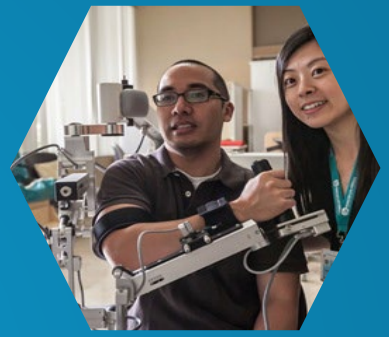
Discharge Dilemma:
TBI, Unhoused and Acute Rehabilitation



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Raquel Saunders, OTD, OTR/L
November 9, 2024

RANCHO LOS AMIGOS
NATIONAL REHABILITATION CENTER

Who we are:

- Part of the Los Angeles County Department of Health Services, the second largest municipal health system in the United States
- One of the largest rehabilitation hospitals in the nation
- Serve approximately 2,500 unique inpatients each year
- Services 75,000 outpatient visits each year
- 60 OTRs/OTAs
- Comprehensive Brain Injury Program

Rancho Mission

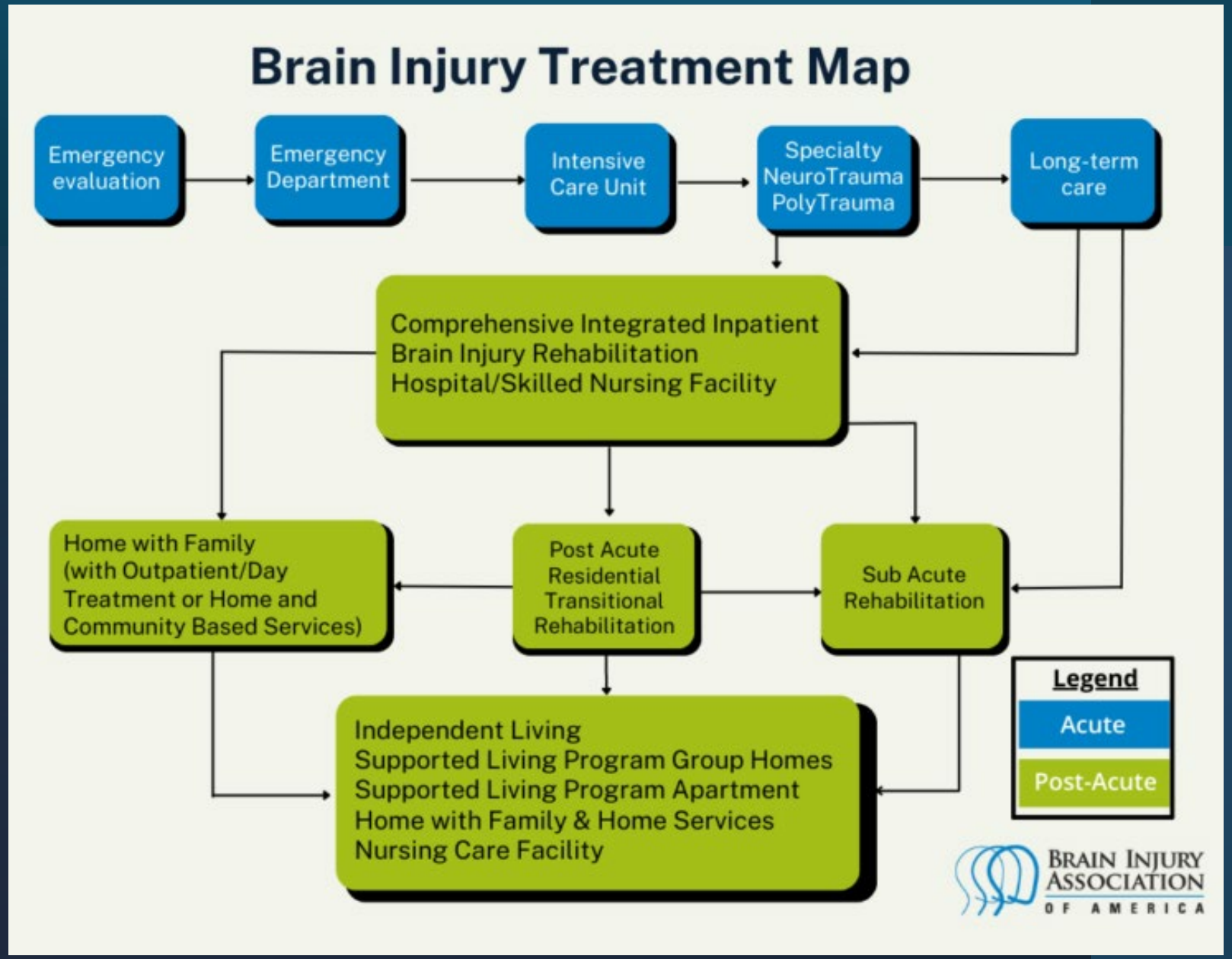
To restore health, rebuild life, and revitalize hope for persons with a life-changing illness, injury or disability.

Learning Objectives

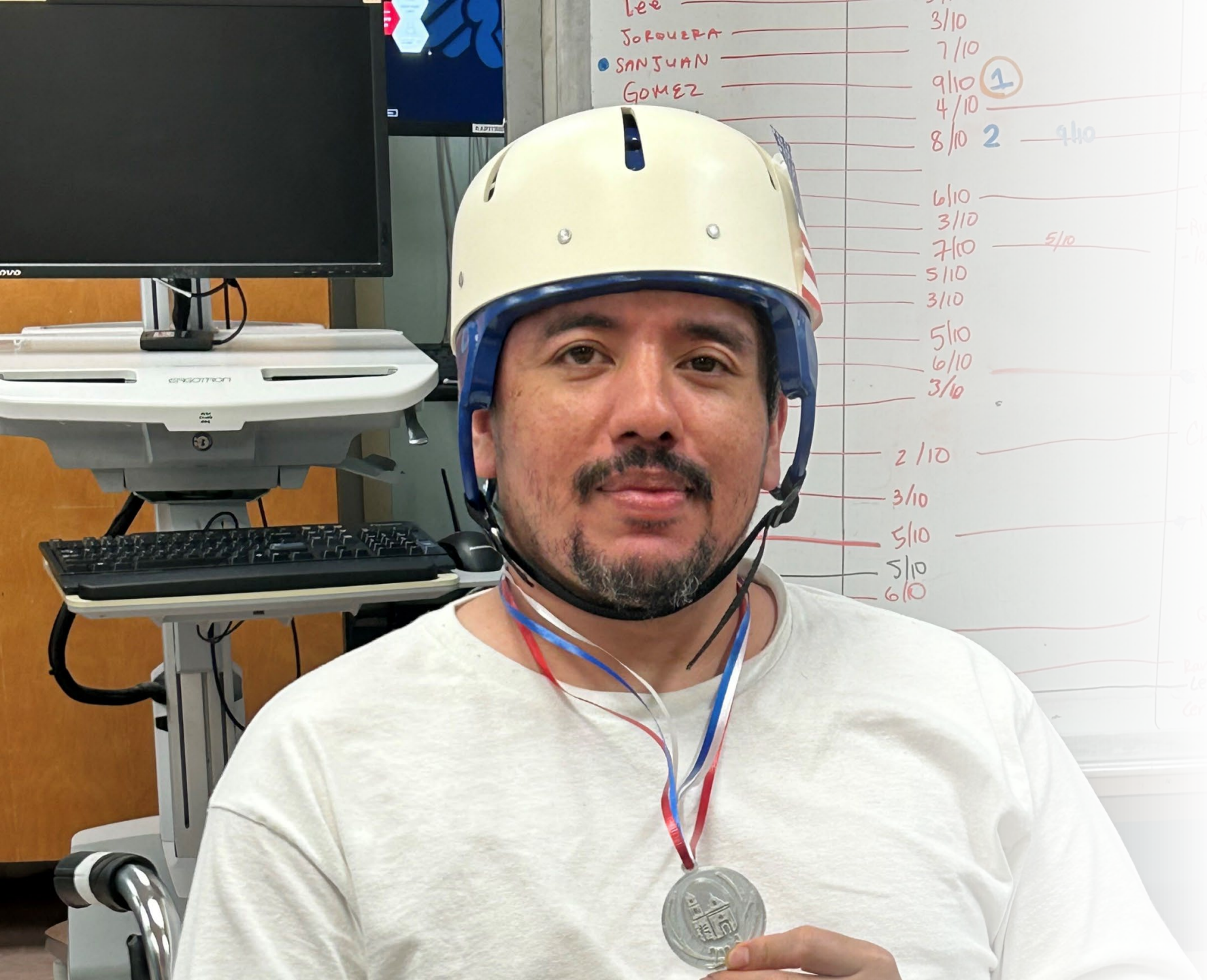
- Understand the current data on health disparities amongst persons experiencing homelessness (PEH), including the prevalence of traumatic brain injury

- Value the role of occupational therapy practitioners in an inpatient rehabilitation facility setting to support PEH in achieving their ADL/IADL goals and discharge to the least restrictive discharge destination.

- Identify opportunities for advocacy on an interdisciplinary team.


Brain Injury Treatment Map
Emergency evaluation
Emergency Department
Intensive Care Unit
Specialty NeuroTrauma PolyTrauma
Long-term care
Comprehensive Integrated Inpatient Brain Injury Rehabilitation Hospital/Skilled Nursing Facility
Home with Family (with Outpatient/Day Treatment or Home and Community Based Services)
Post Acute Residential Transitional Rehabilitation
Sub Acute Rehabilitation
Independent Living
Supported Living Program Group Homes
Supported Living Program Apartment
Home with Family & Home Services
Nursing Care Facility
Legend
Acute
Post-Acute
BRAIN INJURY ASSOCIATION OF AMERICA

Language Matters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Persons Experiencing Homelessness

(PEH)

United States	California	Los Angeles County
650,000	**171,000**	**75,312**
Source: HUD, 2023	Source: UCSF, 2023	Source: LAHSA, 2024

PEH and Health Disparities

Source: United States Interagency Council on Homelessness

Traumatic Brain Injury and Homelessness

53% have TBI (2-4x general population)

23% have moderate to severe TBI (10x general population)

70% with TBI sustained injuries before becoming homeless

Source: Barnes et al. 2015

Source: Stubbs et al., 2020

RLA's Comprehensive Brain Injury Program

- Retrospective Study
- Reviewed CBIP Inpatients (2018-2023)
- N = 49
- Demographic & injury information was extracted from medical records
- Psychosocial comorbidities examined
- Rehabilitation outcomes explored
- Data was compared against TBI patients who had stable housing

Rehabilitation Length PEH versus Stable Housing

	Mean # Days PEH	Mean # Days Stable Housing
Time from injury to rehab admission	14 days	33 days
Length of Stay in ARU	16 days	11 days
Community Adaptive Re-Entry	33 days	-

