RE-IX5

Re-IX5 Pathways to Health Transformation Model

Breaking the Cycle: A Multigenerational, Systems-Integrated Approach to Chronic Disease Prevention in Rural and Tribal Communities

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Reimagining Health Across Generations · Re-Inventing Rural Health and Community Systems
Re-Imagine · Re-Ignite · Re-Imbody · Re-Invent · Re-Inspire · Re-Ionvent

Executive Summary

Chronic disease is not a personal failing. It is a systems failure — and in rural and Tribal communities across the United States, it is a generational one. Despite sustained investment in healthcare and public health programs, rates of Type 2 diabetes, cardiovascular disease, and metabolic syndrome continue to rise in the communities that need relief most. The reason is not insufficient effort. It is a fundamentally flawed approach: interventions designed for individuals, delivered at a single point in time, within systems that were never built to coordinate with one another.

What most interventions never address is how health behaviors are actually formed and transmitted. Health is not created in clinical encounters. It is shaped within families — through the foods that become normal, the ways stress is managed, the value placed on sleep and movement, the coping strategies that get passed from one generation to the next. When a grandmother develops diabetes, her granddaughter's risk has already begun to accumulate. This cycle does not yield to programs designed around individual behavior change. It requires a fundamentally different approach.

This white paper introduces the Re-IX5 Pathways to Health Transformation Model™ — a multigenerational, systems-integrated architecture for chronic disease prevention and management built specifically for rural and Tribal communities. The model operates across the full life course through four integrated programs:

Program	Population Served	Role in the Ecosystem
S.A.F.E. Journey™	Prenatal through 12 weeks postnatal	Community prevention beginning before birth. GDM clinical thread, three-layer safety framework, breastfeeding arc. Bridges to LIFE Journey at program close.
Little Explorers™	Children 0–5 and caregivers	Early childhood layer running concurrently with LIFE Journey. Discovery Circles mirror adult content weekly — families encounter the same health concepts across generations simultaneously.
LIFE Journey™	Adults and families, all ages	12-session community prevention program addressing six lifestyle pillars. The behavioral and relational foundation of the entire ecosystem.
Diabetes Journey™	Adults with T2DM, prediabetes, or GDM history	Clinical DSMES aligned with ADCES7 Self-Care Behaviors. Receives referrals from LIFE Journey and S.A.F.E. Journey. The clinical continuation of the community prevention work.

These four programs share the same five behavioral pillars, the same problem-solving tools (the Trail Problem Solver and the RESILIENT Road Map™), and the same family-centered philosophy. A family that participates across programs does not encounter different programs — they encounter one coherent model at every stage of life.

The model is grounded in prior research demonstrating statistically significant relationships between lifestyle behaviors and health-related quality of life **(Dorland-Roan & Croes-Barone, 2017)**, and in doctoral-level implementation evidence from a systems-level intervention that produced **statistically significant improvements in provider knowledge, screening behavior, and referral practice across all measured outcomes** ($p < 0.001$; Cohen's $d = 1.386–2.675$) **(Dorland-Roan, 2024)**. Effect sizes of this magnitude are rarely produced by educational interventions. They reflect the depth of change that becomes possible when system-level infrastructure is redesigned rather than supplemented.

A 24-month pilot implementation is underway in Big Horn County, Montana, with primary delivery in Crow Nation communities. The pilot is potentially funded through the Montana Healthcare Foundation 2026 Implementation Grant (application submitted), with Big Horn County Public Health as fiscal sponsor, Crow Tribal Health as primary community partner, and Montana DPHHS as state agency partner. The program lead serves on the DPHHS Chronic Disease Prevention Steering Committee — a relationship that creates a direct pathway from pilot evidence to statewide adoption consideration.

The model operates across five implementation pillars grounded in a foundation of Health Equity and Equality: Rural Health Systems Architecture, Lifestyle Medicine Foundations, Generational Health Culture, Community Systems Integration, and Scholar-Practitioner Development. Health Equity and Equality is not the final step of the model — it is the non-negotiable orienting purpose that animates every component from the first.

> ***We are not solving the wrong problems. We are solving them the wrong way — and in the communities where the stakes are highest, the cost of that error is measured in generations.***

The Re-IX5 Pathways to Health Transformation Model is theoretically grounded, evidence-informed, implementation-science guided, and ready for pilot implementation. It honors community sovereignty, builds permanent local capacity, and aligns with the chronic disease prevention, rural health equity, and Tribal health priorities of the organizations best positioned to support it. The Montana pilot will generate the evidence base for statewide adoption and national replication. The time to engage is now, while the model is being built — not after the evidence has already been produced without you.

The model is ready for implementation. We invite Montana DPHHS, Tribal health leadership, Indian Health Service, healthcare systems, community organizations, and funding partners to join in building and scaling this model. Not as recipients of a program — as co-architects of a new approach to rural health transformation.

Section 1: The Problem — Chronic Disease as a Systems Failure

Chronic disease is not a personal failing. It is a systems failure.

Conditions including Type 2 diabetes, cardiovascular disease, obesity, and metabolic syndrome represent the leading drivers of morbidity, mortality, and healthcare cost in the United States **(Najibi et al., 2019; Tait et al., 2018)**. Their impact falls disproportionately on rural and Tribal communities, where rates of diabetes and related conditions significantly exceed national averages and where the social conditions that drive disease are most acute **(Ariel-Donges et al., 2020; Montana Department of Public Health and Human Services, 2024a)**.

In rural Montana and on Tribal lands, these challenges converge with particular intensity. Geographic isolation limits access to care. Workforce shortages reduce available services. Poverty and food insecurity constrain the choices available to families — 1 in 8 Montanans, including 1 in 6 children, experience food insecurity **(Montana Food Bank Network, 2025)**. Nearly one in three Montana adults (31%) have obesity, with American Indian/Alaska Native adults experiencing notably higher rates **(Montana Department of Public Health and Human Services, 2024a)**. Historical and intergenerational trauma shapes the social and emotional environment in which health decisions are made.

The Limitation of Existing Approaches

Despite sustained investment across healthcare, public health, and community sectors, the chronic disease burden in rural and Tribal communities has not meaningfully declined. Most existing interventions share a common design flaw: they target individuals at a single point in time, addressing one risk factor or one behavior **(Smith et al., 2017; Runkle & Nelson, 2021)**. They operate within systems that are fragmented by design — where the clinical encounter, the public health program, and the community resource exist in separate organizational silos with limited coordination **(Decker & Flynn, 2018)**. These approaches produce short-term improvements that rarely sustain **(Meyer et al., 2018)**.

Food Insecurity as a Central Driver

Food insecurity exemplifies the complexity of this problem. National food insecurity rates rose from 10.2% of households in 2021 to 13.5% in 2023 **(Rabbitt et al., 2024)**. Food insecurity is directly associated with significantly increased risk of Type 2 diabetes **(Abdurahman et al., 2019; Tait et al., 2018)** — with food-insecure individuals two to three times more likely to develop diabetes than those who are food secure — and is associated with worsening diet quality, weight, and glycemic control over time in adults already living with prediabetes and T2D **(Gu et al., 2024)**. Food insecurity is also associated with cardiovascular disease and poor metabolic outcomes **(Thomas et al., 2021; Dong et al., 2023)**. Yet food insecurity is rarely addressed within clinical care — screening is inconsistent and referral pathways to food resources are often absent or unknown **(Decker & Flynn, 2018; Smith et al., 2017; Runkle & Nelson, 2021)**.

The Deeper Pattern: Fragmentation at Every Level

Fragmentation is not merely an organizational inconvenience. It is a structural barrier to health transformation **(Decker & Flynn, 2018)**. When healthcare, public health, and community systems operate independently — each with separate funding, separate metrics, and separate definitions of success — individuals and families must navigate a system designed around institutional boundaries rather than human needs **(Meyer et al., 2018)**.

Addressing chronic disease in rural and Tribal communities requires more than better programs. It requires a fundamentally different approach — one that addresses the conditions that create and sustain disease, not just the disease itself.

Section 2: The Missing Link — The Generational Health Cycle

There is a dimension of chronic disease that most interventions never address: how health behaviors develop, persist, and move through families across time.

Health is not created in isolation. It is shaped within the relationships, routines, environments, and cultural practices of families **(Bowen, 1978; Fiese et al., 2006)**. The foods that become normal, the ways stress is managed, the value placed on sleep and movement, the coping strategies that get passed down — these are learned, modeled, reinforced, and transmitted from one generation to the next.

The Generational Health Cycle (GHC)

The Generational Health Cycle is the conceptual framework that names and explains this process. It describes how health behaviors — both protective and harmful — flow across generations through identifiable transmission pathways, and where targeted intervention can disrupt negative patterns and establish new ones. In academic and grant contexts this framework is referred to as the Multigenerational Health Transmission and Disruption Cycle (MHTDC).

Transmission occurs through six primary pathways, each supported by the literature on social determinants of health and family systems **(Healthy People 2030, 2022; Bowen, 1978)**:

- Food culture — what is cooked, how it is prepared, what constitutes a meal, what foods carry cultural significance **(Patil et al., 2018)**
- Stress and coping — how adversity is responded to, whether stress is expressed or suppressed, what coping strategies are modeled and practiced **(Thomas et al., 2021)**
- Learned habits and lifestyle — patterns of movement, sleep, and daily routine that become normalized through repetition and observation **(Dorland-Roan & Croes-Barone, 2017)**
- Family and relationship dynamics — the emotional environment in which health decisions are made, including whether health is discussed, prioritized, or stigmatized **(Fiese et al., 2006)**
- Cultural norms and beliefs — community and cultural frameworks for understanding the body, illness, and what constitutes wellness **(Israel et al., 1998; Wilson et al., 2023)**
- Social environment — the peer, community, and neighborhood context that shapes what behaviors are possible and what is expected **(Agency for Toxic Substances and Disease Registry, 2015)**

These pathways do not operate independently. They interact continuously, creating a composite transmission environment that shapes the health trajectory of each generation. When this environment is characterized by limited food access, chronic stress, sedentary routine, and inadequate sleep, the risk of chronic disease accumulates — and accumulates faster with each generation.

The Accumulation of Risk

Chronic disease risk is not simply present or absent. It accumulates across time and across generations **(Thomas et al., 2021; Tait et al., 2018)**. A child raised in an environment of food insecurity, chronic family stress, and sedentary routine faces compounded risk, shaped by the transmission of patterns reinforced across multiple generations **(Najibi et al., 2019; Patil et al., 2018)**. Without intentional intervention, these cycles persist — not because families do not want to be healthy, but because the patterns are embedded in the very fabric of daily life and reinforced by systems that were never designed to support change **(Runkle & Nelson, 2021; Decker & Flynn, 2018)**.

The Opportunity the GHC Reveals

The Generational Health Cycle is not only a description of how disease persists. It is a map of where intervention can make the deepest and most lasting difference. If health behaviors are transmitted through families, then engaging families — rather than isolated individuals — creates the possibility of changing the transmission environment itself **(Israel et al., 1998; Wallerstein & Duran, 2010)**.

> ***Intervening at the family level does not produce individual change. It produces generational change.***

This is the theoretical foundation of the LIFE Journey Program and the Re-IX5 Framework. The GHC explains why the model is designed the way it is — and why it is positioned to produce outcomes that individually-focused interventions cannot.

Section 3: Theory of Change

The Re-IX5 Pathways to Health Transformation Model rests on an explicit theory of change — a causal argument for why this approach will produce outcomes that existing approaches have not.

