Create a Culture of Health Throughout Hawaii

Take Health to Where People Live, Work, Learn, and Play

Invest in Healthy Babies and Families

Hawai`i Department of Health

Strategic Plan

2015-2018

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Hawaii Department of Health
Strategic Plan: 2015– 2018

A Message from the Hawaii Director of Health.

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"Make Health Hawaii's Shared Value"

Governor Ige's priorities include a recognition of how critical health and the environment are to the vitality of our State and the quality of life for our people. Specifically, the Governor pledged to build a "21st century health system that improves access, treatment, and affordability for all Hawaii residents, *beginning with our children*, honoring our elders, and including rural communities on all islands."

These priorities are core drivers of the Hawaii Department of Health's strategic plan: "Make Health Hawaii's Shared Value," through an emphasis on investments in:

- Healthy babies and families
- Better mental health
- Telehealth

Making health our shared value means recognizing that health doesn't only happen in a doctor's office, nor is sickness always something we inherit from our parents. In fact, research shows that the medical care we receive influences only 10 -15% of outcomes such as length of life and quality of life.

> **The social determinants of health are the conditions in which people live, work, learn, and play.**

The vast majority of factors impacting our health, upwards of 75%, are due to how and where we live our lives: the social determinants of health. Some factors are more in a person's control, for example choosing not to smoke cigarettes, while others such as growing up in poor communities with limited education and work opportunities, are less so.

For example, we know that:
- People growing up in poverty generally live shorter and unhealthier lives,
- Incomplete or insufficient education, in particular lack of a college degree or trade, is a key driver of poverty, and
- Repeat unplanned pregnancies in teens and young adults may create financial stress and prolong inter-generational poverty.

> **Your ZIP code often has a greater impact on your health status, including life expectancy, than your genetic code**.

From conception through about five years of age, a child experiences more brain development than at any other period in his or her life, which directly affects his or her social, emotional, and cognitive potential. Toxic stress in a child's environment such as hunger, poverty, and abuse or witnessing abuse – collectively known as Adverse Childhood Experiences (ACEs) – are associated with obesity, risky behavior, mental health issues, and ultimately a shorter life span.
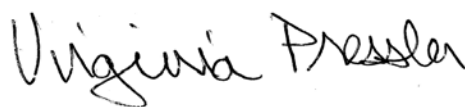
As a result of this evidence base, the department's primary priority through 2018 is to Invest in Healthy Babies and Families, where the earliest opportunity to intervene to improve both social determinants and biological determinants of health is pre-conception.

For example, for all women of child-bearing age, but with particular focus on young women, the department will work with the health care system to implement the One Key Question™ screening protocol: "Would you like to become pregnant in the next year?" A "yes" answer would trigger a comprehensive healthcare response that includes assessments for substance use (tobacco, alcohol, prescription and illicit drugs, etc.) that increases risks for complicated pregnancies, birth defects, and developmental delays. If that is not her choice, she should be provided options for information or referrals to services which may include highly effective forms of contraception, such as Long-Acting Reversible Contraception (LARC) to support her decision and life goals, such as education, vocational training, etc.

Access to LARC options in particular has seen returns on investments in states like Colorado, where a hospital-based LARC program saw the teen unplanned birth rate drop by 48% (women aged 15-19) and 18% for women aged 20-24, teen abortion rate plummet by 48%, and an overall estimated savings of $49 million to $111 million in Medicaid birth-related costs.

This is just one piece of a complex puzzle requiring more than a medical solution for mom and baby. We need to reinforce our social, emotional, and physical health systems at every turn, whether that be in our schools and workplaces, in our markets and restaurants, or in our natural and built environments. And we must recognize that Hawaii's rich tradition of hanai relatives and intergenerational households. Tolerance for our differences expands our understanding of "family" into something larger, an 'ohana nui, or Extended Family. This larger family goes up – across generations from keiki to kupuna – and out – to extended families and into our communities. If we are to break the cycle of poverty underlying the social determinants of health, we must intervene across the generations to meet the needs of vulnerable children and their families **together**. This is Making Health Hawaii's Shared Value. Mahalo for working with us to make this a reality.

