OPPORTUNITIES FOR THE USE OF CHRONIC CARE MODELS FOR BRAIN INJURY

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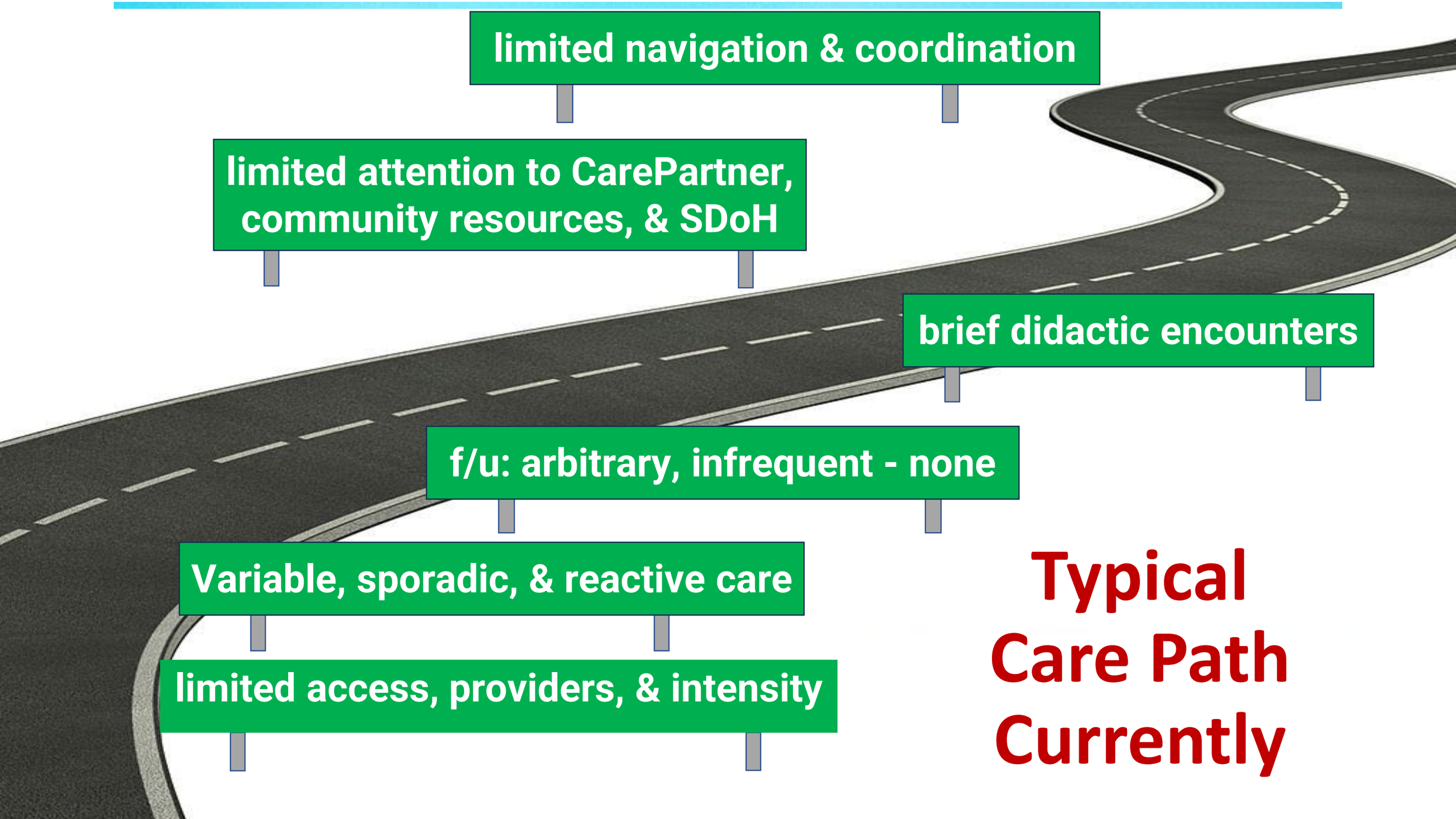
Current Infrastructure is suboptimal for long-term living after injury


limited navigation & coordination
limited attention to CarePartner, community resources, & SDoH
brief didactic encounters
f/u: arbitrary, infrequent - none
Variable, sporadic, & reactive care
limited access, providers, & intensity
Typical Care Path Currently

COULD A CHRONIC DISEASE MANAGEMENT APPROACH OPTIMIZE BRAIN INJURY OUTCOMES?