The Core Premise

Chronic disease in rural and Tribal communities persists not because individuals lack motivation or information, but because the behavioral patterns driving disease risk are embedded in family systems, transmitted across generations, and reinforced by fragmented, uncoordinated health infrastructure **(Decker & Flynn, 2018; Runkle & Nelson, 2021; Bowen, 1978)**. Addressing any one of these dimensions in isolation produces limited, short-term results. Sustainable change requires simultaneous intervention at the individual, family, and system levels **(Agency for Toxic Substances and Disease Registry, 2015; Smith et al., 2017)**.

The Causal Chain

- If health behaviors are understood as generational patterns rather than individual failures **(Bowen, 1978; Fiese et al., 2006)**, then interventions can target the transmission cycle rather than just the symptom.

- If families are engaged as a unit through the LIFE Journey Program, then behavior change is reinforced within the environment where it actually needs to hold — the home, the kitchen, the daily routine — rather than reverting when the program ends **(Fiese et al., 2006; Dorland-Roan & Croes-Barone, 2017)**.

- If lifestyle behaviors are addressed together rather than in isolation, then the interconnected drivers of chronic disease risk are disrupted at the root rather than managed one factor at a time **(Dorland-Roan & Croes-Barone, 2017; Rippe, 2019)**.

- If healthcare, public health, and community systems are aligned through the Re-IX5 Framework, then individuals and families encounter a coordinated system instead of a fragmented one that exhausts their capacity to engage **(Meyer et al., 2018; Decker & Flynn, 2018)**.

Critical Assumptions

The following assumptions underpin the theory of change and represent the hypotheses the pilot is designed to test **(Damschroder et al., 2009; Damschroder et al., 2022)**:

Assumption	Meaning in Practice	How the Pilot Tests It
Family-level change is more durable than individual-only change	Behavior reinforced at home sustains longer than clinic-based education alone	Track family participation rates and 24-month behavior retention
Structural barriers must be reduced alongside behavioral intervention	Food access and system fragmentation must be addressed concurrently, not sequentially	Measure screening uptake and referral completion rates
Trust and relationships are prerequisites, not afterthoughts	Community buy-in must precede implementation, especially in Tribal contexts	Document relationship-building activities as formal Phase 0 pilot activities
Small sustained changes compound across generations	Modest shifts in parental behavior measurably influence children's trajectories	Capture family-level behavior changes, not only individual outcomes

Section 4: The Re-IX5 Model — Framework and Pillars

The Re-IX5 Pathways to Health Transformation Model is organized around six transformative domains and five implementation pillars. The six domains describe how transformation happens — they are the process architecture of the model. The five implementation pillars describe what the model transforms — the content domains across which change is pursued.

The Six Transformation Domains — Root Definitions

These six domains carry consistent root meanings across every context in which Re-IX5 operates. What changes is not the meaning but the application. A community health worker, a family participant, and a doctoral scholar-practitioner each experience these domains at the level relevant to their role while remaining oriented by the same underlying philosophy.

Domain	Core Principle	Root Definition
Re-Imagine	*Vision and possibility*	To see beyond what exists toward what is possible. Re-Imagine challenges the assumption that current systems, patterns, and outcomes are fixed. It asks us to look past fragmented care and generational disease burden toward a vision of what thriving communities and families could become. Nothing changes until someone first dares to see it differently.
Re-Ignite	*Motivation and relationships*	To reawaken the motivation, relationships, and commitment that sustain change. Transformation requires more than vision — it requires energy, trust, and sustained engagement. Re-Ignite is what keeps transformation moving when momentum fades, at the individual, family, and system levels.
Re-Imbody	*Embodied health and lived practice*	To integrate health knowledge into lived experience, daily practice, and physical well-being. Re-Imbody is the domain of lifestyle medicine — nutrition, movement, sleep, stress, relationships — experienced not as prescriptions but as daily acts of self-determination. Health is not something done to people but something lived by them.
Re-Invent	*Design and innovation*	To design new approaches, models, and systems that better serve human health. Where Re-Imagine sees possibility, Re-Invent builds it. It is the work of creating interventions, redesigning care workflows, and constructing systems that align with how health is actually formed and sustained.
Re-Inspire	*Leadership and advocacy*	To elevate others toward leadership, advocacy, and sustained community transformation. Re-Inspire shifts the focus outward — to the practitioner who trains the next practitioner, the family whose change influences the neighborhood, the community whose transformation becomes the model.
Re-Ionvent	*Research and emerging knowledge*	To advance health transformation through innovation, research, and the application of emerging knowledge. Re-Ionvent ensures the framework remains dynamic — evolving as communities, science, and systems evolve. It is both the outcome of moving through the five domains and the force that prevents the framework from becoming static.

How the Domains Apply Across Contexts

The six domains carry the same root meaning at every level of the ecosystem. What changes is the contextual application:

Domain	Re-IX5 Model (System)	S.A.F.E. Journey (Ground) Little Explorers (Seedlings) LIFE Journey (Roots) Diabetes Journey (Support)	Scholar-Practitioner (Professional)
Re-Imagine	Reimagining how rural health systems are designed	Reimagining what health could look like for my family	Reimagining my role as a practitioner
Re-Ignite	Reigniting community partnerships and engagement	Reigniting motivation and hope for change	Reigniting ethical commitment to practice
Re-Imbody	Reimbodying community health through lifestyle infrastructure	Reimbodying health through daily habits and lifestyle	Bringing clinical knowledge into genuine human connection
Re-Invent	Reinventing systems, workflows, and care models	Reinventing family routines and health patterns	Reinventing approaches to patient care and intervention design
Re-Inspire	Reinspiring communities toward sustained transformation	Reinspiring families to sustain change across generations	Reinspiring communities through leadership and advocacy
Re-Ionvent	Innovating new rural health models and policy	Innovating personal health strategies	Innovating through research and scholarly contribution

The Five Implementation Pillars

The five implementation pillars describe what the Re-IX5 transformation framework operates on, grounded in a foundation of Health Equity and Equality that orients every decision **(Healthy People 2030, 2022)**:

Pillar	Definition
1. Rural Health Systems Architecture	The intentional redesign of rural health systems — workflows, care models, policy alignment, cross-sector coordination, and infrastructure. This pillar addresses the structural conditions that either enable or constrain health in rural and Tribal communities, directly reflecting the founder's role as a Rural Health Systems Architect.
2. Lifestyle Medicine Foundations	The six behavioral domains practiced daily that determine long-term health outcomes: nutrition, physical activity, sleep and recovery, stress management and resilience, relationships and social connection, and substance avoidance. These are the daily practices the LIFE Journey Program is designed to shift. (Rippe, 2019; American College of Lifestyle Medicine, 2023)
3. Generational Health Culture	The shared beliefs, behaviors, traditions, and environments within families and communities that shape how health is understood, practiced, and transmitted across generations — and the deliberate work of reshaping those patterns toward lifelong well-being. This pillar encompasses both family systems health and multigenerational prevention. (Bowen, 1978; Fiese et al., 2006)
4. Community Systems Integration	The alignment of healthcare, public health, schools, county extension offices, and community organizations around shared prevention goals. This pillar addresses the environmental and institutional layer that shapes what health behaviors are possible for individuals and families — the community context for all other change. (Agency for Toxic Substances and Disease Registry, 2015)
5. Scholar-Practitioner Development	The formation of the workforce of rural health systems architects who carry the Re-IX5 model forward across communities and generations. This encompasses the Re-IX5 Scholar-Practitioner Pathway, cross-disciplinary training programs, certification, and the ongoing

	professional development that sustains the model's growth. (Damschroder et al., 2009; Damschroder et al., 2022)
FOUNDATION	**Health Equity and Equality — not a pillar to achieve but the non-negotiable orienting purpose that animates every component of the model. Health Equity and Equality is the purpose that animates every step, not the final step of the model. (Healthy People 2030, 2022)**

Generational Health Culture as the Emergent Outcome

When all five pillars operate together over time, Generational Health Culture emerges — the living evidence that the model is working **(Bowen, 1978; Fiese et al., 2006)**. This is not an additional pillar but the cultural transformation that becomes visible when the model has taken root: the shift in how families, communities, and systems understand and transmit health across generations.

Section 5: The Integrated Approach — Re-IX5, GHC, S.A.F.E. Journey, Little Explorers, LIFE Journey, Diabetes Journey, Resilient Road Map/Trail Problem Solver and Digital Bridge

The strength of the Re-IX5 Pathways to Health Transformation Model lies not in any single component but in the integration of eight components that, together, address the full complexity of how chronic disease develops and how it can be sustainably changed.

Component 1: Re-IX5 Framework — How Systems Change

Individual and family behavior change cannot be sustained within systems that remain fragmented **(Runkle & Nelson, 2021; Smith et al., 2017)**. The Re-IX5 Framework addresses this by creating the infrastructure for coordinated, system-level support. The framework operates through four system-level functions: screening for social determinants of health including food insecurity using validated tools such as the Hunger Vital Sign **(Gattu et al., 2019; Makelarski et al., 2017; Children's Health Watch, 2022)**; referral to community resources through established pathways; coordination across healthcare, public health, and community organizations; and integration of lifestyle medicine and prevention principles into routine clinical practice **(Decker & Flynn, 2018; De Marchis et al., 2019)**.

Critically, the Re-IX5 Framework is not designed to create new parallel systems. It is designed to align and strengthen what already exists — making existing investments more effective by connecting them to each other and to the families they serve **(Damschroder et al., 2022)**.

Component 2: Generational Health Cycle — Why Change Is Needed

The GHC provides the theoretical foundation **(Bowen, 1978; Fiese et al., 2006; Agency for Toxic Substances and Disease Registry, 2015)**. It explains why health patterns persist across generations, identifies the transmission pathways through which risk accumulates, and locates the intervention points where the cycle can be disrupted. Without this theoretical grounding, intervention is reactive — treating disease after it has developed rather than interrupting the conditions that produce it **(Decker & Flynn, 2018; Najibi et al., 2019)**.

Component 3: S.A.F.E. Journey Program™ — Prenatal and Postnatal Community Prevention

The S.A.F.E. Journey Program™ operationalizes the Re-IX5 multigenerational framework at the earliest and most consequential intervention point in the generational health cycle: pregnancy and the first twelve weeks of postnatal life. Organized across four phases — Sacred Ground, Awakening, Foundations, and Emergence — the program delivers 4 to 12 Gathering Circles from pre-conception through the postnatal period, serving Seed Keepers (participants) through trained Soil Tenders (facilitators) under Ground Guide (supervisor) oversight.

The program's design is grounded in the recognition that the prenatal period is not simply the beginning of a new life — it is the transmission environment for the next generation's health trajectory. Gestational diabetes (GDM), prenatal nutrition, maternal stress regulation, birth preparation, breastfeeding initiation, and postnatal attachment are not isolated clinical concerns. They are the earliest expressions of the generational health cycle described in Section 2, and the points at which multigenerational intervention can have the most profound and lasting impact **(Bowen, 1978; Fiese et al., 2006)**.

The S.A.F.E. Journey Architecture

The program is organized across four phases, each corresponding to a distinct developmental and relational context:

Phase	Gathering Circles	Focus
S — Sacred Ground	GC 1–3	Identity, family health history, intergenerational trauma, the Generational Health Cycle as personal narrative
A — Awakening	GC 4–6	GDM clinical thread, body awareness, support network, safety anchor activation
F — Foundations	GC 7–9	Birth preparation, feeding intention, postnatal planning, cultural practices
E — Emergence	GC 10–12	Postnatal body and mind, infant attachment, breastfeeding support, transition to LIFE Journey

The GDM Clinical Thread

A gestational diabetes prevention and management thread runs through all twelve Gathering Circles, reflecting the disproportionate burden of GDM in Indigenous and rural communities, where rates are three to five times the national average (Centers for Disease Control and Prevention, 2023). The GDM thread does not require clinical staff to deliver — it is embedded in the lifestyle content that Soil Tenders already facilitate: consistent meals with protein and color, ten-minute post-meal walks, the calm-down practice introduced at GC 2, and adequate sleep with left-side positioning. Each of these practices is GDM prevention, delivered as a community behavioral intervention.