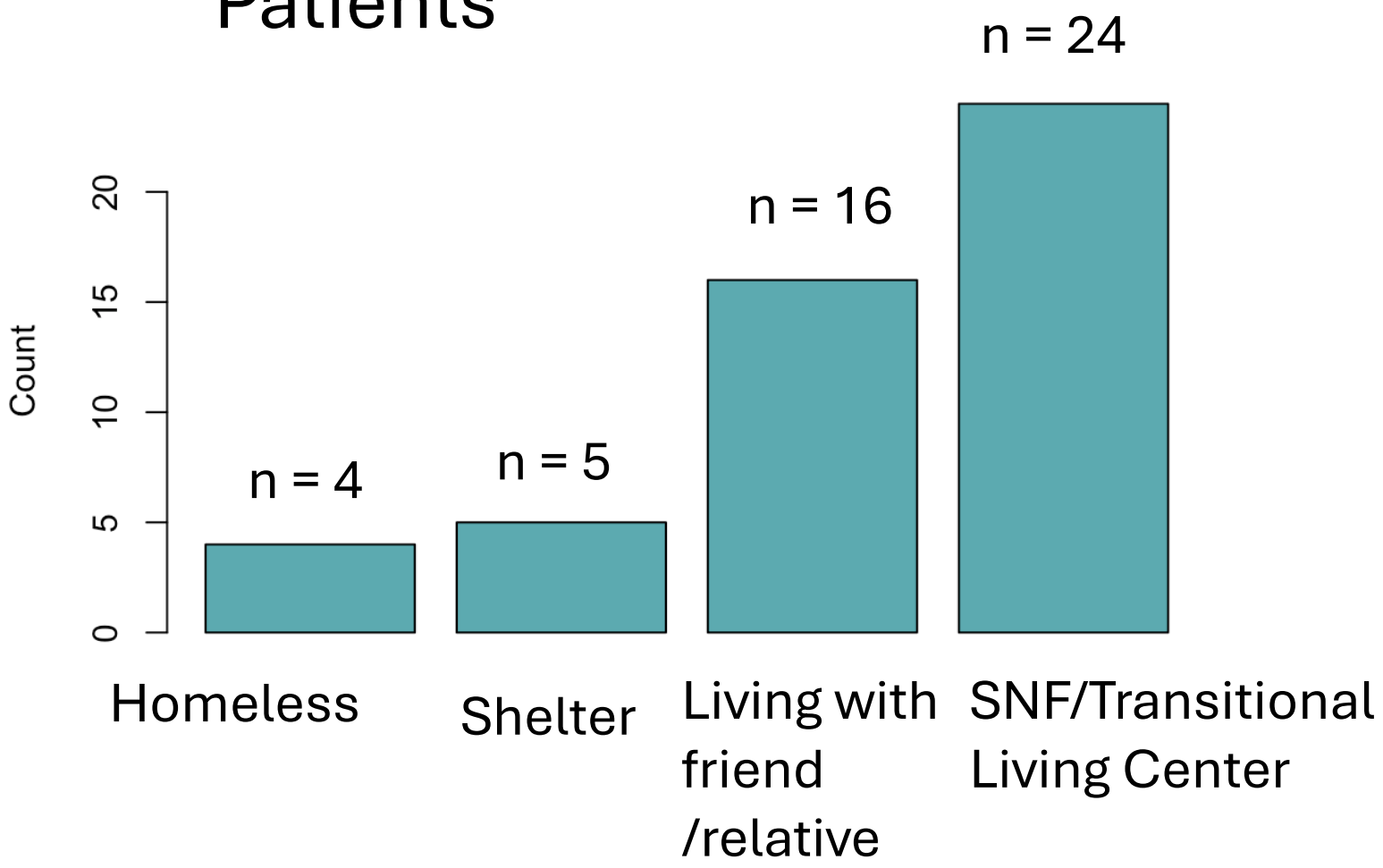
Recovery Information: Admit Versus Discharge

# of Patients With Decline in RCFL	# of Patients with Same RCFL	# of Patients with Increased RCFL
0	17	32

Rehabilitation Characteristics

- 51% of the patients who were PEH did not have capacity at the time of discharge

Discharge Locations for HL/MH Patients



Conditions Contributing to Complexity in Discharge

CATEGORY	PATIENT NEEDS
Physical health	Patient requires dialysis, treatment for complex wounds, injectable medications, ongoing infusions, indwelling catheters, or insulin for diabetes. Patient needs assistance with pain management, polypharmacy.
Behavioral health	Patient has serious mental illness (SMI), substance use disorder (SUD), anxiety and/or depression.
Cognitive impairment	Patient has difficulty concentrating, remembering or learning new things, or making decisions that affect everyday life. Patient has memory loss, difficulty recognizing familiar people, changes in mood or behavior, trouble exercising judgment such as what to do in an emergency, or difficulty planning and carrying out tasks. In some cases, supported decisionmaking such as conservatorship may be required.
Functional needs	Patient requires assistance with activities of daily living (ADLs; e.g., bathing, dressing) or instrumental activities of daily living (IADLs; e.g., preparing meals, taking prescriptions, using transportation, managing finances). Patient needs a wheelchair or other assistive devices for mobility.
Social needs	Patient is experiencing or at risk of homelessness, lacks Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI), is socially isolated (lacks friend or family support), or has a history of violence.

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Playbook for Complex Discharges - California Health Care Foundation

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Initial OT Evaluation

1/29/24

"Opens eyes briefly to sternal rubs and verbal cues. Oriented x 0 at this time. Spoke to patient's brother who stated .... "***he lives a homeless life, which he has chosen***". Family does not know his day-to-day activities or who he lives with. Patient is a Rancho level II, currently unable to assess any ADL's."

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ER to ARU

1/21/24

- Bought in by ambulance to the emergency room after sustaining a gun shot wound (GSW) to his head

1/22/24

- Surgical Intervention : R decompression hemicraniectomy and R frontal ventriculostomy placement

2/15/24

- Transferred to RLA ARU per acute OT/PT reccomendations

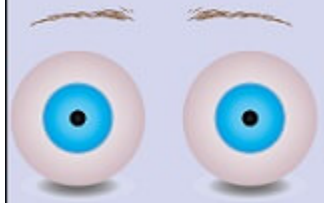
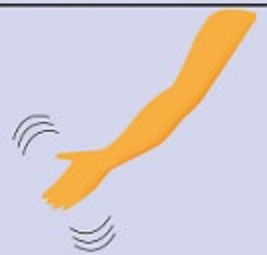
GCS 4 (1-1-2)

GCS = Glasgow Coma cale

- measures how conscious you are by assessing eye response, verbal response, and motor response

GCS 4 = Severe Traumatic Brain Injury

- Your eyes do not open for any reason (1)
- You can't speak or make sounds (1)
- You extend muscles (stretch outward) in response to pressure (2)

Behaviour	Response
 Eye Opening Response	4. Spontaneously 3. To speech 2. To pain 1. No response
 Verbal Response	5. Oriented to time, person and place 4. Confused 3. Inappropriate words 2. Incomprehensible sounds 1. No response
 Motor Response	6. Obeys command 5. Moves to localised pain 4. Flex to withdraw from pain 3. Abnormal flexion 2. Abnormal extension 1. No response

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THE RANCHO LEVELS OF COGNITIVE FUNCTIONING

COGNITIVE LEVEL I – No Response
Unresponsive to all stimuli.