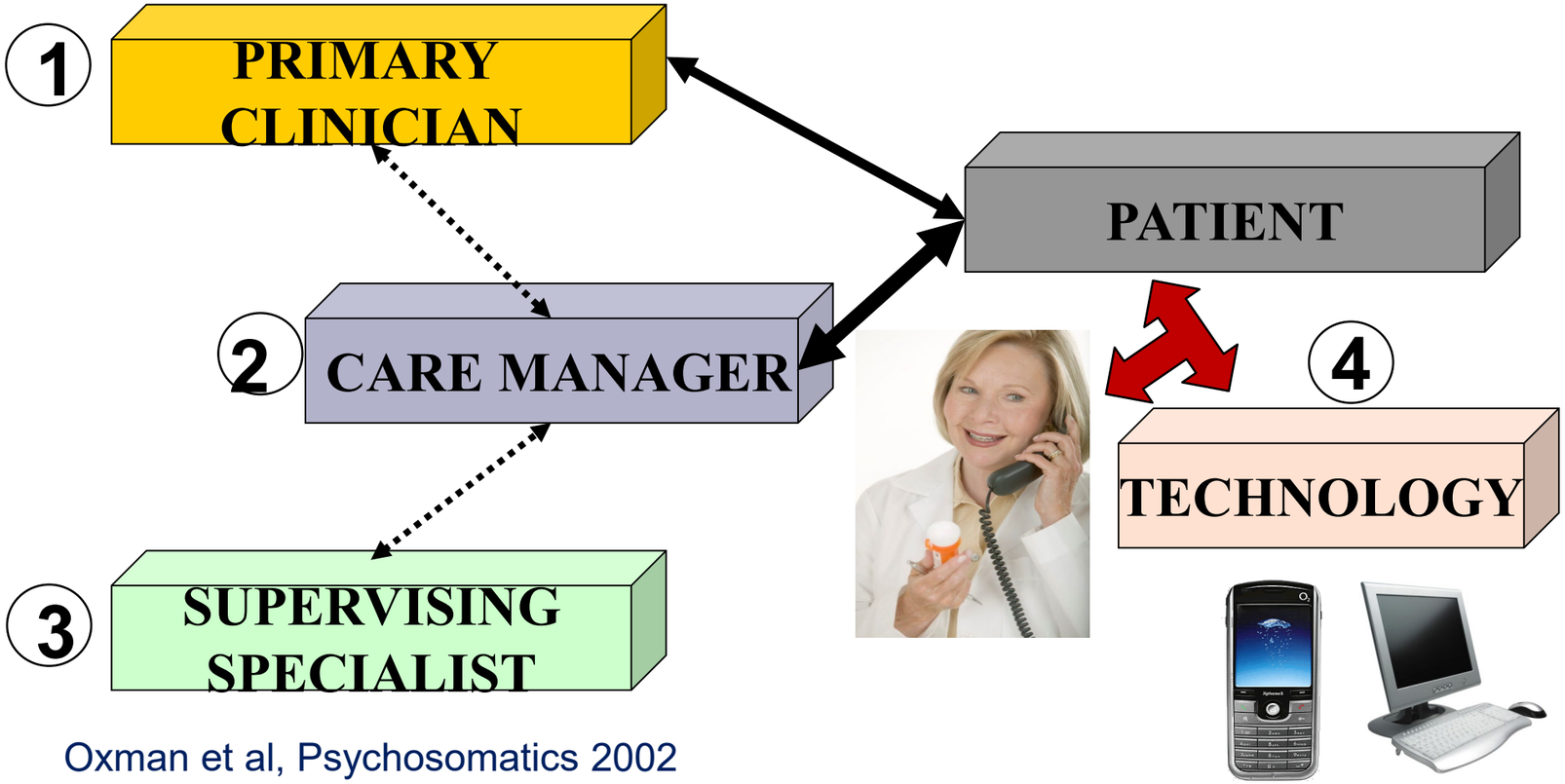
- People with chronic conditions generally use more health care services
- Disease management models for chronically conditions have improved health, reduce cost and utilization
- Several different types:
  1. Chronic disease management
  2. Collaborative care
  3. Chronic care

CHRONIC DISEASE MANAGEMENT

- Regular screenings
- Regular checkups
- Monitoring and coordinating treatment
- Education
  - Learning about the chronic condition & how it's managed
- Avoiding situations and behaviors that trigger symptoms

COLLABORATIVE CARE (3 COMPONENT MODEL) (INTEGRATED)

>1 provider (e.g., care manager & specialist) working to assist primary team in caring for a condition(s) to solve problems together with effective communicaiton



Oxman et al, Psychosomatics 2002

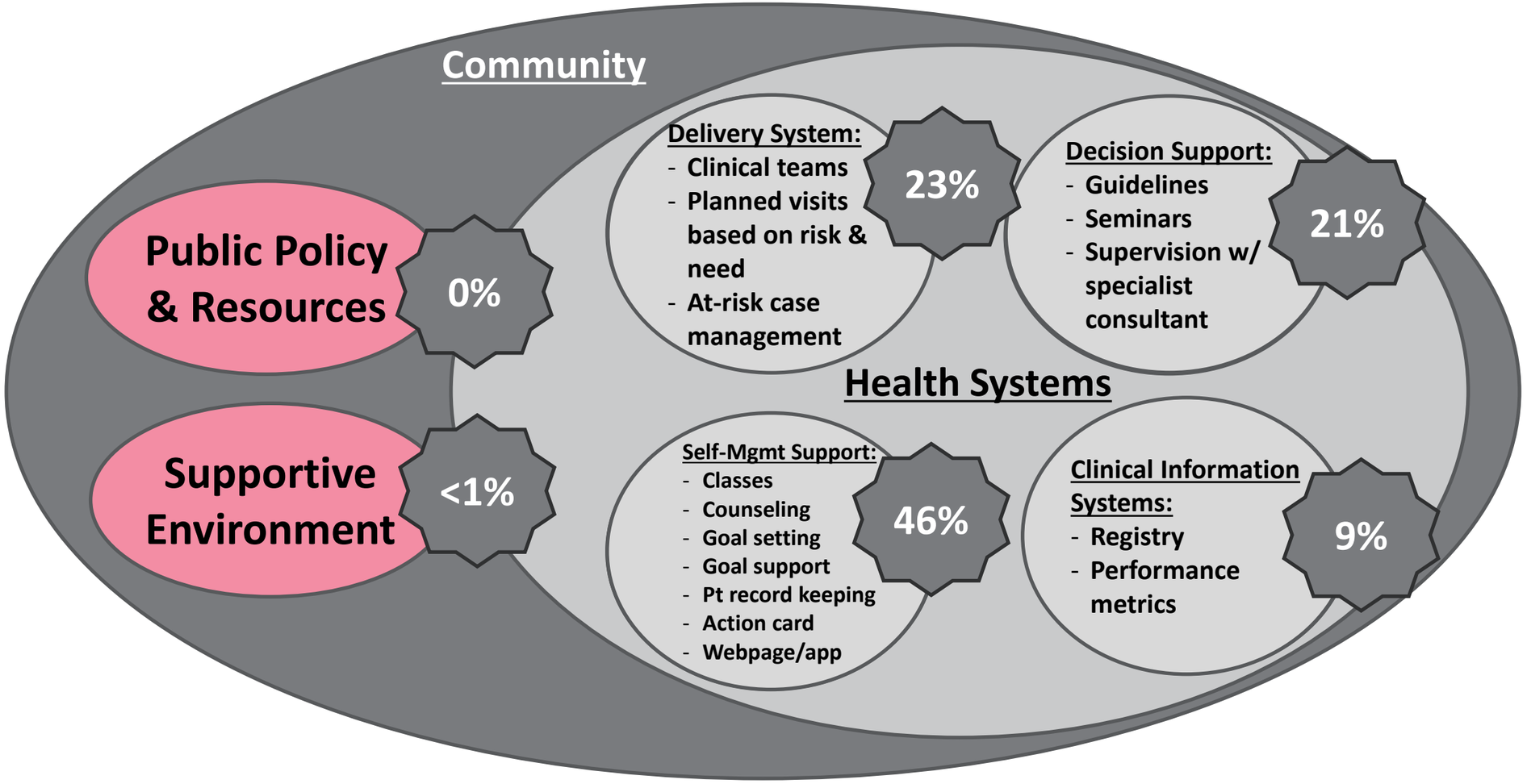
Trexler LE & Parrott D, 2022. N=31. Resource facilitation → decreased recidivism at 6 & 12 mo

Hoffman, et al. 2024. N = 158 RTC; Reduced pain interference, sustained at 8 months

Wagner Chronic Care Model

6 essential elements of the health system & community that encourages high-quality chronic disease care.

Wagner EH. Care of older people with chronic illness. Older People Build Syst Ased Evid. 1999;39–64.

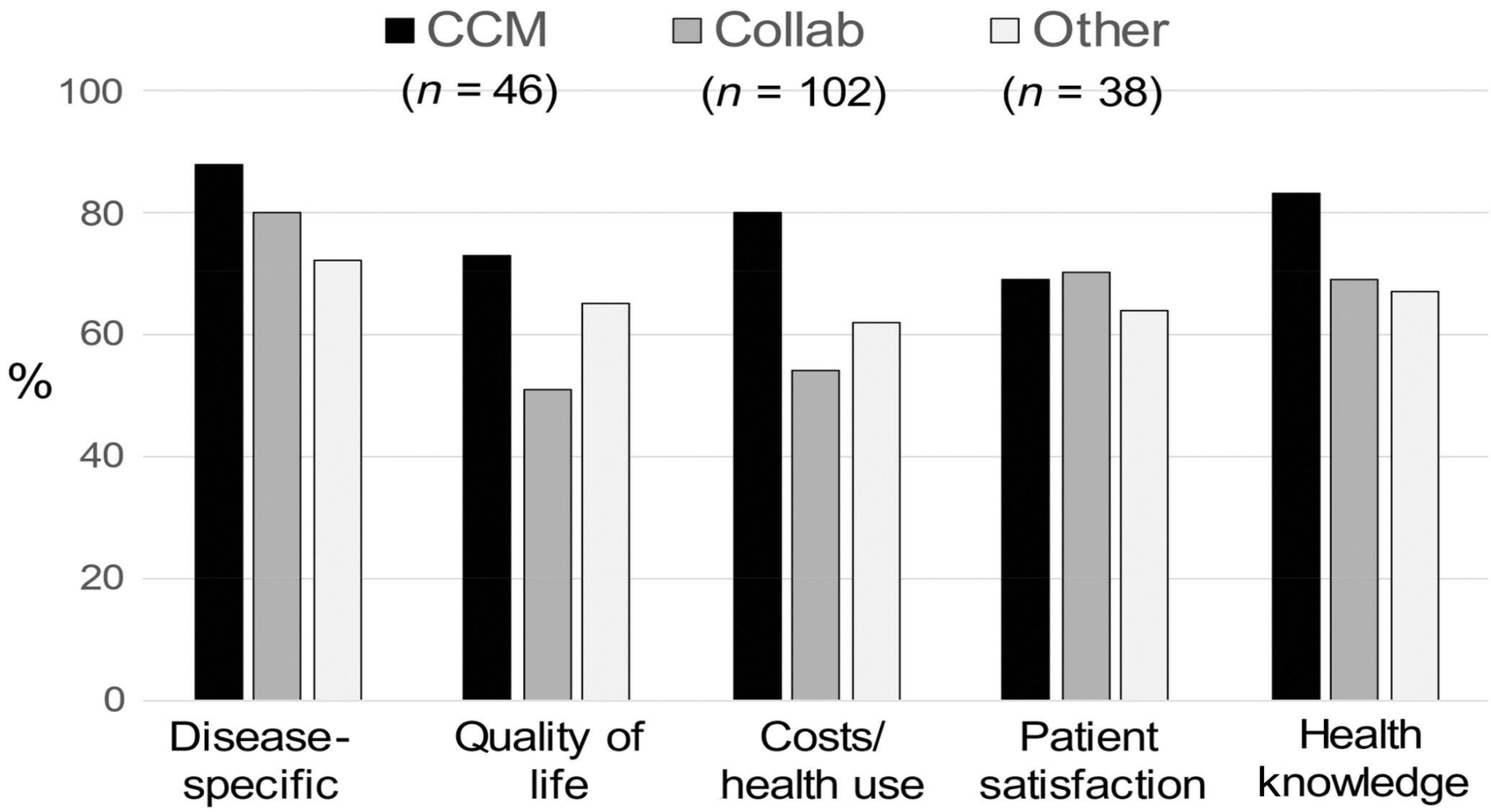


Systematic Review of Chronic Dz Mgmt Interventions in Primary Care

Reynolds R, et al: BMC Family Practice 2018;19(11):1-13

EFFECTIVENESS OF CARE MODELS IN CHRONIC DISEASE MGMT

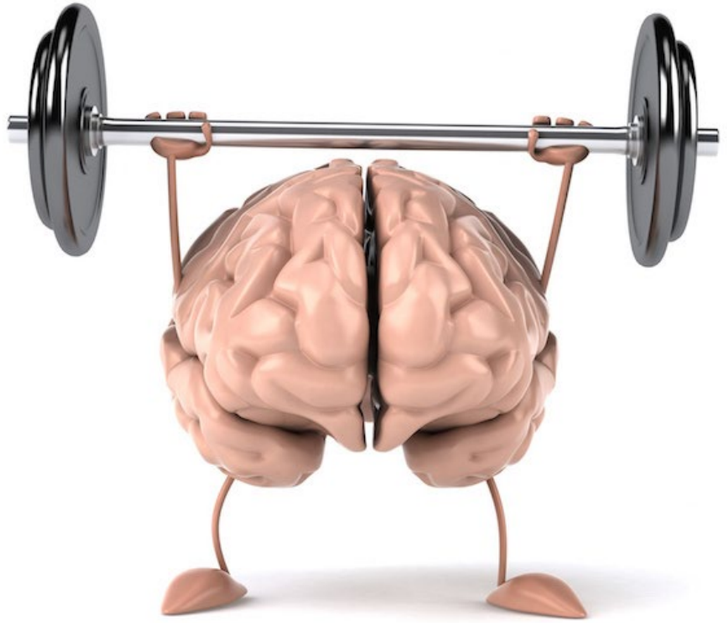
KROENKE K, CORRIGAN JD, RALSTON RK, ET AL. EFFECTIVENESS OF CARE MODELS FOR CHRONIC DISEASE MANAGEMENT: A SCOPING REVIEW OF SYSTEMATIC REVIEWS. PM R. 2024 FEB;16(2):174-189. DOI: 10.1002/PMRJ.13027. EPUB 2023 JUL 25. PMID: 37329557.



BeHEALTHY: A MODEL FOR ENHANCING CHRONIC BRAIN INJURY CARE & LONG-TERM OUTCOMES

BeHEALTHY: A MODEL FOR ENHANCING CHRONIC BRAIN INJURY CARE

NIDILRR 2020 – 2025

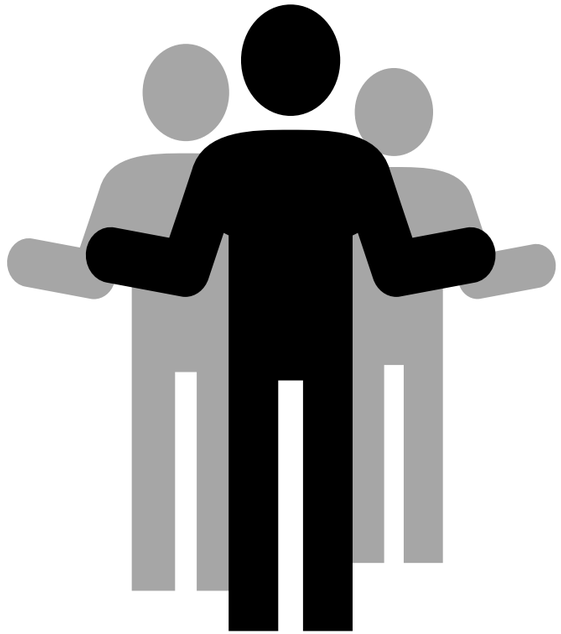


17 sites
PI: Flora Hammond
Co-PI: John Corrigan
Angelle Sander; Kurt Kroenke
TBI Model Systems
investigators

- **Overall goal:** Develop chronic disease model for BI
- **Vision:** Accessible, integrated, competent, & person-centered chronic disease management for individuals who have persistent effects of BI
- **Long-term outcomes:** decreased mortality and improved health, function, participation, and quality of life for people with BI

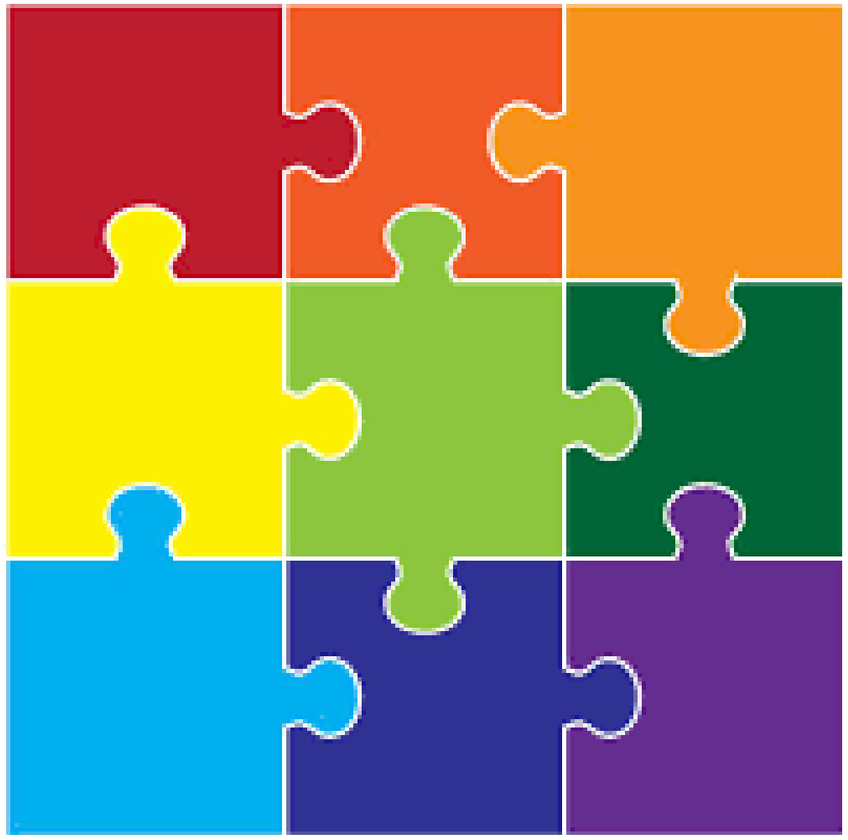
4 BeHEALTHY CORE PRINCIPLES

1. prepared, proactive providers
2. informed, activated, & supported people with TBI and their caregivers
3. activated communities & prepared proactive community partners
4. person-centered and culturally humble approach



9 BeHEALTHY CORE COMPONENTS

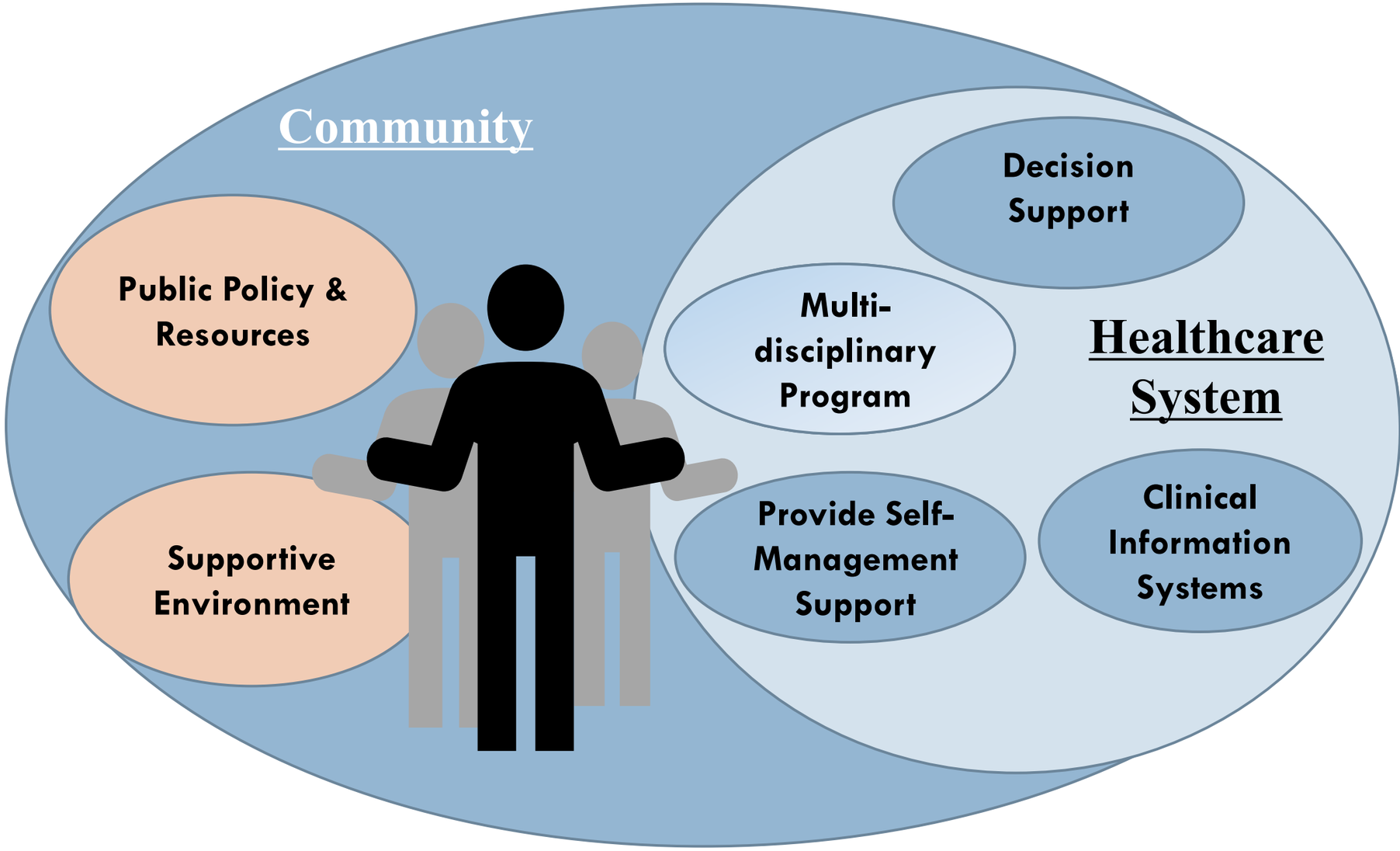
INCORPORATES THE EVIDENCE FOR BRAIN HEALTH



1. **educate & support**
2. **identify & treat hazards**
3. **reduce potential iatrogenic harm**
4. **prescribe appropriate treatments**
5. **facilitate social and intellectual engagement**
6. **encourage healthy brain behaviors**
7. **review for comorbid health conditions & medications**
8. **facilitate communication**
9. **evaluate community barriers & opportunities**

BeHEALTHY: Self-directed Management of Chronic Brain Injury

1. Start with the Chronic Care Model
2. Add Person-Centered approach
3. Use multi-disciplinary program structure



BeHEALTHY: MULTIDISCIPLINARY EXPERTISE

- Brain injury medicine specialist
- Affect, behavior & cognition
- Movement/exercise
- Social & vocational engagement

Multi-disciplinary Program

- Community resource navigation (potentially external to team)
- Care coordination—within BeHEALTHY & with other providers

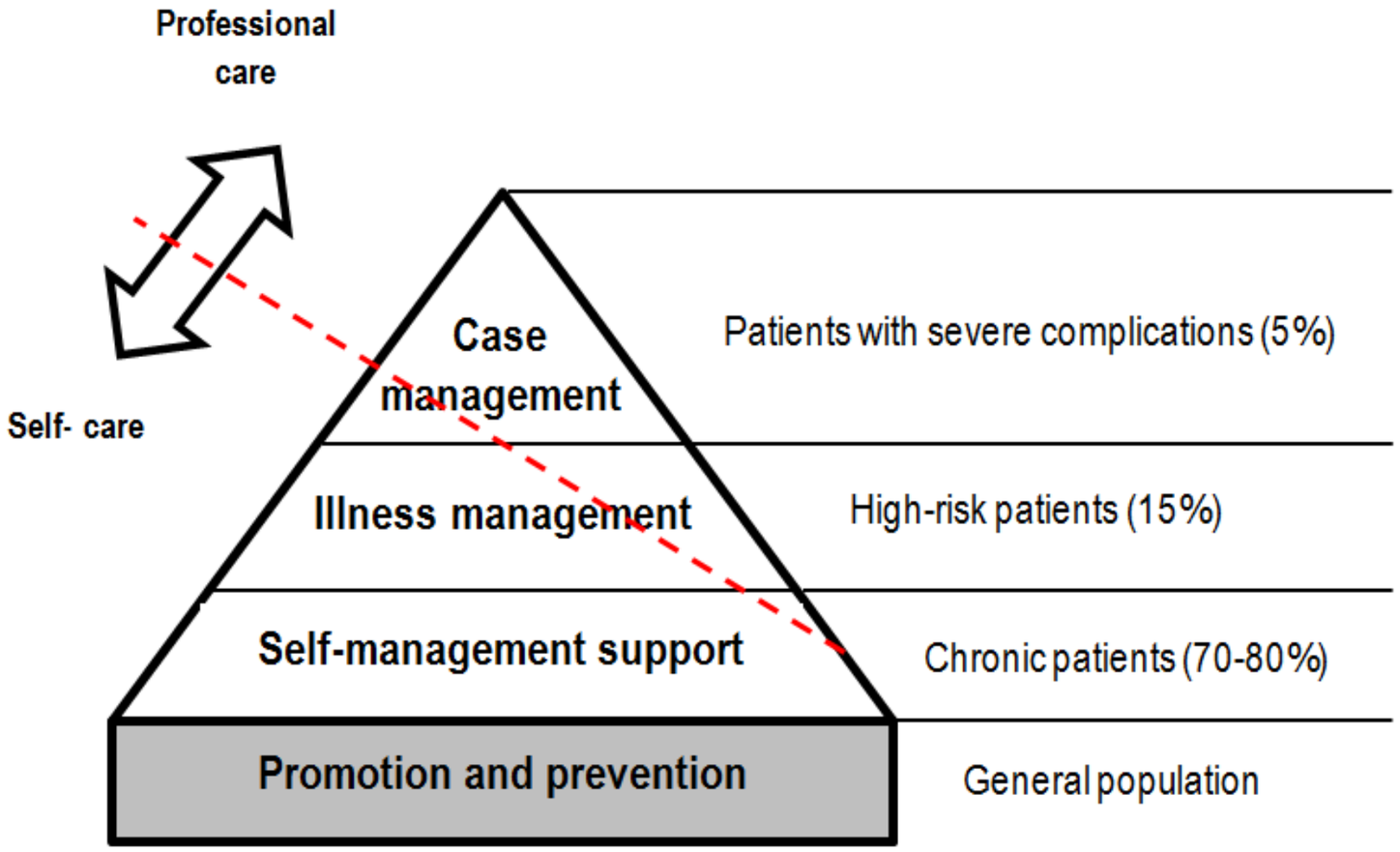
Supportive Environment

WHO IS BeHEALTHY FOR?

Case definition: Chronic Brain Injury is a clinical condition manifested by the presence of persistent or recurring neurological signs or symptoms following an injury to the brain. Motor, sensory, cognitive, emotional, behavioral, functional, and/or social effects may persist for an extended period—often more than six months—recur or emerge over a person's lifetime.

- Not intended to be diagnostic
- Not all brain injuries are chronic
- Not all issues people face after brain injury are due to brain injury
- Does not imply all TBIs require management as a chronic condition