The postnatal continuation of the GDM thread addresses one of the most well-documented and most frequently missed prevention opportunities in maternal health: breastfeeding after GDM reduces the mother's lifetime risk of Type 2 diabetes by 25 to 50 percent **(Gunderson et al., 2015; Stuebe et al., 2011)**. The postpartum OGTT at 6–12 weeks is a Layer 3 safety protocol in Phase E, and the transition from S.A.F.E. Journey to LIFE Journey at the Bountiful Ground ceremony explicitly positions continued lifestyle engagement as the most effective long-term GDM risk reduction strategy available.

Three-Layer Safety Framework

S.A.F.E. Journey operates with a three-layer safety architecture that distinguishes it from conventional prenatal health education programs. Layer 1 is universal — safety, respect, and confidentiality embedded in every Gathering Circle from the first session. Layer 2 is phase-specific — a Safety Anchor at the close of each phase (GC 3, GC 6, GC 9) with three targeted questions addressing home safety, support network concerns, and unspoken fears. Layer 3 is postnatal — the Postpartum Body and Mind Check delivered at GC 10, 11, and 12, screening across six behavioral domains with private follow-up pathways for postpartum depression, domestic violence, and postnatal red flags requiring same-day referral.

This framework positions S.A.F.E. Journey not merely as health education but as a structured safety infrastructure for the prenatal and postnatal period — one that creates relationship conditions under which Seed Keepers disclose what they would not disclose in clinical encounters.

Breastfeeding Arc and Non-Judgment Standard

A breastfeeding arc runs from GC 1 through GC 12, moving from intention through anatomy through preparation through practice. Soil Tenders are trained to the non-judgment standard, delivering all feeding content with equal warmth for breastfeeding and formula feeding — a standard that reflects the program's foundational commitment to self-determination and its evidence-based recognition that the relationship between caregiver and infant matters more than the feeding method **(Feldman-Winter et al., 2020)**.

Ecosystem Position

S.A.F.E. Journey is the prenatal entry point to the Re-IX5 multigenerational ecosystem. The infant who attends GC 10 with their caregiver becomes the Explorer who enters Little Explorers at three to six months. The caregiver who completes S.A.F.E. Journey transitions to LIFE Journey at the Bountiful Ground ceremony — arriving with behavioral foundations, problem-solving tools, and family health language already established. Seed Keepers

with GDM history are referred to the Diabetes Journey through a documented referral pathway. The program's twelve sessions are not standalone health education — they are the foundation layer of a multigenerational health infrastructure that extends across the full life course **(Fiese et al., 2006; Bowen, 1978)**.

S.A.F.E. Journey™ at a Glance

Participants: Seed Keepers
Facilitators: Soil Tenders (Tier 1 certified)
Supervisors: Ground Guides (Tier 2 certified)
Sessions: 4–12 Gathering Circles
Population: Prenatal through 12 weeks postnatal
Ecosystem: Bridges to LIFE Journey, Little Explorers, and Diabetes Journey

Nine Program Pillars

- Nutrition and Feeding
- Physical Activity
- Sleep and Recovery
- Stress and Emotional Health
- Social Connection
- Resilience and Problem-Solving
- Nutrition Skills
- Breastfeeding and Infant Feeding — S.A.F.E. Journey specific
- Intergenerational Trauma and Healing — S.A.F.E. Journey specific

Component 4: Little Explorers™ — Early Childhood Multigenerational Extension

Little Explorers™ is the early childhood layer of the Re-IX5 multigenerational ecosystem, designed as a Discovery Circle program serving children ages 0 to 5 and their caregivers. It operates as a Friday WIC playgroup extension — sixty minutes of structured programming followed by unstructured free play — and is designed to mirror the LIFE Journey Trail Marker Gathering content of the same week. When a family participates in both the adult LIFE Journey and the child Discovery Circle in the same week, they encounter the same health concepts simultaneously across two generations.

This parallel design reflects the core insight of the Generational Health Cycle (Section 2): health behaviors are transmitted within families through shared environment, modeled practice, and repeated experience. Little Explorers does not teach children about health. It creates the conditions under which children experience health — through movement, through food exploration, through caregiver-child play — at the same time their caregivers are developing the behavioral foundations that will define the family's health transmission environment for the next generation (Fiese et al., 2006; Patil et al., 2018).

Multigenerational Continuity

The Explorer who enters Little Explorers at three to six months is the infant who attended S.A.F.E. Journey with their caregiver at GC 10. The caregiver who brings their child to Little Explorers is the Traveler who is simultaneously moving through LIFE Journey Trail Marker Gatherings. The health language, the behavioral tools, and the five Re-IX5 pillars are experienced at every age simultaneously — creating a shared family health vocabulary that the Generational Health Cycle framework identifies as the most durable form of behavioral transmission *(Bowen, 1978; Fiese et al., 2006)*.

This is not incidental. It is the design. Little Explorers exists to close the generational gap that every other program in this ecosystem leaves open — the gap between what adults learn in prevention programs and what children experience in the home environments those adults return to. When children and caregivers are learning the same things together, the transmission environment changes.

Implementation Model

Little Explorers is delivered by a community Sprout Guide — a community member serving in a stipend-supported role integrated within existing WIC playgroup infrastructure. This model is intentionally light: it does not require new facilities, new clinical staff, or standalone program infrastructure. It requires a trained community member, WIC partnership, and program materials that connect the Discovery Circle content to the LIFE Journey pillar of the same week.

The stipend model reflects the program's commitment to community-based delivery and its recognition that the knowledge required to facilitate early childhood developmental play is community knowledge — not clinical

expertise. Sprout Guides are trained and supported through the Re-IX5 training system and supervised by the Trail Guide team delivering LIFE Journey.

Little Explorers™ at a Glance
Participants: Explorers (ages 0–5) and caregivers
Facilitators: Sprout Guides (community stipend role)
Format: Friday WIC playgroup extension — 60 minutes per session
Session structure: 15–20 minutes structured programming + 40–45 minutes free play
Content alignment: Mirrors LIFE Journey Trail Marker pillar of the same week
Ecosystem entry: 3–6 months; bridges from S.A.F.E. Journey at GC 10 and GC 12
Infrastructure: WIC integration; no standalone facility required

Component 5: LIFE Journey Program — How Individuals and Families Change

The LIFE Journey Program operationalizes behavior change at the individual and family level. It is a structured, 12-session intervention addressing the six lifestyle domains most strongly associated with chronic disease risk and health-related quality of life **(Dorland-Roan & Croes-Barone, 2017; Rippe, 2019; American College of Lifestyle Medicine, 2023)**. What distinguishes LIFE Journey from conventional health education is its multigenerational design. Participants are invited to engage as family units — Travelers moving through Trail Marker Gatherings alongside their families, guided by trained Trail Guides. The goal is not to educate individuals and send them home to change alone. The goal is to shift the transmission environment itself.

The program integrates evidence-based approaches including motivational interviewing, behavior change theory, health literacy principles, and lifestyle medicine. It is designed to be culturally adaptable, facilitator-led by trained community members, and scalable across rural and Tribal settings **(Israel et al., 1998; Wallerstein & Duran, 2010; Sacca et al., 2022)**. The RESILIENT Road Map (7-step advanced problem-solving tool introduced at Trail Marker 10) and the Trail Problem Solver (5-step community version at Trail Marker 5) provide structured frameworks for navigating barriers that arise between sessions.

The Twelve Trail Marker Gatherings

The twelve Trail Marker Gatherings progress through the five lifestyle pillars in a deliberate developmental arc, building from identity and family health legacy through the behavioral skills required for sustained change. The final three Trail Markers deepen and integrate content from earlier sessions, culminating in The Health Legacy Plan at Trail Marker 12 — the session at which Travelers articulate their family health commitment and transition toward long-term sustaining behavior.

Trail Marker	Title	Primary Pillar Focus
1	Discovering Your Family Health Legacy	Generational Health Culture — connecting personal history to the GHC framework
2	Fueling the Body	Nutrition — food as fuel, metabolic health, traditional foods honored
3	Movement for Life	Physical Activity — movement in all its forms; land-based and cultural activity
4	Rest & Recovery	Sleep — metabolic and emotional consequences of poor sleep
5	Resilience in Action	Problem-Solving & Resilience — Trail Problem Solver (5-step tool) introduced
6	Cooking for Health	Nutrition Skills — practical meal preparation; Balanced Plate in family kitchen contexts

7	Move More: Cardio Health	Physical Activity — cardiovascular activity, intensity, sustainable movement habits
8	Calming the Mind	Stress Management — nervous system as health system; Stress Reset Toolkit
9	Food as Medicine	Nutrition — food patterns and long-term chronic disease prevention and reversal
10	Problem Solving in Action	Problem-Solving & Resilience — RESILIENT Road Map (7-step tool); bridge to Diabetes Journey
11	Strengthening Connections	Social Connection — relationships, family systems, and community as health infrastructure
12	The Health Legacy Plan	Integration — progress celebration; Family Health Legacy Statement; trail close

Trail Marker 10 is the structural bridge between the LIFE Journey community prevention pathway and the Diabetes Journey clinical self-management pathway. Travelers with T2DM, prediabetes, or GDM history receive a formal referral at this session, arriving at the Diabetes Journey with behavioral foundations already established.

Three-Tier Training System

Tier	Role	Training Hours	Pass Threshold	Responsibility
Tier 1	Trail Guide	12 hours + practicum	80%	Deliver Trail Marker Gatherings; direct participant contact
Tier 2	Ground Guide	12 hours + supervised delivery	85%	Train and supervise Trail Guides; fidelity monitoring; Warm/Wonder/Wish debrief
Tier 3	Master Trainer	16 hours + independent delivery	90%	Train Ground Guides; certification authority; program stewardship

LIFE Journey™ at a Glance

Participants	Travelers (individuals and family units)
Facilitators	Trail Guides (Tier 1 certified)
Supervisors	Ground Guides (Tier 2 certified)
Sessions	12 Trail Marker Gatherings
Duration	Approximately 90 minutes per session
Population	Adults and families — all ages
Final session	Legacy Summit — The Health Legacy Plan
Ecosystem	Bridges to Diabetes Journey (TM 10); Little Explorers (concurrent); S.A.F.E. Journey graduates at Bountiful Ground

Six Lifestyle Pillars

- **Nutrition** — *Forest Green — food as foundation and culture*
- **Physical Activity** — *Sky Blue — movement in all its forms*
- **Sleep & Recovery** — *Navy — metabolic and emotional foundation*
- **Stress Management** — *Purple — nervous system as health system*
- **Social Connection** — *Teal — relationships as health infrastructure*
- **Problem-Solving & Resilience** — *Gold — SDOH and whole-person capacity*

Each pillar maps to one or more ADCES7 Self-Care Behaviors, creating a direct referral pathway from community prevention to clinical DSMES.

Component 6: The Diabetes Journey — Clinical Self-Management and DSMES Integration

The Diabetes Journey operationalizes clinical diabetes self-management education and support (DSMES) within the Re-IX5 ecosystem, providing the clinical counterpart to the community prevention work of the LIFE Journey. Aligned with the ADCES7 Self-Care Behaviors framework — Healthy Eating, Being Active, Monitoring, Taking Medication, Problem Solving, Reducing Risks, and Healthy Coping — the Diabetes Journey addresses the full spectrum of self-management competencies identified as essential to sustained glycemic control and complication prevention **(American Diabetes Association, 2025; Powers et al., 2020; Kolb & Huffman, 2018)**. It is designed for delivery by credentialed Road Guides — Certified Diabetes Care and Education Specialists (CDCES), registered dietitians, or clinically trained community health workers — and is built for integration with IHS clinical workflows, enabling continuity between community-based prevention and clinical diabetes care.