Mahalo,

Virginia Pressler

MISSION, PHILOSOPHY, & GOALS

Mission
The mission of the Hawaii DOH is to protect and improve the health and environment for all people in Hawai`i.

Philosophy
Health, that optimal state of physical, mental, social and environmental well-being, is a right and responsibility for all Hawaii's people.

Goals
- Promote health and well-being
- Prevent disease and injury
- Promote healthy lifestyles and workplaces
- Promote the strength and integrity of families and communities

To preserve a healthy and natural environment
- Promote resource conservation (recycling)
- Protect and enhance air and water quality

To assure basic physical and mental health care (the five A's)
- Available
- Accessible
- Appropriate
- Assured quality
- Affordable

GUIDING PRINCIPLES

1. Ensure that public health functions – assessment, policy, and assurance – are implemented or maintained.
2. Ensure that federal mandates, including court-ordered settlements are satisfied.
3. Ensure that resources are directed at those problems that pose the greatest risk to the public's health and the environment.
4. Ensure that appropriate and cost-effective resources are dispersed geographically and satisfy principles 1 to 3.
5. Ensure that the health department is the service provider of last resort for uninsurable populations and where there is no other satisfactory alternative.

EXPLANATION OF THE STRATEGIC MAP

The Strategy Map is a diagram that is used to document the primary strategic goals being pursued by the Hawaii Department of Health (DOH) for 2015 through 2018. The department's overall theme is "Make Health Hawaii's Shared Value," for which there are three major goals organized into three columns, in descending order of specificity.

Column A: Invest in Healthy Babies and Families
Column B: Take Health into Where People Live, Work, Learn, and Play
Column C: Create a Culture of Health Throughout Hawaii

Column	Strategic Goal	Implementation Time Frame	Impact and Evaluation
A	Invest in Healthy Babies and Families	1 – 3 years	Specific interventions of immediate priority for targeted populations

B	Take Health Into Where People Live, Work, Learn, and Play	2 – 6 years and continuous	Enhancing public health connections to non-traditional systems and settings
C	Create a Culture of Health Throughout Hawaii	Continuous and aspirational	Longer term infrastructure and capacity building focused on prevention and awareness

Each Strategic Goals is described in greater detail later in this document.

Rows D, E, and F describe cross-cutting Strategic Intents designed to enhance the department's ability to achieve its strategic goals, focusing on systems internal to the Department of Health.

The life cycle of the Strategy Map is intended to be about two years, which is the time frame in which the department expects to achieve certain Strategic Goals, particularly in Column A, Invest in Healthy Babies and Families.

The Strategic Narrative appended to the Strategy Map provides greater detail on program objectives within each strategic goal and may be edited or updated as resources and priorities change. Multiple objectives from different programs may fall under a single strategic goal.

Hawaii Department of Health Strategic Map: 2015 - 2018

Make Health Hawaii's Shared Value

A — Invest in Healthy Babies and Families

1. Reduce substance use and exposure for pregnant mothers
2. Decrease unintended pregnancies
3. Improve the postpartum experience for all
4. Promote developmental screenings and services in early childhood
5. Enhance maternal bonding and improve obesity prevention through breastfeeding
6. Address conditions contributing to child deaths and maternal mortality
7. Plan for a system of care for children that addresses physical and emotional health

B — Take Health to Where People Live, Work, Learn, and Play

1. Invest in telehealth to improve health access
2. Prevent and contain epidemics and disease outbreaks
3. Improve connections between primary care and behavioral health
4. Improve life trajectories for vulnerable persons
5. Partner with communities to identify and meet their needs
6. Create communities where the healthy choice is the easy choice
7. Improve home, school, and workplace safety

C — Create a Culture of Health Throughout Hawaii

1. Invest in better mental health
2. Enforce public health and environmental regulations
3. Make health and environmental data more accessible
4. Improve and protect Hawaii's water, land, and air
5. Adapt to and mitigate climate change
6. Enhance public health communication to influence, educate, and motivate
7. Enhance laboratory and scientific services