BeHEALTHY: RISK / INTENSITY ASSESSMENT

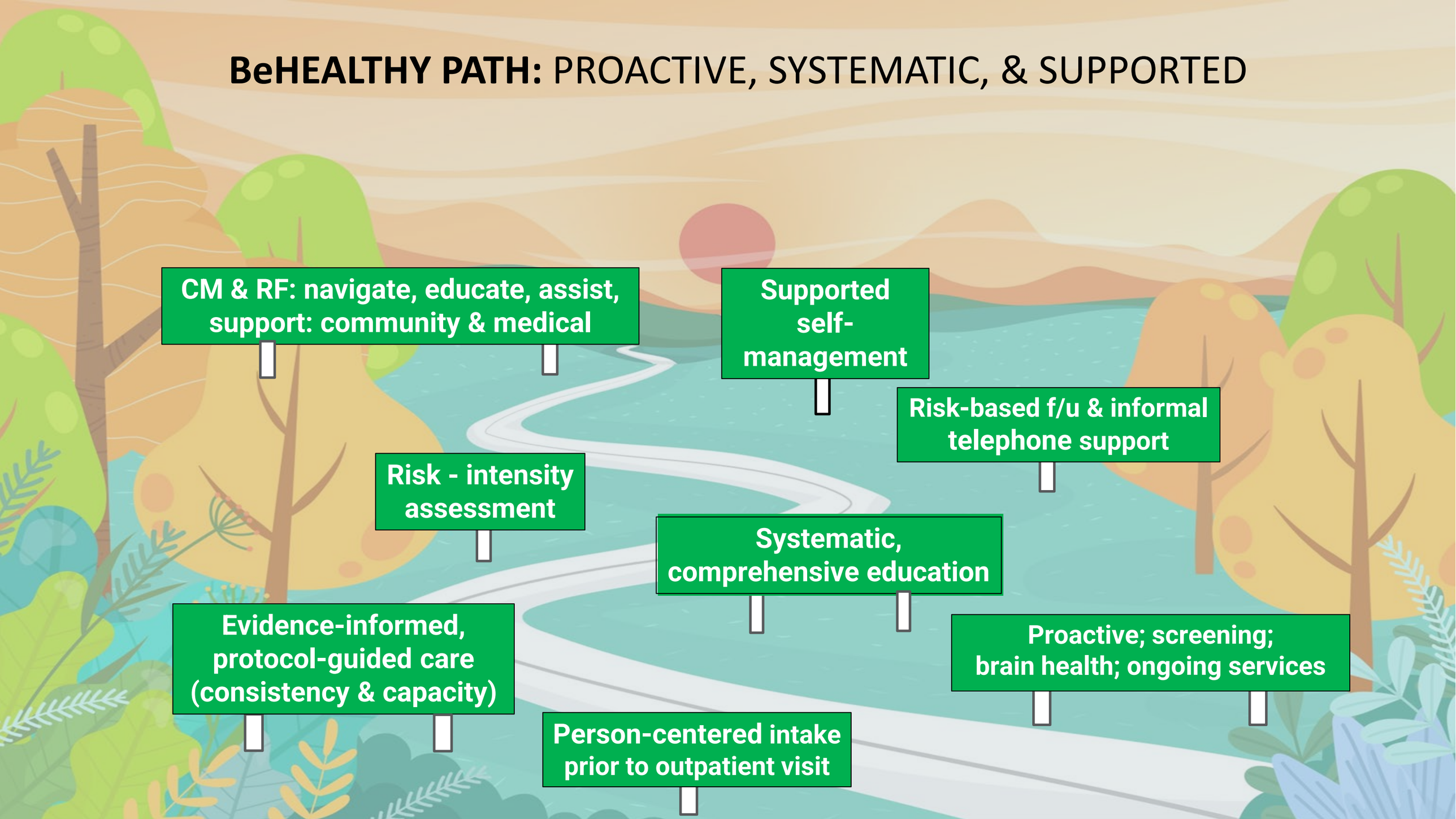


Risk Stratification for Chronic Disease Management
Target the right people with the right intensity

Intensity/risk assessment:

a. **medical complexity**
b. **independence in self-management**
c. **community resources including Social Determinants of Health**

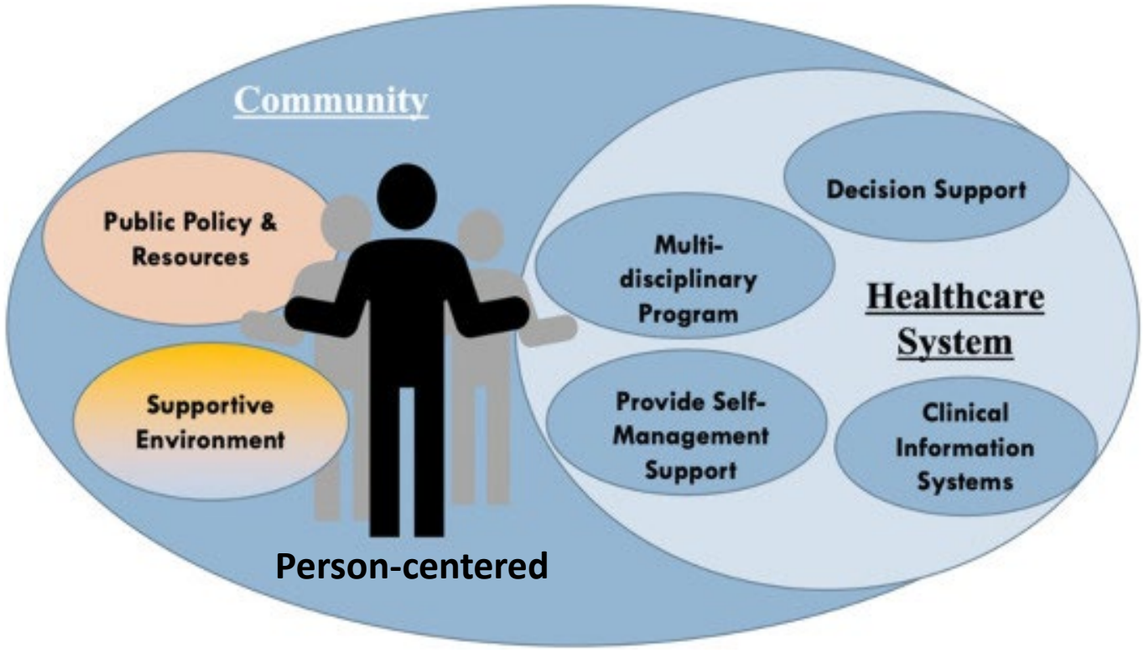
BeHEALTHY PATH: PROACTIVE, SYSTEMATIC, & SUPPORTED



FUNDING CONSIDERATIONS

- Fee-for-service blended with…???
- Community partnership
- Accountable Care Organization subcontract
- Commercial insurance value-based funding
- Post-acute care managed risk
- Home & Community-Based Services waiver

NEXT STEPS



- **Research & development:** pieces of model, resources, processes, training materials, implementation
- **Bridge to community:** Identify barriers to integration between medical care, rehabilitation, community health & disability programs
- **Funding:** Examine implications for healthcare reimbursement models
- **Awareness & advocacy:** Continue advocacy to treat & track BI as a chronic condition

TAKE HOME POINTS

1. Our current care models for brain injury are woefully inadequate for managing brain injury as a chronic & dynamic condition
2. Need person-centered, chronic care & greater provider capacity for brain injury care to achieve more appropriate care, with less resources & better outcomes.
3. We can learn & borrow from chronic care models used for many other conditions & brain health initiatives.
4. Starting to see examples emerging in TBI.

THANK YOU

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