What distinguishes the Diabetes Journey from conventional DSMES programming is its structural integration with the LIFE Journey. Participants who complete or are enrolled in the LIFE Journey and who have or are at risk for diabetes are referred into the Diabetes Journey through a documented referral pathway, arriving with behavioral foundations already in place — health literacy, problem-solving confidence, and family support infrastructure established through the LIFE Journey's twelve sessions **(Powers et al., 2020; Dorland-Roan & Croes-Barone, 2017)**. This sequencing addresses a well-documented limitation of standalone DSMES programs: participants who lack community behavioral support and family engagement disengage at higher rates and demonstrate lower sustained behavior change **(Strawbridge et al., 2018; Chrvala et al., 2016)**. The Diabetes Journey is designed to receive participants who are already engaged, not to create engagement from scratch.

The program is further supported by the Road Check Card system — a structured clinical documentation tool that aligns with IHS workflow requirements — and by twenty clinical support documents (T-1 through T-20) that provide the Road Guide with session-by-session guidance, assessment instruments, and referral documentation tools. The Diabetes Journey qualifies for G0108 and G0109 DSMES billing codes when delivered by a CDCES-credentialed Road Guide, creating a sustainable reimbursement pathway aligned with Centers for Medicare and Medicaid Services (CMS) coverage policy **(CMS, 2023; Powers et al., 2020)**.

The Seven-Chapter Clinical Curriculum

The Diabetes Journey is organized across seven chapters aligned one-to-one with the ADCES7 Self-Care Behaviors, delivered by a credentialed Road Guide. Chapter 1 — Coping — is delivered first by design: Travelers who arrive with diabetes distress or shame cannot engage meaningfully with clinical content until the emotional environment is addressed. Beginning with coping honors the person before addressing the disease, and establishes the relational foundation that makes the remaining six chapters possible.

Chapter	Title	ADCES7 Behavior	Re-IX5 Connection
1	Coping	Healthy Coping	Mirrors Stress Management (TM 8); builds on Stress Reset Toolkit from LIFE Journey
2	Eating Right	Healthy Eating	Deepens Nutrition pillars (TM 2, 6, 9); traditional foods connected to clinical nutrition
3	Staying Active	Being Active	Deepens Physical Activity pillars (TM 3, 7); blood glucose response to movement

4	Taking Medications	Taking Medication	New clinical content; Road Guide credential required; medication literacy and self-advocacy
5	Monitoring	Monitoring	Blood glucose self-monitoring; CGM literacy; pattern recognition
6	Reducing Risks	Reducing Risks	Complication prevention; GDM-to-T2DM continuum for postnatal participants
7	Solving Problems	Problem Solving	RESILIENT Road Map in clinical context — the structural bridge from LIFE Journey TM 10

Chapter 7 revisits the RESILIENT Road Map introduced at LIFE Journey Trail Marker 10, applying the same seven-step framework in a clinical self-management context. This shared language is the mechanism that makes the Re-IX5 ecosystem a continuum rather than two separate programs.

Delivery Modes and Population-Specific Adaptations

Population	Primary Clinical Concern	Program Emphasis
T2DM — established	Glycemic management; complication prevention; medication adherence	Full seven-chapter curriculum; G0108/G0109 billing eligible
Prediabetes	Progression prevention; normalization without fatalism	Chapters 1, 2, 3, 7 primary; behavior change emphasis over clinical management
GDM history (postnatal)	50–60% lifetime T2DM risk; postpartum OGTT; breastfeeding as protection	All chapters; Chapter 6 addresses GDM-to-T2DM continuum explicitly
Family members	Inherited risk; preventive behavioral foundation	Community Mode; Chapter 7 applied to family health goals

Diabetes Journey™ at a Glance	
Participants	Travelers (adults with T2DM, prediabetes, or GDM history)
Facilitators	Road Guides (CDCES, RDN, or clinically trained CHW)
Sessions	7 chapters — flexible delivery format
Population	T2DM prevention and management; postnatal GDM continuity
Clinical alignment	ADCES7 Self-Care Behaviors; CDC DPP evidence base
Billing	G0108 (individual) and G0109 (group) when delivered by credentialed Road Guide

ADCES7 Self-Care Behaviors

- **Healthy Coping** — *Chapter 1 — delivered first by design*
- **Healthy Eating** — *Chapter 2 — deepens LIFE Journey Nutrition pillars*
- **Being Active** — *Chapter 3 — deepens Physical Activity pillars*
- **Taking Medication** — *Chapter 4 — requires Road Guide clinical credential*
- **Monitoring** — *Chapter 5 — blood glucose literacy and CGM integration*
- **Reducing Risks** — *Chapter 6 — GDM-to-T2DM continuum; complication prevention*

Documentation	Road Check Card system; T-1 through T-20 clinical support documents	• **Problem Solving** — *Chapter 7 — RESILIENT Road Map in clinical context*
Ecosystem entry	LIFE Journey TM 10 referral; S.A.F.E. Journey postnatal referral for GDM history	*ADCES DEAP accreditation in progress. Recognition as an accredited DSMES program creates a sustainable reimbursement pathway independent of grant funding.*

Component 7: The RESILIENT Road Map and Trail Problem Solver — Bridging Prevention and Clinical Self-Management

A recurring limitation of both community prevention and clinical self-management programs is the gap between session content and real-world application **(Lorig & Holman, 2003; Powers et al., 2020)**. Participants leave sessions with knowledge and intention but encounter barriers — logistical, emotional, social, and environmental — that are rarely addressed by the program itself. The Re-IX5 ecosystem addresses this gap through two structured problem-solving tools that operate at different levels of complexity and are deliberately shared across both the LIFE Journey and the Diabetes Journey.

The Trail Problem Solver is a five-step community problem-solving tool introduced at Trail Marker 5 of the LIFE Journey. Grounded in self-efficacy theory and motivational interviewing principles, it provides Travelers with a structured framework for identifying barriers, generating solutions, selecting action steps, and reflecting on outcomes **(Bandura, 1977; Miller & Rollnick, 2012; Lorig & Holman, 2003)**. The Trail Problem Solver is designed to be used independently between sessions and within family conversations — extending the program's impact into the daily environments where health decisions are actually made.

The RESILIENT Road Map is a seven-step advanced problem-solving framework introduced at Trail Marker 10 — the bridge session that explicitly connects LIFE Journey community prevention with Diabetes Journey clinical self-management. RESILIENT is an acronym whose steps scaffold progressively from recognition of the challenge through engagement, solution generation, implementation, evaluation, next steps, and transformation — a framework aligned with problem-solving therapy principles and self-management support theory **(D'Zurilla & Nezu, 2007; Lorig & Holman, 2003; Powers et al., 2020)**. The RESILIENT Road Map is the structural mechanism that makes the Re-IX5 ecosystem a continuum rather than two separate programs — providing a shared language and shared process that Travelers carry from community settings into clinical encounters and back.

Component 8: The Digital Bridge — Technology as a Continuity Infrastructure

Behavior change does not occur in program sessions. It occurs in the spaces between them — in kitchens, in evening routines, in moments of stress and decision-making that unfold far from any clinical or community setting **(Lorig & Holman, 2003; Fjeldsoe et al., 2009)**. The Digital Bridge is the technology infrastructure of the Re-IX5 ecosystem, designed specifically to support behavior change in those between-session spaces without requiring reliable internet connectivity — a critical design constraint in rural and frontier communities where broadband access remains a documented barrier to digital health engagement **(Federal Communications Commission, 2024; Buis, 2011)**.

The Digital Bridge maintains a single unified family health profile across both the LIFE Journey and the Diabetes Journey, tracking stage-based behavior change across all six lifestyle domains and providing Trail Guides and Road Guides with a shared oversight view of participant engagement and progress **(Fjeldsoe et al., 2009)**. Seven digital tools are embedded within the platform, each aligned with specific program content: the Trail Problem Solver (digital version of the five-step community tool), the Behavior Dashboard (stage-based behavioral self-monitoring across six domains), the Movement for Life Planner (physical activity planning and tracking), the Stress Reset Toolkit (evidence-informed stress management resource), the Support Circle Map (social connection and support network visualization), the 90-Day Health Roadmap (goal-setting and progress tracking across the full program arc), and the Family Meal Planner (nutrition planning tool aligned with the LIFE Journey Balanced Plate and traditional foods framework).

All seven tools are designed to function offline — essential for communities where connectivity is intermittent or unavailable. The Digital Bridge does not require participants to adopt new technology habits from scratch; it is introduced progressively through Trail Marker Gatherings, with Trail Guide support, as a natural extension of session content rather than a separate digital program. This design reflects implementation science principles regarding the importance of relative advantage, compatibility, and low complexity in technology adoption within underserved community settings **(Rogers, 2003; Damschroder et al., 2022)**.

The Integrated Ecosystem

The Re-IX5 ecosystem has been fully operationalized through eight integrated components — four program pathways, one systems framework, and a technology infrastructure layer.

The LIFE Journey™ is the community prevention pathway — a 12-session multigenerational program delivered by certified Trail Guides addressing six behavioral pillars: Nutrition, Physical Activity, Sleep, Stress Management, Social Connection, and Problem-Solving and Resilience.

The S.A.F.E. Journey™ (Sacred Ground · Awakening · Foundations · Emergence) is the prenatal and postnatal prevention pathway — a 4 to 12 Gathering Circle program delivered by certified Soil Tenders from pre-conception through twelve weeks postnatal. A GDM clinical thread runs through all sessions. Three safety layers protect Seed Keepers across all four phases. At the Bountiful Ground ceremony at GC 12, S.A.F.E. Journey graduates transition directly to LIFE Journey, arriving with behavioral foundations, problem-solving tools, and family health language already established.

Little Explorers™ is the early childhood pathway — a Discovery Circle program serving children ages 0 to 5 and their caregivers as a WIC playgroup extension. Running concurrently with LIFE Journey, Little Explorers mirrors the Trail Marker Gathering content of the same week, so families encounter the same health concepts across generations simultaneously. The infant who attends S.A.F.E. Journey at GC 10 becomes the Explorer who enters Little Explorers at three to six months, creating an unbroken multigenerational arc from before birth through early childhood.

The Diabetes Journey™ is the clinical self-management pathway — a DSMES program aligned with the ADCES7 Self-Care Behaviors and designed for integration with IHS clinical workflows, delivered by credentialed Road Guides. Participants who complete LIFE Journey and who have or are at risk for diabetes are referred into the Diabetes Journey at Trail Marker 10, arriving with behavioral foundations already in place. S.A.F.E. Journey graduates with GDM history are referred through a documented postnatal pathway, given the 50 to 60 percent lifetime T2DM risk associated with GDM.

Bridging all programs is the RESILIENT Road Map™ — a 7-step advanced problem-solving framework introduced at Trail Marker 10 of LIFE Journey and woven into the Diabetes Journey clinical curriculum — and the Trail Problem Solver™, a 5-step community version introduced at Trail Marker 5. These tools give participants a shared language for navigating barriers that extends from community sessions into clinical encounters and back.

The Digital Bridge is the technology pathway — a unified platform maintaining a single family health profile across all programs, with seven digital tools (Trail Problem Solver, Behavior Dashboard, Movement Planner, Stress Reset Toolkit, Support Circle Map, 90-Day Health Roadmap, and Family Meal Planner) all accessible offline for frontier and rural community use.