ICU

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Nonspecific responses (e.g. increased respiratory rate, blood pressure, moaning, large body movements) in response to sensory stimuli.

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Expected functional outcomes

McCrea, MA et al. (2021):

- Looked at 484 individuals with moderate to severe TBI (part of the Transforming Research and Clinical Knowledge in TBI (TRACK-TBI) study)
- By 12 months post injury half of the participants with severe TBI (n= 362) and three quarters of those with moderate TBI (n=122) were able to function independently at home for at least 8 hours/day.
- Concluded that the presence of acute severe impairment does not indicate poor functional outcomes after a moderate to severe TBI and that clinicians should not make early prognostications about the likelihood of poor functional outcomes after a moderate or severe TBI

Roberts et al (2023):

- Looked at 1,835 level I trauma center patients with broad TBI severity levels
- Found that extracranial surgery and anesthesia were associated with worse functional and cognitive outcomes at 2 weeks and 6 months after injury, especially in persons with acute intracranial findings on neuroimaging.

Recovery two years after brain injury

Research from the TBI Model System program, at 2 years after injury, offers information about recovery from a moderate to severe TBI.

- About 30% of people need some amount of assistance from another person. This may be during the day, at night, or both. Over time, most people can move around again without help. They can also take care of themselves. This includes bathing and dressing.
- Trouble with thinking is common. This includes how fast a person can think. It also includes forming new memories. The severity of these problems varies.
- About 25% of people have major depression. In some cases, it's caused directly by the brain injury. In addition, people with TBI are also dealing with major changes in their lives caused by the trauma, including changes in employment, driving, and living circumstances.
- Just over 90% of people live in a private home. Of those who were living alone when they were injured, almost half go back to living alone.
- About 50% of people can drive again, but there may be changes in how often they drive or when.
- About 30% of people have a job, but it may not be the same job they had before the injury. Many people get help from vocational rehabilitation counselors who help people with TBI and other disabilities to go back to work.

Table from: Understanding TBI: Part 3 - The Recovery Process | MSKTC

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ST Evaluation

QI	Initial 2/16
Expression	1
Understanding	2

- Non-verbal for majority of evaluation
- Mild-moderate impairments in receptive language skills as evidenced by delayed auditory processing
- Mod executive functioning deficits and impaired sustained attention/easily distracted
- Severely delayed information processing

- O-Log initial score = 25/30
- MoCA = unable to complete
- Long Term Goals
  - Supervision for money and medication management given verbal and visual cues
  - Min A to use external memory aides to recall routine tasks and/or when engaging in functional activities
  - Min A to identify at least 2 alternate solutions to common daily problems

Admit to Rancho

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OT evaluation (2/16/24)

- QI Section GG/Self-Care
- COPM
- BiVaba (vision)
- Fugl-Meyer (UE)
- Modified Ashworth Scale
- UE-NSA

- ADLs completed at bed level
- Non-verbal & non-responsive to Yes/No questions
- Followed 1-step directions consistently with visual and tactile cues
- Decreased postural control when sitting at edge of bed
- Limited functional use of R UE
  - Increased tone in shoulder, elbow, and wrist
  - Pain in shoulder abduction and external rotation
  - Limited P/AROM
- Decreased sitting/standing static and dynamic balance
- Impaired functional cognition
  - Limited communication
  - Unable to follow multi-step directions
  - Impaired executive functioning

OT evaluation

Occupational History: unable to determine at time of evaluation

Family involvement: no family present at time of evaluation, per chart review pt has a brother

QI: Section GG*	Initial 2/16	Goal
Eating	3	5
Grooming*	3	5
Oral Hygiene	3	5
Toileting Hygiene	2	4
Shower/bathe self	2	3
Upper body dressing	2	4
Lower body dressing	2	3
Putting on/taking off footwear	2	3
Shower transfer*	2	4

PT Evaluation

- Impaired R LE ROM, strength, and motor control
- Impaired balance and endurance
- Mod-max A for bed mobility
- Mod A stand pivot transfers
- Mod-max A ambulation 45 ft
- Difficulty communicating but appeared to understand 80% of commands

Section GG: Mobility	Initial 2/16	Goal
Roll L & R	88	6
Lying to Sitting on Side of Bed	3	4
Sit to Lying	3	6
Sit to Stand	3	4
Chair, Bed to chair transfer	3	4
Toilet transfer	3	4
Car transfer	88	4
Picking up object	88	3
Walk 10 feet	1	4
Walk 150 feet	88	4
Wheel 50 feet w/ 2 turns	88	4
Wheel 150 feet	88	4

ST discharge from program 3/22

QI: B	Initial 2/16	Discharge 3/22
Expression	1	4
Understanding	2	4
O-Log initial score	25/30	n/a
MOCA	unable	27/30

- Independent (I) with recall of routine tasks
- Mod (I) with short-term and new learning
- (I) with abstract thinking/reasoning
- Mod (I) executive functioning
- Mod (I) with medication management

BUT…

- Supervised level with alternating/divided attention skills when required to multi-task during ADLS per OT/PT
- Mild impulsivity when following multi-step commands and/or semi-complex sequencing during ADLs
- Occasional cues to check for errors with medication management

Source: Landry et al., 2024

Put the patient's voice front and center

Recommended Strategy:

- Incorporate patient goals, values, and preferences in assessments and documentation so they are considered vs. being an after thought
- Include the patient and, if they wish their family or caregiver in case conferencing

Putting it into Practice:

- Patient Centered Rounds (PCR) with family present
- Participants: Patient, sister, bother
- MD, OT, PT, ST, RN, LCSW, MCW, Case manager, Psychology

OT internal dialogue

- Can't let him go to a SNF, he's too young
- How on earth do we get him to I when he can't even do x,y,z
  - Can't even go to the bathroom by himself.. let alone get a jpi blue band or stay in the training apartment by himself
- Need to decide if goal is independent mobility from w/c level or ambulation with R AFO, cane
- What are the areas we would need to focus on to help him become independent:
  - Toileting
  - Footwear (donning R AFO and R shoe)
  - shower
  - dressing
- What would it take to get him to I?
  - Time (how many additional sessions ?)
  - Compensatory equipment and strategies
  - Patient buy in
  - TEAM buy in: MD, SW, PT, ST… and Nursing

Paradigm shift

OT initial treatments focused on increased independence AND restoration of R UE motor control

- Self-care
- ROM, positioning (bed positioning, R serial casting, A/P splint, arm trough on w/c, sling, taping ?)
- Motor control, NMES, s/p chemodenervation (botox) to R UE on 2/16

Making slow progress but not independent (self-care scores)

Understand local capacity, demand, and common pain points

Recommended Strategy:

- Understanding facilities and services
- Multi entity working groups for cooperative planning and problem solving

Putting it into Practice:

- Recuperative care
- Housing for Health

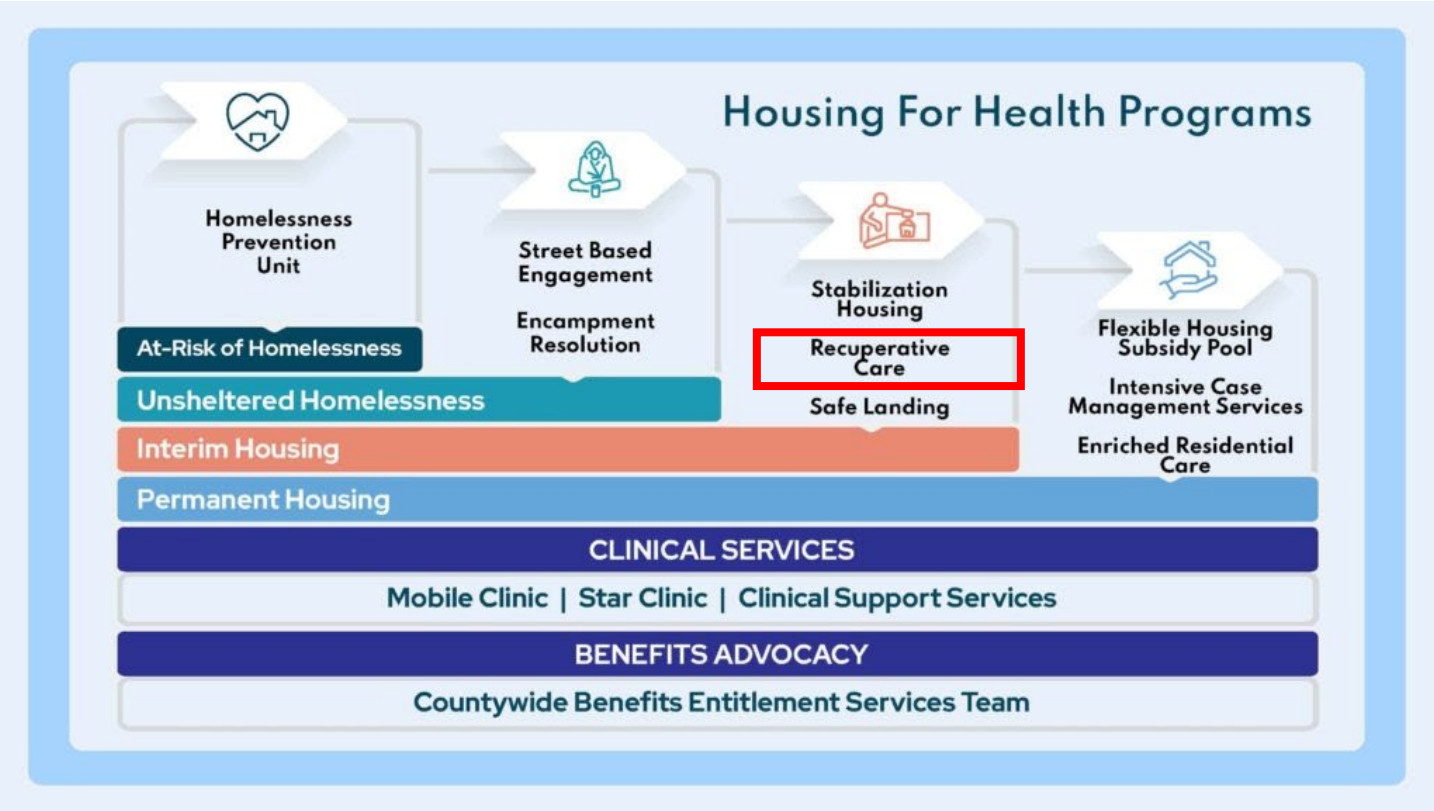
Housing for Health

- A prescription for housing and integrated services to reduce inappropriate use of health care resources and improve health outcomes
- Funded through investments by various county departments and Measure H aimed at addressing social determinants of health
- Providers, nurses, social workers, community health workers, medical case workers, and on-boarded OT in 2022

(Moon, 2024)

What is recuperative care?

Short-term or “interim” housing for individuals recovering from an acute illness or injury, or who have conditions that would be exacerbated if they are not in stable housing with medical care.



Who We Are - Housing For Health

Develop strong relationship to optimize coordination and outcomes

Recommended Strategy:

- Build partnerships to help address barriers
- Optimize referral process
- Visit the facility and get face time with partners

Putting it into Practice:

- Recuperative care
- Housing for Health

Clarify roles

Recommended Strategy:

- Identify a lead that drives coordination and advocates on patient's behalf
  - Aligned with primary needs and diagnosis
  - Rapport
  - Effective communication
  - Proactive in placement

Putting it into Practice:

- Interdisciplinary team roles:
  - Medical: physician and RN
  - Therapies: OT/PT/ST
  - Social work, medical case worker, and case manager
  - Psychology
- Role of OT in coordinating

Start care plans early, and plan beyond the next step

Recommended Strategy:

- Be proactive
- Best practices for chart documentation

Putting it into Practice:

- DC planning starts at initial team meeting and is ongoing
- Documenting independence at DC

Be open to flexibility and compromise

Recommended Strategy:

- Leniency on facility policies
- Delivering needed services in alternative settings
- Acquiring new certifications to accommodate new patient

Putting it into Practice:

- Independent trial in room (OT, PT, RN)
- JPI blue band
- Medication management trials
- Food tray

Medication Management at Discharge

Amantadine: helps with cognitive recovery and functional improvement in patients with TBI
Cholecalciferol: vitamin D supplement
Cyanocobalamin: Vitamin B12 supplement
Diclofenac topical gel: used to treat acute and chronic pain associated w/ inflammatory conditions (for his R shoulder pain)
Donepezil: (Aricept): improves general cognitive ability, short-term memory, attention for TBI
Folic acid: supplement
Ibuprofen: PRN for pain
Methocarbamol: muscle relaxant
Triamcinolone topical: for eczema/skin irritation
Melatonin: sleep supplement
Acetaminophen: for pain

Build and maintain information-sharing infrastructure for enhanced coordination

Recommended Strategy:

- Collect standard patient data
- Enhance data-sharing pathways and partnerships
- Share contact list with coordination partners

Putting it into Practice:

- LA County DHS EMR
- Communication between Rancho and Housing for Health

Dynamic discharge planning

- Dc dates… # of times changed!
- Initial dc placement plan
  - on CM referral to rehab facility: possibly home with brother, "depending on his strength"
  - SW admit note: out of home placement, possible SNF (barriers = age, homeless and minimal family support)
- By 3/27 SW, MD documenting pt goals of reaching mod I to discharge to recuperative care and that pt was motivated and agreeable to achieve mod I for recuperative care
- 4/1 IDT discussing possible recuperative care placement

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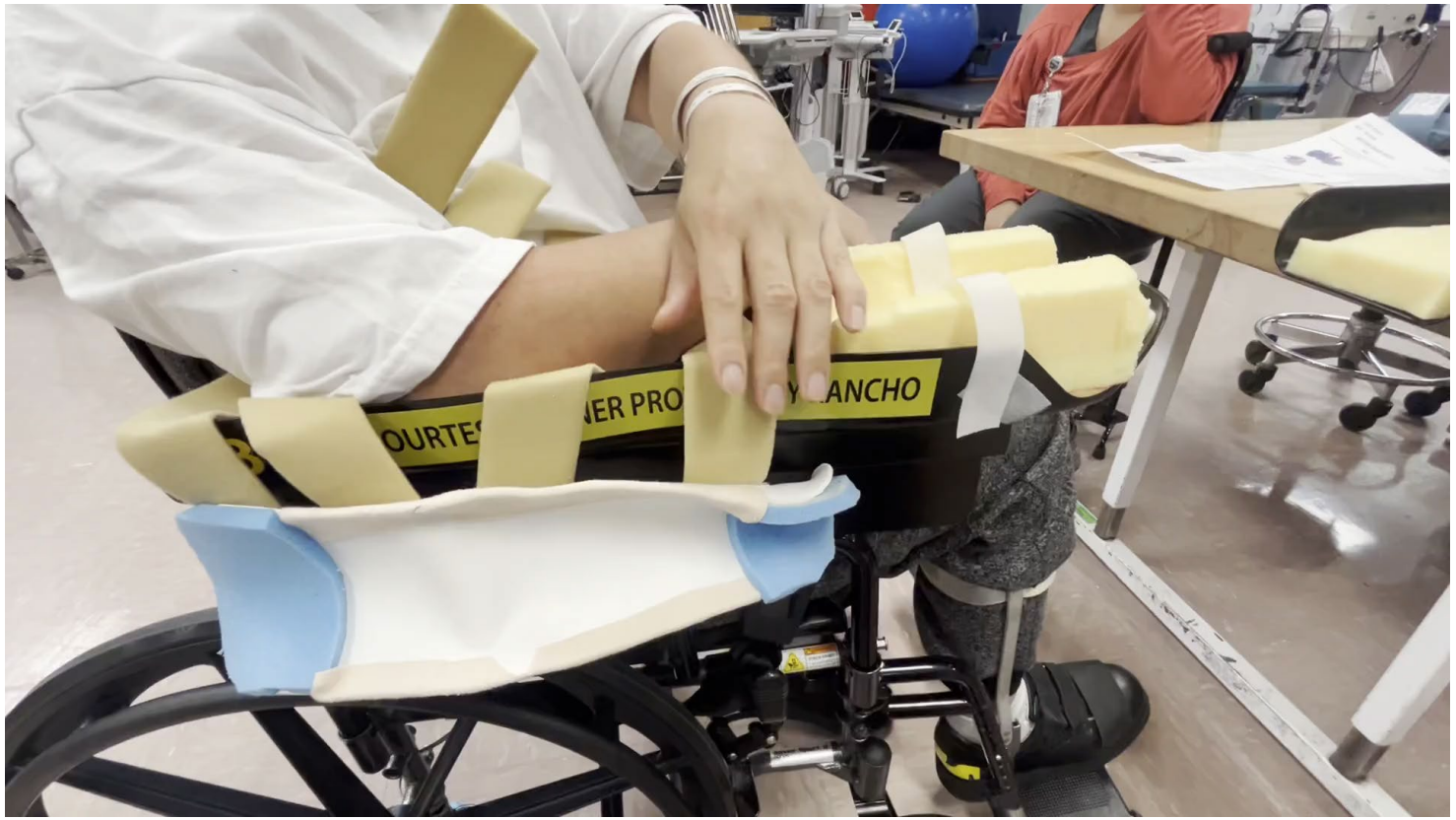
Discharge from Rancho

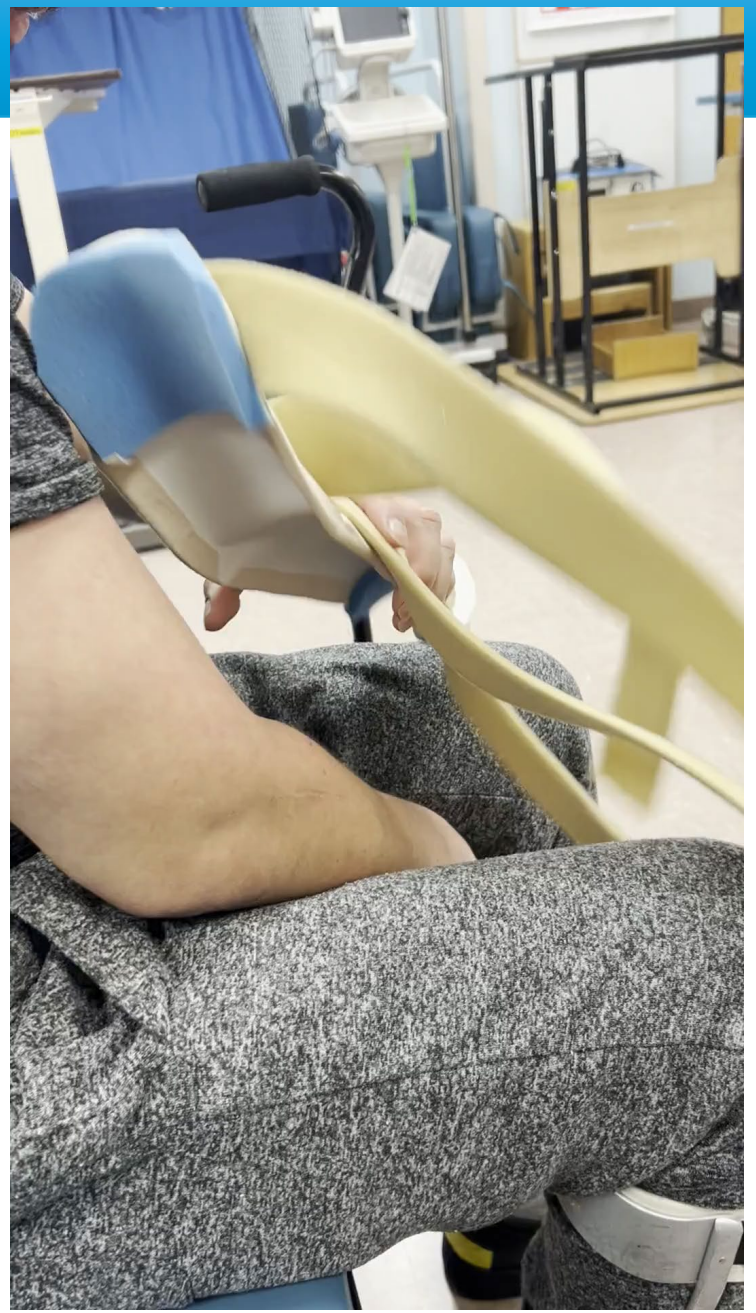
Physical Therapy

Section GG: Mobility	Initial 2/16	Goal	3/26	4/9	4/15	4/22	Discharge 4/26
Roll L & R	88	6	4	6	6	6	6
Lying to Sitting on Side of Bed	3	4	4	6	6	6	6
Sit to Lying	3	6	4	6	6	6	6
Sit to Stand	3	4	4	5	6	6	6
Chair, Bed to chair transfer	3	4	4	5	6	6	6
Toilet transfer	3	4	4	5	6	6	6
Car transfer	88	4	88	88	88	88	6
Picking up object	88	3	88	88	88	88	6
Walk 10 feet	1	4	4	4	4	6	6
Walk 150 feet	88	4	4	4	4	4	6
Wheel 50 feet w/ 2 turns	88	4	3	6	6	6	6
Wheel 150 feet	88	4	88	6	6	6	6

Occupational Therapy

QI: Section GG*	Initial 2/16	Goal	3/26	4/9	4/15	4/22	Discharge 4/26
Eating	3	5	6	6	6	6	6
Grooming*	3	5	6	6	6	6	6
Oral Hygiene	3	5	4	6	6	6	6
Toileting Hygiene	2	4	4	4	6	6	6
Shower/bathe self	2	3	3	4	5	6	6
Upper body dressing	2	4	5	6	6	6	6
Lower body dressing	2	3	4	4	6	6	6
Putting on/taking off footwear	3	3	4	4	4	6	6
Shower transfer*	2	4	3	4	5	6	6