D — Address the Social Determinants of Health

E — Use Evidence-Based Practices and Make Data-Driven Decisions

F — Improve Core Business Services and Customer Satisfaction

**A
Invest in Healthy
Babies and Families**

Reduce substance use and exposure for pregnant mothers
1

Decrease unplanned pregnancies
2

Support parents and extended ohana after childbirth
3

Promote optimal developmental screenings and services in early childhood
4

Enhance maternal bonding and obesity prevention through breastfeeding
5

Address conditions contributing to child and maternal mortality
6

Plan for a system of care for adolescents that addresses physical and emotional health
7

STRATEGIC PRIORITY A: INVEST IN HEALTHY BABIES AND FAMILIES.

OBJECTIVE A-1: REDUCE SUBSTANCE USE AND EXPOSURE FOR PREGNANT MOTHERS

Purpose
While in the womb, a fetus grows and develops due to nourishment from the mother. However, along with nutrients, any toxins in the mother's system may be delivered to the fetus causing damage to the developing fetal organs. Infants born to mothers who smoke, drink alcohol, or use other substances may have growth problems, long-term behavioral problems or intellectual disabilities. Prenatal substance exposure raises the risk for sudden infant death syndrome.

Plan
The Department of Health (DOH) will promote *Screening, Brief Intervention, and Referral to Treatment* (SBIRT), for all people, including pregnant women and women who might get pregnant. SBIRT is an approach to identify and deliver intervention and treatment to people with substance use problems or those at risk of developing these problems. Because the risks to developing infants have long-term impacts, women are advised to avoid using tobacco, alcohol, and other substances. The DOH will lead community efforts to create economic incentives, increase provider awareness, and better connect community resources to encourage adoption of SBIRT for expecting mothers.

To further promote healthy reproductive health outcomes, Reproductive Life Plan (RLP) and preconception counseling, as appropriate, includes discussion of the woman's personal goals about becoming pregnant and entails screening and identifying risks factors such as prescribed and illicit drug/alcohol use and smoking. These types of counseling should be integrated in all well-women visits.

The utility of One Key Question™ screening protocol encourages providers to routinely ask women about their reproductive health needs and ensures that more pregnancies are wanted, planned, and healthy by asking "Would you like to become pregnant in the next year?" If a woman answers "yes," she will be further screened for substance use, including tobacco, alcohol, and prescription and illicit drugs - all of which increase risks for complicated pregnancies, birth defects, and developmental delays. If a woman does not plan a pregnancy, counseling and referral about reducing these risk factors is warranted.

Partners
Health care providers, mental health and substance abuse community, health insurers and managed care organizations, Hawaii Poison Center, social service agencies, education system, and criminal justice system.

Milestones
- Train prenatal care providers on prenatal SBIRT; train substance treatment providers on pregnancy related issues
- Train primary care providers on SBIRT
- Establish performance measures related to SBIRT utilization for providers of publicly funded health insurance
- Assure a sufficient and accessible substance abuse treatment provider network
- Utilize toll-free 24/7 access to the Hawaii Poison Center as public and health care professional resource for information on the adverse health effects of drug exposure during pregnancy

OBJECTIVE A-2: DECREASE UNPLANNED PREGNANCIES

Purpose
Unintended pregnancy and childbearing bring substantial social and economic costs through immediate and long-term impacts on families. Pregnancies which are unintended may come at a time when a woman is not in optimal health for childbearing or when a couple is not otherwise prepared to raise a child. These pregnancies are linked to increased risk of exposure to alcohol, tobacco, and other substances, late prenatal care, preterm birth, and other negative birth outcomes.

While unintended pregnancies can create challenges for all families the impacts are often greater for teen parents. The high rate of unintended pregnancies leads to early exposure to tobacco, alcohol, and other substances, even among women who stop using these substances once they know they are pregnant.

Plan
The primary means to reduce unintended and teen pregnancies is client centered approach counseling in developing a reproductive life plan and encouraging frequent follow-up to promote healthy problem solving regarding contraceptive methods and receiving sexually transmitted disease prevention and other preventive health services. