicity is the leading cause of death in British Columbia** for people between the ages of 10 and 59, accounting for more deaths than homicides, suicides, accidents, and natural disease combined.

Since April 2016, at least **14,000 people in B.C.** have died as of January 2024 from unregulated drug toxicity.

6.8

Deaths per day

Reducing Overdose and Relapse: Concurrent Attention to Neuropsychiatric Ailments and Drug Addiction

Provincial Health Services Authority

- The largest ever clinical study on concurrent severe substance use and severe mental disorders
- Innovative integration of information from administrative data, chart reviews, patient interview and patient testing at Red Fish Healing Centre, Heartwood Centre for Women and the Forensic Psychiatric Hospital
- Population data → Hospitalizations, ER, Overdoses, Primary Care, Medication, Arrests, Incarceration (2 years before and after)
- Chart review → Mental health, Substance use, Treatment, Aggression, Victimization (During treatment and 6 months follow up)
- Questionnaires and tests → Substance use, Mental health, Cognition, Physical health, Forensic (During treatment)

CST PROJECT: LIVE AND FUTURE CST CERNER FACILITIES

>42,000 active CST Cerner users

LEGEND

○ Live CST Cerner facility

○ Future CST Cerner facility

*Major facility go-live = >500 staff

- BC Cancer – Prince George
- Pemberton Health Centre
- Whistler Health Care Centre
- BC Cancer – Vancouver*
- Squamish General Hospital
- Vancouver General Hospital*
- Sechelt Hospital
- Red Fish Healing Centre for Mental Health & Addiction
- St. Paul's Hospital*
- Lions Gate Hospital*
- Mount Saint Joseph Hospital
- UBC Hospital*
- Forensic Psychiatric Hospital
- BC Children's Hospital & BC Women's Hospital + Health Centre*
- BC Cancer – Surrey
- Holy Family Hospital
- BC Cancer – Abbotsford
- Richmond Hospital*
- BC Cancer – Victoria*
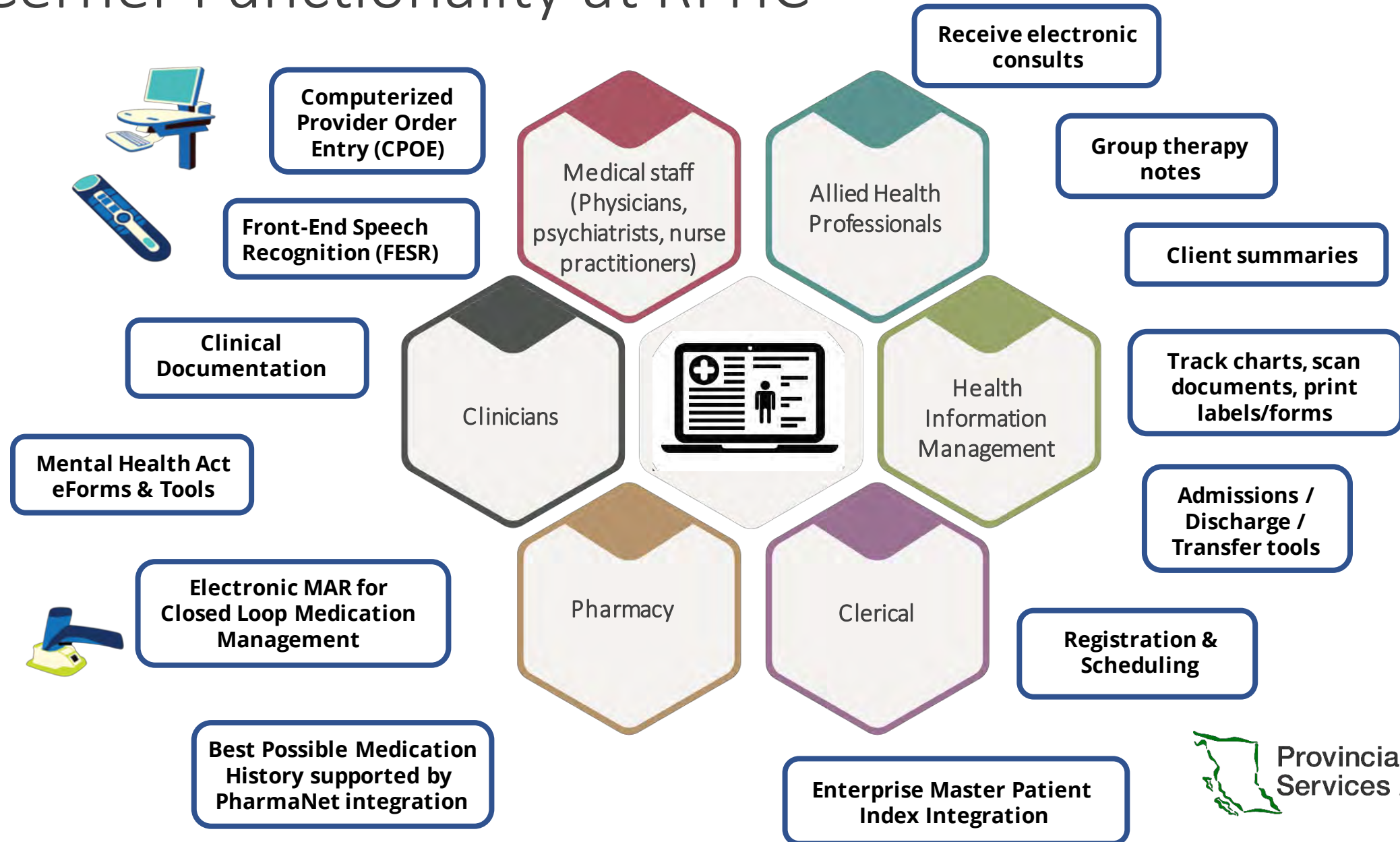
In the community (live and future):

- VCH Urgent Primary Care Centres
- PHC Community Dialysis Units
- Associated community, long-term care and tertiary facilities
- Associated ambulatory clinics (in waves)

CLINICAL + SYSTEMS TRANSFORMATION
Our path to smarter, seamless care

A joint initiative of:

Vancouver CoastalHealth
How you want to be treated.

Provincial Health Services Authority

Providence Health Care
How you want to be treated.

14

Cerner Functionality at RFHC

Computerized Provider Order Entry (CPOE)

Front-End Speech Recognition (FESR)

Clinical Documentation

Mental Health Act eForms & Tools

Electronic MAR for Closed Loop Medication Management

Best Possible Medication History supported by PharmaNet integration

Medical staff (Physicians, psychiatrists, nurse practitioners)

Allied Health Professionals

Clinicians

Health Information Management

Pharmacy

Clerical

Receive electronic consults

Group therapy notes

Client summaries

Track charts, scan documents, print labels/forms

Admissions / Discharge / Transfer tools

Registration & Scheduling

Enterprise Master Patient Index Integration

Provincial Health Services Authority

Cerner-enabled Mental Health tools and practices

Assessment tools such as: Broset Violence Risk Assessment, Addiction Severity Index (ASI), Health of the Nation Outcome Scales (HoNOS), This is Me

Closed Loop Patient Administration & Patient ID Scanning

Mental Status Exam

Group Therapy Documentation

CPOE & Medication Safety Tracking

Provincial Health
Services Authority

Adoption Metrics

Burnaby Centre for Mental Health and Addiction/Red Fish Healing Centre KPI

Legend: CPOE-M, Patient ID Scan Rate, Medication Scan Rate
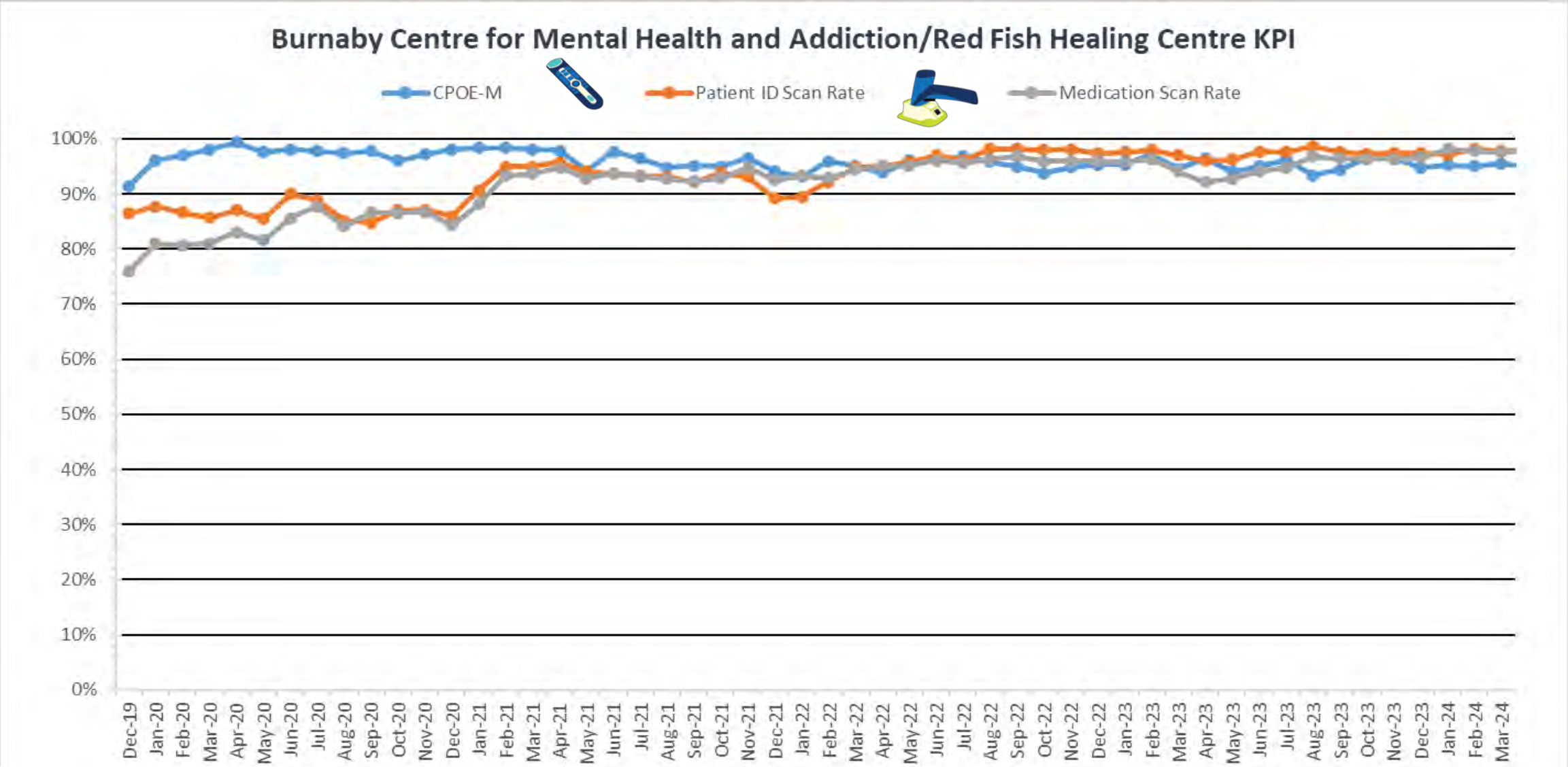
BCMHA: Data from Dec   8, 2019 - October 12, 2021

RHC : Data from Oct 12th, 2021 - May 6, 2024

Source: Cerner Lights On

17

Benefits Realization

Client Value

✓ **Less time** spent **repeating** story, supplying medical **history,** or undergoing **unnecessary duplicate tests**

✓ Access to **Virtual Health for specialist consults**

✓ Improved experience for clients and caregivers navigating **Mental Health Act**

✓ Better **transitions of care and continuity of care**

✓ Indigenous self-identification enabling Indigenous Health teams to provide **appropriate cultural support services** through automated referrals

Provider / Clinician Value

✓ Providers **document and share patient information** while traveling and working across health care sites

✓ **Receive reports**, results, transcribed documents, discharge summaries **electronically** via Excelleris

✓ Ability to **provide safer care** with support of alerts and medication administration tools & practices

✓ Reduced administrative burden over time

System Value

✓ Fewer adverse events with **improved medication safety** incorporating computerized-provider order entry

✓ **Decreased registration errors** across sites

✓ **Improved compliance** with assessment tools (e.g. Broset, Mental Health Act, etc.)

Overview & Goals

Goals

- The Red Fish SIF Innovation Hub is a BCMHSUS project, in partnership with the Government of B.C. and TELUS through the Strategic Investment Fund.

- Address clinical needs by leveraging new and emerging technologies and transforming traditional care delivery models

- Develop and implement a **Virtual/Digital Innovation Hub** at Red Fish

- Design and validate a **Virtual/Digital Health Innovation Framework**

- Identify leading-edge virtual care **innovations**

- Prioritize, implement and evaluate **pilot projects** (including assessment for potential scale & spread)

Innovative Technology Solutions

01

Wearable & Sensor Technologies
- Three types of wearables currently deployed, designed to measure stress, sleep and levels of drug craving
- Facilitate early identification and intervention for symptoms of stress, cravings, avoiding relapse
- Use of surveys to enable comparison between client-reported vs objective measures

Virtual Reality (VR)
- Growing evidence to support use of exposure therapy for clients with phobias, schizophrenic hallucinations, trauma, etc.
- Interested in potential applicability of training clients to cope with their substance use triggers.

02

Provincial Health
Services Authority

Pilot #1: Mental Health Wearable Devices

A key objective for the "wearables devices" pilot is to **understand how access to real-time wearable data can help to improve care planning and enhance clinical decision-making**

Sleep Activity & Architecture

- Accelerometer
- Sleep quality, time spent in sleep
- Good sleep hygiene is critical to positive mental health

Stress Detection

- Device to measure electrical conductance of the skin
- Stress is often associated with relapse

Drug Craving Biofeedback

- EEG biofeedback that measures immediate response to specific visual cues.

Provincial Health Services Authority

Pilot # 2: Virtual Reality to Train Coping to Triggers

- **Purpose** is to provide clients with opportunities to experience virtual exposure to triggers for substance use so that they can practice their coping strategies while surrounded by their care team, and thus reduce the risk of relapse when they return to community

- **Example:** *Attending a party where some people are drinking/using drugs - how will you respond?*

- Sessions would be run by mental health professionals. Currently we are in the "proof of concept" phase – working with staff and patient partners to assess the acceptability of virtual reality as a modality for care delivery

VR Pilot – Current State

- VR "Super-User" sessions held to explore and self-train on VR solutions. Currently focused on exploring:
  - non-substance use focused scenarios for VR sessions with patient partners.
  - substance use-focused scenarios for VR sessions with clinicians.
- The project team will continue to build out the VR scenarios/protocols for the proof of concept
- We will begin to identify and recruit clinicians and patient partners for participation.
- The pilot will not include clients at Red Fish; patient partners will assess non-addictions related scenarios only
  - This is to mitigate any triggering situations, given this is very new technology

Learnings so far…

- It's hard to combine research and innovation
- Strong governance with clear roles and responsibilities set us up for success
- Earlier and more frequent engagement with Indigenous partners to ensure approaches are trauma-informed

Questions / Discussion

Provincial Health Services Authority

Thank you

Rebecca Hahn	*Rebecca.Hahn@phsa.ca*
Prab Gill	*Prabhjot.gill@phsa.ca*
Kathryn Embacher	*Kathryn.Embacher@phsa.ca*
Dr. Nick Mathew	*Nick.mathew@phsa.ca*
Megan Stowe	*Megan.stowe@phsa.ca*