Independence with Footwear

Client Factors//Barriers	Interventions
Decreased functional use of RUE	Positioning of orthotic
Flexor tone in RLE	Adaptations (inserts, velcro)
DAAJ for increased safety with walking and transfer	Equipment (AFO docking stations, shoehorn)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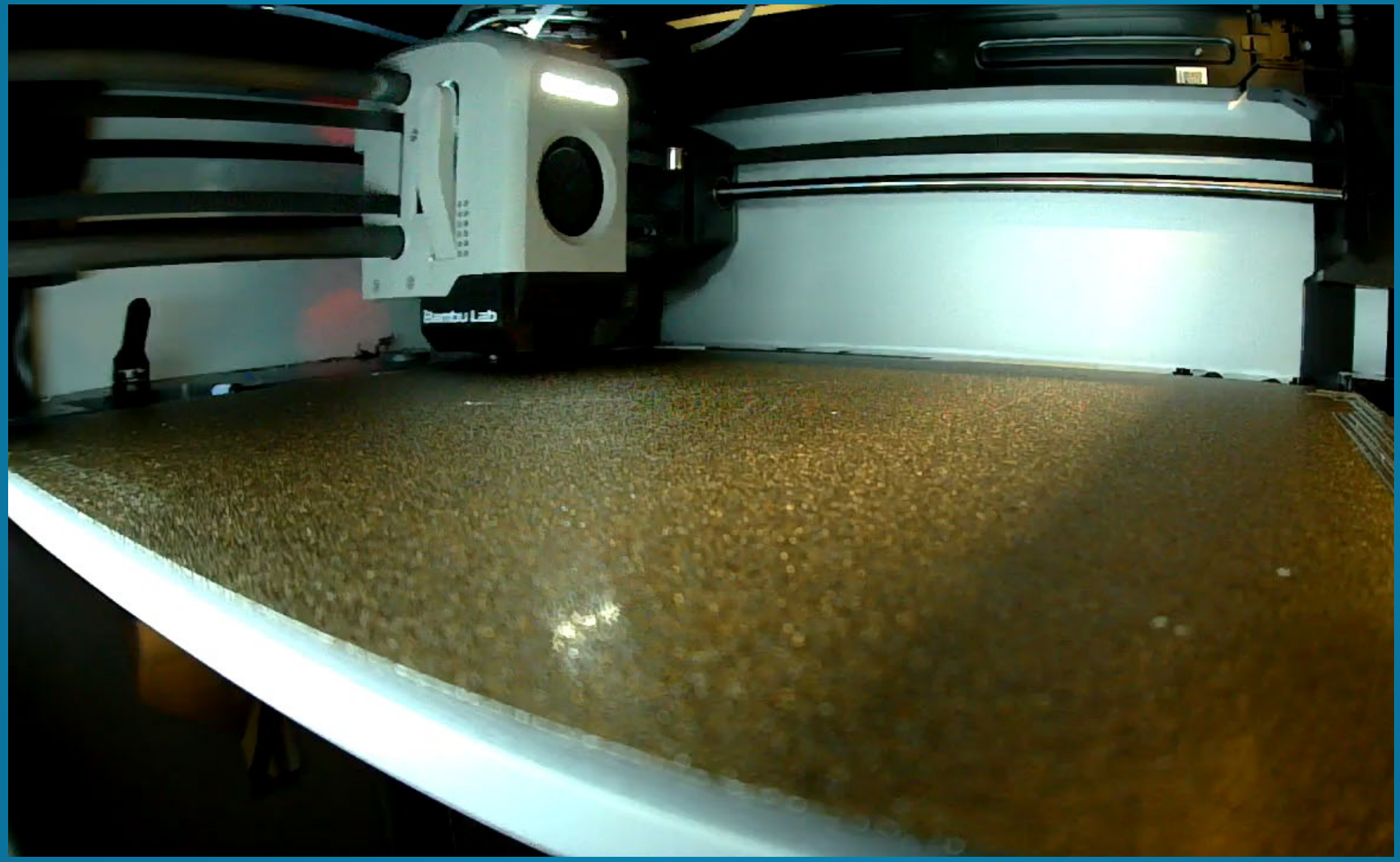
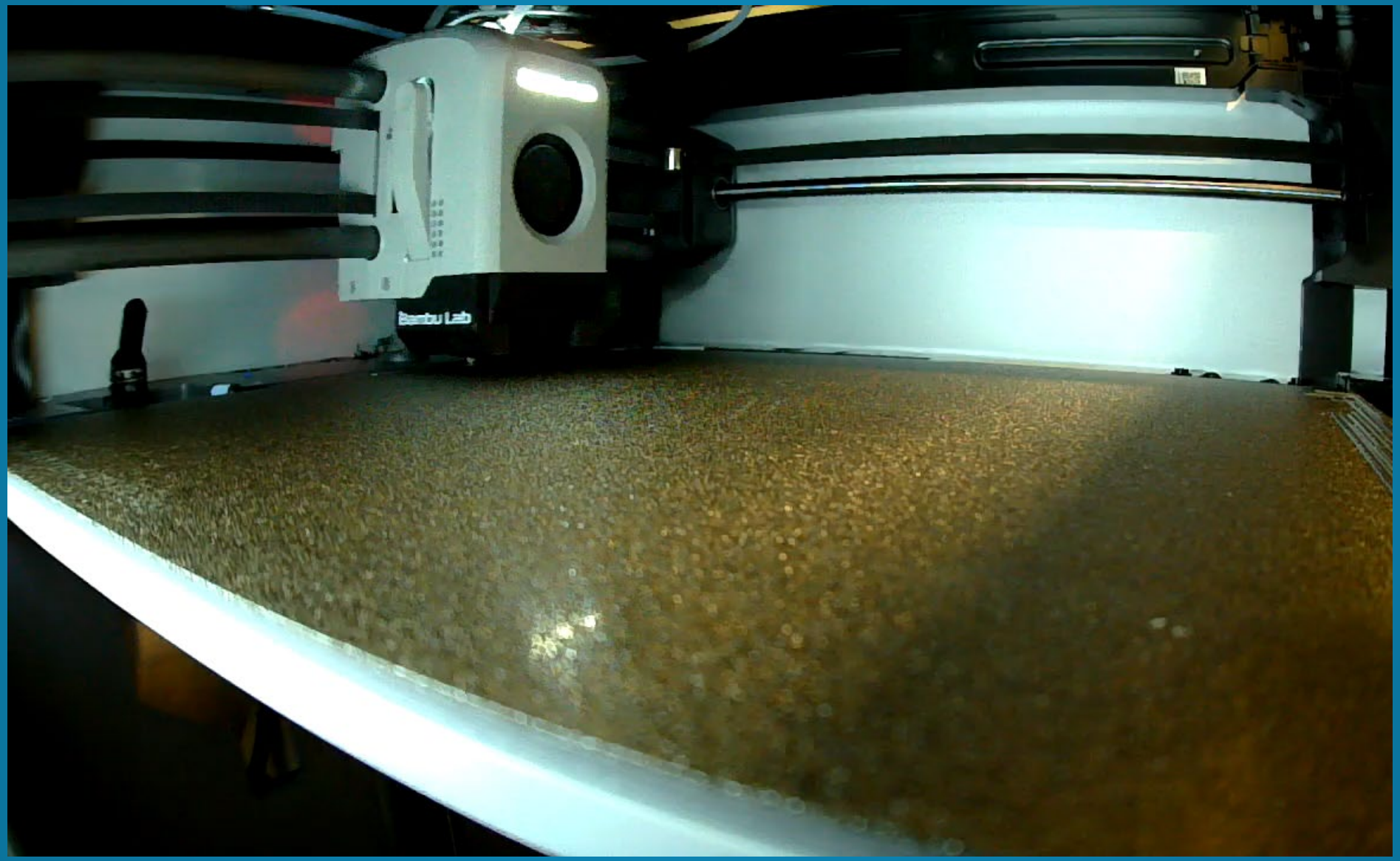
AFO Shoe Horn



AFO Docking Station




LONG BEACH
THANKS
ALL WHO HAVE SERVED

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תודה
Dankie
Gracias
Спасибо
شكراً
Merci
Takk
Köszönjük
Terima kasih
Grazie
Dziękujemy
Dėkojame
Ďakujeme
Vielen Dank
Paldies
Kiitos
Täname teid
谢谢
Thank You
Tak
感謝您
Obrigado
Teşekkür Ederiz
감사합니다
Σας ευχαριστούμε
ขอบคุณ
Bedankt
Děkujeme vám
ありがとうございます
Tack