Together these eight components create a seamless continuum from prenatal community prevention through early childhood through adult prevention to clinical self-management to sustained digital engagement — addressing chronic disease across the full life course and full spectrum of risk within a single coherent framework.

Pathway	Program	Description
Prevention	LIFE Journey™	12-session community prevention; Trail Guides; adults and families across generations

Prenatal & Postnatal Prevention	S.A.F.E. Journey™	4–12 Gathering Circles; Soil Tenders; pre-conception through 12 weeks postnatal; GDM thread; bridges to LIFE Journey at Bountiful Ground
Early Childhood	Little Explorers™	Discovery Circles; WIC playgroup extension; 0–5 years; mirrors LIFE Journey content weekly; bridges from S.A.F.E. Journey at GC 10
Clinical Self-Management	Diabetes Journey™	ADCES7-aligned DSMES; Road Guides; T2DM, prediabetes, GDM history; receives referrals from LIFE Journey TM 10 and S.A.F.E. Journey postnatal
Technology & Engagement	Digital Bridge	Unified family health profile; 7 offline-capable digital tools; sustained engagement between sessions across all programs
Workforce Capacity	Trail Guide · Soil Tender · Road Guide system	Three-tier certification per program; Scholar-Practitioner model; permanent local capacity independent of grant cycles
Evaluation & Sustainability	Outcomes framework	Fidelity monitoring; replication model; policy alignment; evidence base for statewide adoption

The Re-IX5 Pathways to Health Transformation Model organizes these eight components into seven integrated implementation pathways. The LIFE Journey is the Prevention Pathway — the community-based behavioral foundation delivered through certified Trail Guides to whole families across generations. The S.A.F.E. Journey is the Prenatal and Postnatal Prevention Pathway — the community prevention layer serving families from pre-conception through twelve weeks postnatal, bridging to LIFE Journey at program close. Little Explorers is the Early Childhood Pathway — the multigenerational extension that mirrors LIFE Journey content for children ages 0 to 5 and their caregivers simultaneously, closing the generational gap that every other program in this ecosystem leaves open. The Diabetes Journey is the Clinical Self-Management Pathway — the DSMES and lifestyle medicine layer that receives LIFE Journey participants and S.A.F.E. Journey graduates who have or are at risk for diabetes, connecting community prevention to clinical care through a structured referral process. The Digital Bridge is the Technology and Engagement Pathway — the unified platform that sustains behavioral engagement between sessions and across all programs through seven offline-capable digital tools. Workforce Development is the Capacity Pathway — the Trail Guide, Soil Tender, and Road Guide certification systems, the Scholar-Practitioner model, and the community health worker training infrastructure that builds permanent local delivery capacity independent of any single grant cycle. Evaluation and Sustainability is the Systems Pathway — the outcomes framework, fidelity monitoring system, replication model, and policy alignment strategy that generate the evidence base for statewide adoption and long-term program endurance. Together these seven pathways constitute the Re-IX5 Pathways to Health Transformation Model — a complete, integrated architecture for multigenerational chronic disease prevention and management across the full life course in rural and Tribal communities **(Damschroder et al., 2022; Aarons et al., 2011; Wallerstein & Duran, 2010)**.

> ***GHC explains the cycle. S.A.F.E. Journey begins the interruption before birth. LIFE Journey sustains it across generations. Diabetes Journey deepens it clinically. Little Explorers passes it forward.***

Section 6: Evidence Base and Intellectual Lineage

The Re-IX5 model is grounded in a body of prior research and real-world implementation experience that directly supports both its conceptual foundation and its practical feasibility.

Foundational Research: Lifestyle Behaviors and Health Outcomes

The PI's master's-level research examined the relationships between multiple lifestyle behaviors — physical activity, sleep health, body mass index, and cardiac risk ratio — and perceived health and well-being, using validated measurement tools including the CDC Healthy Days Measure **(Moriarty et al., 2003)**, the Satisfaction with Life Scale **(Pavot & Diener, 2008)**, and the Godin Leisure-Time Exercise Questionnaire **(Garcia et al., 2017)**. The study demonstrated statistically significant associations between lifestyle behaviors and health-related quality of life, with individuals 45 years of age and under more likely to have perceived physical and mental health negatively impacted by BMI, sleep health, and physical activity levels ($p < .05$ across multiple measures) **(Dorland-Roan & Croes-Barone, 2017)**. These findings established two foundational principles: that lifestyle factors interact with one another in their influence on health outcomes, and that multi-domain intervention is more likely to produce meaningful change than single-factor approaches **(Dorland-Roan & Croes-Barone, 2017; Bize et al., 2007)**.

Systems-Level Implementation: Doctoral Capstone

The PI's doctoral capstone implemented a quasi-experimental systems-level intervention addressing food insecurity within rural healthcare and public health systems, integrating provider education, standardized screening using the Hunger Vital Sign tool **(Gattu et al., 2019; Children's Health Watch, 2022)**, and referral pathway development **(De Marchis et al., 2019)**. Results demonstrated statistically significant improvements across all measured outcomes ($p < 0.001$), with large effect sizes (Cohen's d ranging from 1.386 to 2.675) **(Dorland-Roan, 2024)**. These findings demonstrate that systems-level educational interventions can produce meaningful provider behavior change, that screening and referral integration is achievable in rural settings, and that the gap between knowing and doing can be closed through structured, coordinated intervention **(Dorland-Roan, 2024; Smith et al., 2017)**.

Intellectual Lineage

The Re-IX5 model integrates and extends five established bodies of knowledge:

- Socio-Ecological Model — the recognition that health is shaped by individual, interpersonal, community, and societal factors operating simultaneously **(Agency for Toxic Substances and Disease Registry, 2015; Healthy People 2030, 2022)**
- Lifestyle Medicine — the evidence base demonstrating that nutrition, physical activity, sleep, stress management, relationships, and substance avoidance are primary drivers of chronic disease risk **(Rippe, 2019; American College of Lifestyle Medicine, 2023; Dorland-Roan & Croes-Barone, 2017)**
- Social Determinants of Health — the understanding that structural factors including food access, housing, income, and community infrastructure shape health outcomes **(Healthy People 2030, 2022; Decker & Flynn, 2018; Dorland-Roan, 2024)**
- Family Systems Theory — the recognition that behaviors and patterns are transmitted within families through learned habits, cultural norms, and relationship dynamics **(Bowen, 1978; Fiese et al., 2006)**
- Implementation Science — the rigorous study of how evidence-based interventions are adopted, implemented, and sustained in real-world settings **(Damschroder et al., 2009; Damschroder et al., 2022; Aarons et al., 2011)**

Section 7: Cultural Adaptation and CBPR Protocol

The most common reason health interventions fail in Tribal communities is not that the science was wrong. It is that the process was wrong. Programs designed elsewhere and delivered to communities rather than with them consistently underperform regardless of their evidence base **(Israel et al., 1998; Wallerstein & Duran, 2010; Sacca et al., 2022)**. The Re-IX5 model's implementation in Tribal communities is grounded in community-based participatory research (CBPR) principles — not a methodology applied after program design, but a philosophy that shapes how the program gets designed in the first place **(Israel et al., 1998)**.

Core CBPR Principle: Community as Co-Investigator

In the Re-IX5 Crow Nation implementation, the community is not the target of intervention. They are partners in determining what the intervention becomes — a distinction that determines everything from program content to governance structure to data ownership **(Wallerstein & Duran, 2010; Tenorio et al., 2025)**.

Phase 0: Relationship Before Program

Before any program content is introduced, a formal relationship-building phase establishes the foundation for everything that follows. This phase includes community listening sessions, identification of Tribal community advisors, and formal review of all program components by advisors who carry genuine authority to reshape, rename, or redirect any component **(Israel et al., 1998; Wallerstein & Duran, 2010; Wilson et al., 2023)**.

Cultural Adaptation Framework

Each component of the model is subject to cultural adaptation guided by Tribal advisors **(Sacca et al., 2022)**:

- The Generational Health Cycle framework aligns with deeply held Crow cultural values around intergenerational responsibility and legacy. Adaptation focuses on language and framing — connecting the GHC concept to existing cultural frameworks for understanding health as relational and generational rather than individual
- LIFE Journey session content is reviewed for cultural relevance across all six domains, with particular attention to the role of traditional foods in nutrition sessions, culturally meaningful forms of movement and physical activity, the influence of historical and intergenerational trauma on stress patterns and coping, and how health decisions are made within clan and family systems
- Re-IX5 domain language is reviewed for resonance, with the possibility of Crow language equivalents accompanying or replacing English terminology in community-facing materials

Community Governance Structure

A Tribal Community Advisory Board of 6–8 members — including Tribal health leadership, elders, community health representatives, and program participants — reviews and approves all program materials before use, meets monthly during implementation, and holds genuine authority to pause, modify, or redirect any program component **(Israel et al., 1998)**. Local Crow community members are trained as LIFE Journey Trail Guides through the Re-IX5 Scholar-Practitioner Pathway — the primary dissemination strategy, not a supplementary add-on **(Wallerstein & Duran, 2010; Wilson et al., 2023)**.

Data Sovereignty

All data collected within the Crow Nation pilot belongs to the Tribe. The community advisory board determines what data is collected, how it is stored, and what is shared externally. Publication of findings requires Tribal review and approval. This is not a concession — it is a CBPR requirement and an ethical obligation **(Wallerstein & Duran, 2010; Grady, 2015)**.

Section 8: Implementation Science Framework — CFIR and EPIS

Most health interventions fail not because the intervention is wrong but because implementation is treated as an afterthought **(Damschroder et al., 2009; Damschroder et al., 2022; Aarons et al., 2011)**. The Re-IX5 model addresses this through explicit grounding in two complementary implementation science frameworks: the Consolidated Framework for Implementation Research (CFIR) **(Damschroder et al., 2009; Damschroder et al., 2022)**, and the Exploration, Preparation, Implementation, Sustainment (EPIS) model **(Aarons et al., 2011)**.

The updated CFIR 2.0, published in 2022, incorporates significant revisions including better centering of innovation recipients and explicit attention to equity in implementation **(Damschroder et al., 2022)**. The Re-IX5 model applies CFIR 2.0 constructs throughout its design — from the cultural adaptation protocol to the phased pilot approach.

CFIR Application

Across five domains, CFIR 2.0 analysis **(Damschroder et al., 2009; Damschroder et al., 2022)** surfaces both the strengths and vulnerabilities of Re-IX5 implementation:

- Innovation characteristics: Re-IX5's relative advantage is its simultaneous operation at individual, family, and system levels **(Agency for Toxic Substances and Disease Registry, 2015)**. Its adaptability is demonstrated through the cultural adaptation protocol **(Israel et al., 1998; Sacca et al., 2022)**
- Outer setting: High chronic disease burden **(Montana Department of Public Health and Human Services, 2024b)**, food insecurity **(Montana Food Bank Network, 2025; Rabbitt et al., 2024)**, and documented system fragmentation **(Runkle & Nelson, 2021)** create clear need
- Inner setting: Integration with existing workflows rather than creation of parallel systems reduces implementation burden **(De Marchis et al., 2019)**
- Individuals: The Scholar-Practitioner Pathway builds facilitator knowledge, self-efficacy, and cultural competence **(Wallerstein & Duran, 2010; Wilson et al., 2023)**
- Implementation process: A phased approach with explicit preparation, community engagement, fidelity monitoring, and real-time adaptation **(Aarons et al., 2011)**

EPIS Phase Structure

Phase	Focus	Re-IX5 Application
Exploration	Is this the right intervention for this context?	Community needs assessment, CBPR relationship building, cultural adaptation, stakeholder readiness, partner mapping (Israel et al., 1998; Wallerstein & Duran, 2010; Sacca et al., 2022)
Preparation	Getting ready to implement well	Program adaptation finalized, Trail Guide training, screening and referral workflows established, IRB and Tribal governance approvals, MOU signed (Grady, 2015)
Implementation	Delivering with fidelity and flexibility	LIFE Journey sessions delivered, family engagement tracked, screening integrated, monthly advisory board meetings, real-time adaptation (Damschroder et al., 2022)
Sustainment	How does this continue after the pilot ends?	Local Trail Guides trained, workflows embedded in routine practice, community governance transitioned to ongoing role, alignment with existing funding streams (Aarons et al., 2011)

The Fidelity-Adaptation Balance

Implementation science distinguishes between fidelity — delivering core components as designed — and adaptation — adjusting delivery to fit context **(Damschroder et al., 2009; Damschroder et al., 2022)**. The Re-IX5 model is designed so that the core theoretical components are fixed while delivery is adaptable. The GHC

framework, the six lifestyle domains, and the system alignment functions remain constant. How they are introduced, framed, and facilitated adapts to the community **(Israel et al., 1998; Wallerstein & Duran, 2010; Sacca et al., 2022)**.

Section 9: Pilot Implementation Plan

The pilot is intentionally designed to be focused, feasible, and immediately actionable — designed to test whether the model can be implemented as intended and whether it produces the preliminary signals that justify a larger study **(Damschroder et al., 2009; Damschroder et al., 2022; Aarons et al., 2011)**.

Setting and Population

The pilot will be conducted in Big Horn County, Montana, with primary implementation in Crow Nation communities served by Indian Health Service and local public health infrastructure. In Montana, 1 in 8 Montanans — including 1 in 6 children — experience food insecurity **(Montana Food Bank Network, 2025)**, and nearly one in three adults (31%) have obesity, with American Indian/Alaska Native adults experiencing notably higher rates **(Montana Department of Public Health and Human Services, 2024a)**. The 2024 Montana State Health Improvement Plan identifies chronic disease prevention and health equity as shared statewide priorities **(Montana Department of Public Health and Human Services, 2024b)**. When combined with documented rural/urban disparities in access to diabetes prevention programs **(Ariel-Donges et al., 2020)**, the need for targeted, culturally responsive prevention programming is acute. The pilot cohort will include 50 or more participants across 20 multigenerational family units.

Implementation Phases

- Phase 1 — Launch Preparation (Months 1–3): Partner MOUs finalized with Crow Tribal Health and Big Horn County Public Health. Re-IX5 program delivery contract executed. 4–6 community Trail Guides certified through Tier 1 training. Community gathering spaces confirmed. Participant recruitment launched. 0–5 WIC playgroup program assistant identified and onboarded.

  The S.A.F.E. Journey Program™ is co-delivered with the LIFE Journey as a complementary prenatal and postnatal community prevention program. S.A.F.E. Journey Gathering Circles are facilitated by certified Soil Tenders trained through the Re-IX5 Tier 1 training system, under Ground Guide supervision. The program operates across four phases (Sacred Ground, Awakening, Foundations, Emergence) with a flexible 4–12 Gathering Circle structure, enabling adaptation to participant gestational age at enrollment and to the scheduling realities of prenatal community programming.

  Little Explorers Discovery Circles run concurrently with LIFE Journey Trail Marker Gatherings, facilitated by a community Sprout Guide in a stipend-supported role integrated within the existing WIC Friday playgroup. The 0–5 WIC playgroup assistant position in the program budget ($4,340 per year) funds this role. Content mirrors the LIFE Journey pillar of the same week, creating multigenerational simultaneity: caregivers and young children encounter the same health concepts together across both programs.

  Participants completing S.A.F.E. Journey are transitioned to LIFE Journey at the Bountiful Ground ceremony at GC 12. Seed Keepers with GDM history are referred to the Diabetes Journey through a documented referral pathway. Infants attending GC 10 with their caregivers are introduced to the Little Explorers program and enrolled at three to six months of age.
- Phase 2 — First Cohort Implementation (Months 4–12): First LIFE Journey cohort delivered (10 families, 12 Trail Marker Gatherings). Baseline and post-program evaluation data collected across six behavioral domains. Second cohort recruited and launched. Additional Trail Guides certified. Month 12 interim report submitted.
- Phase 3 — Year 2 Scale and Evaluation (Months 13–24): Second cohort completed with full Family Program Infrastructure package — Nutrition Prescription Fund, activity memberships, device and data access, transportation gas cards, and gathering meals. Formal clinical integration MOUs developed with IHS Crow Service Unit and One Health FQHC. Program evaluation completed. Replication model presented to Montana DPHHS for statewide adoption consideration. Final report submitted (Glasgow et al., 1999).

Implementation Phases

The Big Horn County and Crow Nation implementation is supported by a confirmed network of organizational partners whose commitments ground the theoretical model in real community relationships and institutional capacity. Crow Tribal Health serves as the primary community partner, providing Tribal authorization and governance support, Tribal health worker engagement as Trail Guide candidates, community gathering spaces, and the cultural foundation that makes implementation possible in Crow Nation. Big Horn County Public Health — led by Kelsey Roebling, RN, Public Health Director — has committed to serve as fiscal sponsor and community partner, contributing organizational infrastructure, the WIC program's existing year-round Friday playgroup through which LIFE Journey messaging will be extended to the 0–5 population, and community health networks built over decades of service in Big Horn County. Montana DPHHS Chronic Disease Prevention Bureau has agreed to serve as state agency partner, contributing data analysis and program evaluation technical assistance and supporting the pathway toward statewide adoption — a relationship grounded in the program lead's active participation on a DPHHS chronic disease prevention and weight management steering committee. IHS Crow Service Unit has expressed strong support for programming as a long-sought community-based prevention complement to their clinical services, contributing clinical referral infrastructure and community spaces at outpatient locations in Crow Agency, Lodge Grass, and Pryor. Big Horn Hospital and One Health FQHC are open to support as clinical community partners, with formal MOUs targeted for the first or second year of implementation. Together these organizational commitments demonstrate that the Re-IX5 Pathways to Health Transformation Model has the community authorization, institutional infrastructure, and cross-sector alignment required for a rigorous and sustainable pilot **(Israel et al., 1998; Wallerstein & Duran, 2010; Damschroder et al., 2022)**.

This white paper presents a conceptual and implementation framework for multigenerational health transformation. Program implementation may vary by setting, resources, and community needs.

Section 10: Evaluation and Outcomes Framework

The evaluation framework is designed to capture how change occurs, not only whether it occurs. Using a mixed-methods, multi-level approach guided by RE-AIM implementation science principles **(Glasgow et al., 1999)**, the pilot will generate data across individual, family, provider, and system levels.

Primary Outcome Domains

Level	Short-Term (0–6 months)	Intermediate (6–18 months)	Long-Term (Projected)
Individual	Increased knowledge, self-efficacy, readiness to change	Improved nutrition, activity, sleep, stress management	Reduced chronic disease risk markers
Family	Increased family engagement and shared goal-setting	Shared health behaviors, strengthened family routines	New health patterns transmitted to next generation
Provider	Increased knowledge, screening rates, referral utilization	Sustained practice change, improved care coordination	System-level integration of prevention
System	Screening integration, referral pathways activated	Cross-sector coordination, partnership strengthening	Health equity improvements, policy influence

S.A.F.E. Journey and Little Explorers Outcome Domains

The evaluation framework extends across all program components, including S.A.F.E. Journey and Little Explorers. Outcome domains specific to these programs are measured in addition to the six-domain behavioral framework applied across LIFE Journey:

Domain	S.A.F.E. Journey Measures	Little Explorers Measures
Prenatal / Postnatal Health	GDM screening completion; postpartum OGTT completion; breastfeeding initiation at hospital discharge; breastfeeding continuation at 6 and 12 weeks postnatal	N/A — caregivers measured through LIFE Journey
Safety	Safety Anchor activation rates at GC 3, 6, and 9; Layer 3 Postpartum Body and Mind Check completion rates; referral activation within 24 hours of safety concern identified	N/A
Infant Attachment and Development	Postpartum Body and Mind Check six-domain scores at GC 10, 11, and 12; Seed Keeper self-report on infant feeding and attachment confidence	Developmental milestone appropriateness; caregiver-reported play confidence
Program Ecosystem Engagement	Transition rate to LIFE Journey at Bountiful Ground ceremony; GDM-to-Diabetes Journey referral completion; Little Explorers enrollment rate at GC 12	Concurrent LIFE Journey caregiver enrollment rate; session attendance consistency
Multigenerational Simultaneity	Family units with concurrent S.A.F.E. Journey and Little Explorers enrollment	Family units with concurrent LIFE Journey and Little Explorers enrollment

These measures are collected alongside the primary LIFE Journey outcome domains and analyzed at the family level wherever possible, enabling assessment of the multigenerational simultaneity that distinguishes the Re-IX5 model from single-program interventions. All S.A.F.E. Journey safety measures are documented using the

three-phase Safety Anchor record system, with confidentiality protocols reviewed and approved by the Tribal Community Advisory Board prior to implementation.

Implementation Metrics

Feasibility and scalability will be assessed through participant reach and retention rates; program completion and session attendance; fidelity to LIFE Journey curriculum; provider and partner adoption of screening and referral workflows; and participant and provider satisfaction and perceived relevance — metrics aligned with the RE-AIM framework's Reach, Effectiveness, Adoption, Implementation, and Maintenance domains **(Glasgow et al., 1999)**.

Data Collection Methods

Quantitative data will be collected through validated pre-post surveys, program attendance logs, screening and referral tracking systems, and clinical indicators where available **(Andrade et al., 2020)**. Qualitative data will be collected through participant focus groups, facilitator observations, and stakeholder interviews. All data collection instruments will be reviewed by the Tribal Community Advisory Board for cultural appropriateness **(Israel et al., 1998)**.

Section 11: Limitations and Potential Harms

Naming limitations and potential harms is not a concession of weakness. It is an ethical obligation and a sign of intellectual honesty that strengthens rather than undermines the credibility of the work **(Vaidyanathan, 2022; Czajkowski & Olsson, 2023)**.

Study and Pilot Limitations

- Small pilot sample: A cohort of 50 or more participants provides meaningful feasibility data but is insufficient for statistically significant population-level conclusions. The pilot is explicitly framed as a feasibility and acceptability study **(Damschroder et al., 2022)**
- Short follow-up period: Six months cannot capture the generational health changes central to the GHC framework. Long-term generational impact is a theoretical projection supported by the framework, not a pilot claim **(Bowen, 1978; Fiese et al., 2006)**
- Single geographic context: Initial implementation in Big Horn County limits generalizability. The modular design supports structured adaptation in future contexts
- Self-reported outcomes: Behavioral measures rely on self-report, which is subject to social desirability and recall bias **(Vaidyanathan, 2022)**. Validated tools and supplementary clinical indicators are used where feasible **(Andrade et al., 2020)**
- Researcher positionality: Existing community relationships are an asset but also a source of potential bias **(Wallerstein & Duran, 2010)**. Structured data collection processes and advisory board oversight mitigate this risk

Potential Harms

- Family conflict: Engaging families in behavior change conversations can surface existing tensions **(Fiese et al., 2006)**. Trail Guides are trained to navigate family dynamics sensitively. Individual participation is fully supported without requiring family engagement
- Unmet needs identified through screening: Food insecurity screening may identify needs that referral systems cannot fully meet **(De Marchis et al., 2019; Runkle & Nelson, 2021)**. Community resource mapping is completed before screening begins. Gaps are documented as findings informing advocacy
- Raised expectations: Pilot programs create engagement that may not be sustained after the pilot ends. Expectations are managed honestly from the first community conversation. Sustainment structures are built during the pilot, not after
- Cultural misalignment despite good intentions: Even with a robust CBPR protocol, program elements may carry unexamined assumptions **(Israel et al., 1998; Sacca et al., 2022)**. The Tribal Community Advisory Board holds genuine authority to modify or reject any component at any time
- Data extraction without community benefit: Research in Tribal communities has a documented history of benefiting researchers without returning value to communities **(Wallerstein & Duran, 2010)**. Data sovereignty is embedded in the MOU. Findings are returned to the community before academic publication **(Grady, 2015)**

Section 12: Scalability and Policy Alignment

The Re-IX5 model is designed as a scalable architecture that can move from initial implementation to regional expansion to statewide and national adoption through a deliberate, phased progression **(Damschroder et al., 2009; Damschroder et al., 2022; Aarons et al., 2011)**.

Phased Scale Strategy

- Phase 1 — Pilot (Local): 50+ participants, Big Horn County, 24 months. Establish feasibility, generate data, build local capacity, refine the model
- Phase 2 — Expansion (Regional): Additional Tribal communities and rural Montana regions. Trained local Trail Guides, standardized adaptation process, strengthened cross-sector coordination
- Phase 3 — Integration (System): Embed program components into existing healthcare delivery models, public health initiatives, and Medicaid prevention structures
- Phase 4 — Scale (Statewide/National): Replicate across regions, align with federal funding streams, develop workforce through the Re-IX5 Scholar-Practitioner Pathway, influence policy

Sustainability Strategy

Sustainability is built into the model from the first day of implementation through four mechanisms: workforce development through the Scholar-Practitioner Pathway creates permanent local capacity not dependent on external delivery **(Wallerstein & Duran, 2010)**; financing alignment with IHS chronic disease funding, HRSA rural health programs, Medicaid prevention models, and foundation funding reduces dependence on any single grant; systems integration embeds screening and referral workflows into routine clinical practice so they remain after program funding ends **(De Marchis et al., 2019)**; and community ownership transitions the Tribal advisory board into an ongoing governance role maintaining community authority over the model **(Israel et al., 1998)**.

Policy Alignment

Priority Area	Re-IX5 Alignment
Chronic Disease Prevention	Addresses multiple risk factors simultaneously through lifestyle medicine and family systems intervention (Rippe, 2019; Dorland-Roan & Croes-Barone, 2017)
Rural Health Equity	Targets underserved rural and Tribal populations with a model designed specifically for these contexts (Montana Department of Public Health and Human Services, 2024a; Ariel-Donges et al., 2020)
Social Determinants of Health	Integrates SDOH screening and referral as core system components, not add-ons (Healthy People 2030, 2022; Gu et al., 2024; Dorland-Roan, 2024)
Maternal and Family Health	Multigenerational focus explicitly addresses prenatal, parenting, and family health trajectories (Fiese et al., 2006; Bowen, 1978)
Value-Based Care	Prevention-focused model reduces long-term healthcare utilization and costs (Thomas et al., 2021; Tait et al., 2018)
Tribal Sovereignty	CBPR protocol and data sovereignty framework center community authority throughout (Israel et al., 1998; Wallerstein & Duran, 2010; Tenorio et al., 2025)

Section 13: Call to Action

The time for incremental change has passed.

Chronic disease in rural and Tribal communities is not a problem that will be solved by better individual education, more clinical encounters, or additional fragmented programs **(Runkle & Nelson, 2021; Smith et al., 2017)**. It is a problem that requires a fundamentally different approach — one that addresses how health is formed and transmitted across generations, and that builds the system infrastructure to support sustained change **(Bowen, 1978; Agency for Toxic Substances and Disease Registry, 2015; Damschroder et al., 2022)**.

The Re-IX5 Pathways to Health Transformation Model provides that approach. It is theoretically grounded **(Agency for Toxic Substances and Disease Registry, 2015; Bowen, 1978)**, evidence-informed **(Dorland-Roan & Croes-Barone, 2017; Dorland-Roan, 2024)**, implementation-science guided **(Damschroder et al., 2009; Damschroder et al., 2022; Aarons et al., 2011)**, and ready for pilot implementation. It honors community sovereignty **(Israel et al., 1998; Wallerstein & Duran, 2010)**, builds local capacity, and aligns with the policy and funding priorities of the organizations best positioned to support it.

> ***We are not asking you to fund a program. We are inviting you to help build a model for health systems transformation.***

Partnership Opportunities

We are seeking strategic partners to:

- Launch a 24-month pilot in rural and Tribal Montana communities
- Align healthcare, public health, and community systems around shared intervention infrastructure
- Evaluate outcomes across individual, family, and system levels
- Generate a scalable model for statewide and national implementation

We invite collaboration from:

- Montana Department of Public Health and Human Services — to align the pilot with state health improvement priorities and create a pathway for statewide scale
- Crow Nation and Tribal health leadership — to co-design and implement a culturally grounded model that strengthens community health capacity
- Indian Health Service — to integrate the model into existing chronic disease prevention and care delivery infrastructure
- Healthcare systems and community organizations — to pilot screening, referral, and coordination workflows that improve outcomes for shared patients
- Funding partners — to invest in a high-impact pilot designed to generate meaningful data and a scalable rural health transformation model

About the Author

Raichell Dorland-Roan, DrPH, RDN, LN, CDCES, CLC

Founder & Executive Director, Re-IX5 Institute Foundation · reix5.com

Dr. Raichell Dorland-Roan has worked in Big Horn County and Crow Nation, Montana for more than twenty years — not as an outside expert but as a practitioner embedded in the communities she serves. That rootedness is the source of the Re-IX5 model, not its application context. The programs described in this white paper were not designed in a research setting and then brought to the community for validation. They were built from two decades of direct clinical practice, community relationship, and the accumulated understanding of what works, what fails, and what the peer-reviewed literature alone cannot see.

Her clinical credential set spans the full spectrum of the model she has built. As a Registered Dietitian Nutritionist (RDN) and Licensed Nutritionist (LN), she brings medical nutrition therapy expertise and the clinical authority to prescribe nutritional interventions. As a Certified Diabetes Care and Education Specialist (CDCES), she holds the credential that governs delivery of accredited diabetes self-management education and support programs — including the Diabetes Journey™ clinical pathway described in this white paper and the ADCES DEAP accreditation currently in being expliored. As a Certified Lactation Counselor (CLC), she carries the specific expertise that anchors the S.A.F.E. Journey™ breastfeeding arc and the non-judgment standard that runs through all prenatal and postnatal program content. The doctoral credential (DrPH) situates her as a public health systems thinker, not only a clinician — trained to understand how structural conditions shape health outcomes and how systems can be redesigned to support change rather than constrain it.

DrPH	Doctor of Public Health	Public health systems design; implementation science; policy and advocacy
RDN	Registered Dietitian Nutritionist	Medical nutrition therapy; clinical nutrition prescription authority
LN	Licensed Nutritionist — Montana	State licensure for nutritional practice in Montana
CDCES	Certified Diabetes Care & Education Specialist	DSMES delivery authority; ADCES DEAP accreditation; GDM clinical pathway
CLC	Certified Lactation Counselor	Breastfeeding support and program design; S.A.F.E. Journey™ feeding arc

The Re-IX5 model rests on two bodies of original research. Her master's-level study examined the relationships between multiple lifestyle behaviors — physical activity, sleep health, body mass index, and cardiac risk ratio — and perceived health and well-being, demonstrating statistically significant associations that established the multi-domain intervention approach at the center of the LIFE Journey™ design (Dorland-Roan & Croes-Barone, 2017). Her doctoral capstone implemented a systems-level intervention addressing food insecurity within rural healthcare and public health systems — producing statistically significant improvements across all measured outcomes ($p < 0.001$) with large effect sizes (Cohen's $d = 1.386–2.675$) that demonstrated what becomes possible when the gap between knowing and doing is addressed through structured, coordinated system design (Dorland-Roan, 2024). **These are not background studies. They are the empirical foundation that the Re-IX5 model is built on.**

Re-IX5 Institute operates through a dual-entity structure that reflects the intentional separation of intellectual property and community mission. Re-IX5 Institute, LLC holds all program intellectual property — curriculum, methodology, and the Re-Ionvent™ trademark. Re-IX5 Institute Foundation is a 501(c)(3) nonprofit that delivers community health programs, holds grant funding, and carries the implementation work described in this white paper. This structure ensures that the programs' clinical and educational integrity is protected independently of any single funding cycle, and that community program delivery is governed by a nonprofit board accountable to the communities served.

Dr. Dorland-Roan currently serves on the Montana Department of Public Health and Human Services Chronic Disease Prevention and Weight Management Steering Committee — a position that places her in direct relationship with the state infrastructure through which the Re-IX5 model is designed to scale. She brings to that table not only the model described in this white paper but the twenty years of Big Horn County and Crow Nation practice that make implementation in rural and Tribal Montana not a theoretical proposition but a concrete and immediate one.

The Re-IX5 model is her life's work. It is also, she believes, the work the moment requires — *a multigenerational response to a multigenerational problem, built by someone who has lived in its presence long enough to understand what it will actually take.*

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References

Aarons, G. A., Hurlburt, M., & Horwitz, S. M. (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. *Administration and policy in mental health, 38*(1), 4–23. https://doi.org/10.1007/s10488-010-0327-7

Abdurahman, A. A., Chaka, E. E., Nedjat, S., Dorosty, A. R., & Majdzadeh, R. (2019). The association of household food insecurity with the risk of type 2 diabetes mellitus in adults: A systematic review and meta-analysis. *European journal of nutrition, 58*(4), 1341–1350. https://doi.org/10.1007/s00394-018-1705-2

Agency for Toxic Substances and Disease Registry. (2015). *The social ecological model of health.* https://www.atsdr.cdc.gov/communityengagement/pce_models.html

American College of Lifestyle Medicine. (2023). *What is lifestyle medicine?* https://lifestylemedicine.org/What-is-Lifestyle-Medicine

American Diabetes Association. (2025). *Standards of care in diabetes — 2025.* Diabetes Care, 48(Supplement 1). https://doi.org/10.2337/dc25-S001

Andrade, C., Menon, V., Ameen, S., & Kumar Praharaj, S. (2020). Designing and conducting knowledge, attitude, and practice surveys in psychiatry: Practical guidance. *Indian journal of psychological medicine, 42*(5), 478–481. https://doi.org/10.1177/0253717620946111

Ariel-Donges, A. H., Gordon, E. L., Dixon, B. N., Eastman, A. J., Bauman, V., Ross, K. M., & Perri, M. G. (2020). Rural/urban disparities in access to the National Diabetes Prevention Program. *Translational behavioral medicine, 10*(6), 1554–1558. https://doi.org/10.1093/tbm/ibz098

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215.

Bize, R., Johnson, J. A., & Plotnikoff, R. C. (2007). Physical activity level and health-related quality of life in the general adult population: A systematic review. *Preventive medicine, 45*(6), 401–415. https://doi.org/10.1016/j.ypmed.2007.07.017

Bowen, M. (1978). *Family therapy in clinical practice.* Jason Aronson.

Buis, L. R. (2011). Barriers and facilitators to the use of health information technologies among older adults. *University of Michigan.*

Centers for Disease Control and Prevention. (2023). *Gestational diabetes.* https://www.cdc.gov/diabetes/basics/gestational.html

Children's Health Watch. (2022). *Hunger Vital Sign.* https://childrenshealthwatch.org/public-policy/hunger-vital-sign/

Chrvala, C. A., Sherr, D., & Lipman, R. D. (2016). Diabetes self-management education for adults with type 2 diabetes mellitus. *Diabetes Research and Clinical Practice, 116*, 1–22.

CMS. (2023). *Diabetes self-management training.* Centers for Medicare & Medicaid Services. https://www.cms.gov

Czajkowski, M., & Olsson, L. (2023). Conflicts of interest are ever present in medical research. *Lakartidningen, 120*, 23013.

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation science, 4*, 50. https://doi.org/10.1186/1748-5908-4-50

Damschroder, L. J., Reardon, C. M., Opra Widerquist, M. A., & Lowery, J. (2022). The updated Consolidated Framework for Implementation Research based on user feedback. *Implementation science, 17*, 75. https://doi.org/10.1186/s13012-022-01245-0

De Marchis, E. H., Torres, J. M., Benesch, T., Fichtenberg, C., Allen, I. E., Whitaker, E. M., & Gottlieb, L. M. (2019). Interventions addressing food insecurity in health care settings: A systematic review. *Annals of family medicine, 17*(5), 436–447. https://doi.org/10.1370/afm.2412

Decker, D., & Flynn, M. (2018). Food insecurity and chronic disease: Addressing food access as a health care issue. *Rhode Island medical journal, 101*(4), 28–30.

Dong, T., Harris, K., Freedman, D., Janus, S., Griggs, S., Iyer, Y., Nasir, K., Neeland, I. J., Rajagopalan, S., & Al-Kindi, S. G. (2023). Food insecurity and atherosclerotic cardiovascular disease risk in adults with diabetes. *Nutrition, 106*, 111865. https://doi.org/10.1016/j.nut.2022.111865

Dorland-Roan, R. (2024). *Addressing food insecurity in health care and public health practice* [Unpublished doctoral capstone project]. Capella University.

Dorland-Roan, R., & Croes-Barone, S. (2017). *Influence of weight status (BMI), physical activity level, sleep health, and cardiac risk ratio on perceived health and wellbeing* [Unpublished master's research manuscript]. Benedictine University.

D'Zurilla, T. J., & Nezu, A. M. (2007). *Problem-solving therapy: A positive approach to clinical intervention* (3rd ed.). Springer.

Federal Communications Commission. (2024). *2024 Broadband deployment report.* https://www.fcc.gov

Feldman-Winter, L., Kellams, A., Peter-Wohl, S., Taylor, J. S., Lee, K. G., Terrell, M. J., Noble, L., Maynard, G., Meek, J. Y., & Stuebe, A. M. (2020). Evidence-based updates on the first week of exclusive breastfeeding among infants ≥35 weeks. *Pediatrics, 145*(4), e20183696. https://doi.org/10.1542/peds.2018-3696

Fiese, B. H., Foley, K. P., & Spagnola, M. (2006). Routine and ritual elements in family mealtimes: Contexts for child well-being and family identity. *New directions for child and adolescent development, 2006*(111), 67–89. https://doi.org/10.1002/cd.156

Fjeldsoe, B. S., Marshall, A. L., & Miller, Y. D. (2009). Behavior change interventions delivered by mobile telephone short-message service. *American Journal of Preventive Medicine, 36*(2), 165–173.

Garcia, D., Daniele, T. M. D. C., & Archer, T. (2017). A brief measure to predict exercise behavior: The Archer-Garcia ratio. *Heliyon, 3*(6), e00314. https://doi.org/10.1016/j.heliyon.2017.e00314

Gattu, R. K., Paik, G., Wang, Y., Ray, P., Lichenstein, R., & Black, M. M. (2019). The Hunger Vital Sign identifies household food insecurity among children in emergency departments and primary care. *Children (Basel, Switzerland), 6*(10), 107. https://doi.org/10.3390/children6100107

Glasgow, R. E., Vogt, T. M., & Boles, S. M. (1999). Evaluating the public health impact of health promotion interventions: The RE-AIM framework. *American journal of public health, 89*(9), 1322–1327. https://doi.org/10.2105/AJPH.89.9.1322

Grady, C. (2015). Institutional Review Boards: Purpose and challenges. *Chest, 148*(5), 1148–1155. https://doi.org/10.1378/chest.15-0706

Gu, K. D., Cheng, J., Fung, V., Levy, D. E., McGovern, S., McCurley, J. L., Clark, C. R., & Thorndike, A. N. (2024). Association of food insecurity with changes in diet quality, weight, and glycemia over two years in adults with prediabetes and type 2 diabetes on Medicaid. *Nutrition & diabetes, 14*(1), 16. https://doi.org/10.1038/s41387-024-00273-7

Gunderson, E. P., Hurston, S. R., Ning, X., Lo, J. C., Crites, Y., Walton, D., Dewey, K. G., Azevedo, R. A., Young, S., Fox, G., Elmasian, C. C., Salvador, N., Lum, M., Sternfeld, B., & Quesenberry, C. P. (2015). Lactation and progression to Type 2 diabetes mellitus after gestational diabetes mellitus. *Annals of Internal Medicine, 163*(12), 889–898. https://doi.org/10.7326/M15-0807

Healthy People 2030. (2022). *Social determinants of health.* U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. https://health.gov/healthypeople/priority-areas/social-determinants-health

Israel, B. A., Schulz, A. J., Parker, E. A., & Becker, A. B. (1998). Review of community-based research: Assessing partnership approaches to improve public health. *Annual review of public health, 19*, 173–202. https://doi.org/10.1146/annurev.publhealth.19.1.173

Kolb, L., & Huffman, F. (2018). Diabetes self-management education and support. *Diabetes Spectrum, 31*(3), 261–270.

Lorig, K. R., & Holman, H. R. (2003). Self-management education: History, definition, outcomes, and mechanisms. *Annals of Behavioral Medicine, 26*(1), 1–7.

Makelarski, J. A., Abramsohn, E., Benjamin, J. H., Du, S., & Lindau, S. T. (2017). Diagnostic accuracy of two food insecurity screeners recommended for use in health care settings. *American journal of public health, 107*(11), 1812–1817. https://doi.org/10.2105/AJPH.2017.304033

Meyer, S. B., Edge, S. S., Beatty, J., Leatherdale, S., Perlman, C., Dean, J., Ward, P. R., & Kirkpatrick, S. I. (2018). Challenges to evidence-based health promotion: A case study of a food security coalition in Ontario, Canada. *Health promotion international, 33*(5), 760–769. https://doi.org/10.1093/heapro/dax011

Miller, W. R., & Rollnick, S. (2012). *Motivational interviewing: Helping people change* (3rd ed.). Guilford Press.

Montana Department of Public Health and Human Services. (2024a, April). *Obesity in Montana adults, 2022* [Data brief]. Montana Department of Public Health and Human Services, Public Health and Safety Division. https://prod-dphhs.mt.gov/assets/publichealth/Diabetes/Data/ObesityMontanaAdults2022.pdf

Montana Department of Public Health and Human Services. (2024b). *Montana State Health Improvement Plan 2024–2028.* https://dphhs.mt.gov/assets/publichealth/ahealthiermontana/2024StateHealthImprovementPlanDraft_publiccomment.pdf

Montana Food Bank Network. (2025, May). *Hunger in Montana.* https://mfbn.org/hunger-in-montana/

Moriarty, D. G., Zack, M. M., & Kobau, R. (2003). The Centers for Disease Control and Prevention's Healthy Days Measures — population tracking of perceived physical and mental health over time. *Health and quality of life outcomes, 1*, 37. https://doi.org/10.1186/1477-7525-1-37

Najibi, N., Firoozi, R., Shahrezaee, S., Eshraghian, M., Daneshi-Maskooni, M., & Dorosty-Motlagh, A. (2019). Food insecurity is an important risk factor for type 2 diabetes: A case-control study of new referrals to university clinics, Shiraz, southern Iran. *BMC public health, 19*(1), 885. https://doi.org/10.1186/s12889-019-7236-9

Patil, S. P., Craven, K., & Kolasa, K. (2018). Food insecurity: How you can help your patients. *American family physician, 98*(3), 143–145.

Pavot, W., & Diener, E. (2008). The Satisfaction with Life Scale and the emerging construct of life satisfaction. *Journal of positive psychology, 3*(2), 137–152. https://doi.org/10.1080/17439760701756946

Powers, M. A., et al. (2020). Diabetes self-management education and support in adults with type 2 diabetes. *Diabetes Care, 43*(7), 1636–1649.

Rabbitt, M. P., Reed-Jones, M., Hales, L. J., & Burke, M. P. (2024). *Household food security in the United States in 2023* (Economic Research Report No. 337). U.S. Department of Agriculture, Economic Research Service. https://www.ers.usda.gov/webdocs/publications/109896/err-337.pdf

Rippe, J. M. (2019). Lifestyle medicine: The health promoting power of daily habits and practices. *American journal of lifestyle medicine, 12*(6), 499–512. https://doi.org/10.1177/1559827618785554

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Runkle, N. K., & Nelson, D. A. (2021). The silence of food insecurity: Disconnections between primary care and community organizations. *Journal of patient-centered research and reviews, 8*(1), 31–38. https://doi.org/10.17294/2330-0698.1765

Sacca, L., Shegog, R., Hernandez, B., Peskin, M., Rushing, S. C., Jessen, C., Lane, T., & Markham, C. (2022). Barriers, frameworks, and mitigating strategies influencing the dissemination and implementation of health promotion interventions in indigenous communities: A scoping review. *Implementation science, 17*(1), 18. https://doi.org/10.1186/s13012-022-01190-y

Smith, S., Malinak, D., Chang, J., Schultz, A., & Brownell, K. (2017). Addressing food insecurity in family medicine and medical education. *Family medicine, 49*(10), 765–771.

Strawbridge, L. M., et al. (2018). Use of diabetes self-management education and support services. *Diabetes Care, 41*(5), 999–1006.

Stuebe, A. M., Rich-Edwards, J. W., Willett, W. C., Manson, J. E., & Michels, K. B. (2011). Duration of lactation and incidence of Type 2 diabetes. *JAMA, 294*(20), 2601–2610. https://doi.org/10.1001/jama.294.20.2601

Tait, C. A., L'Abbé, M. R., Smith, P. M., & Rosella, L. C. (2018). The association between food insecurity and incident type 2 diabetes in Canada: A population-based cohort study. *PloS one, 13*(5), e0195962. https://doi.org/10.1371/journal.pone.0195962

Tenorio, E., Sandoval, J., Sanchez, J., Sanchez, R., Salvador, M., & Altschul, D. B. (2025). Tribal-academic partnership aimed at eliminating behavioral health disparities. *Health education & behavior, 52*(1_suppl), 20S–25S. https://doi.org/10.1177/10901981251347243

Thomas, M. K., Lammert, L. J., & Beverly, E. A. (2021). Food insecurity and its impact on body weight, type 2 diabetes, cardiovascular disease, and mental health. *Current cardiovascular risk reports, 15*(9), 15. https://doi.org/10.1007/s12170-021-00679-3

Vaidyanathan, A. K. (2022). Controlling bias in research. *Journal of Indian Prosthodontic Society, 22*(4), 311–313. https://doi.org/10.4103/jips.jips_405_22

Wallerstein, N., & Duran, B. (2010). Community-based participatory research contributions to intervention research: The intersection of science and practice to improve health equity. *American journal of public health, 100*(Suppl. 1), S40–S46. https://doi.org/10.2105/AJPH.2009.184036

Wilson, D. H., German, D., Ricker, A., Gourneau, H., Hanson, G. C., Mayhew, J., Brockie, T. N., & Sarche, M. (2023). Feasibility, acceptability and effectiveness of a culturally informed intervention to decrease stress and promote well-being in reservation-based Native American Head Start teachers. *BMC public health, 23*(1), 2088. https://doi.org/10.1186/s12889-023-16913-z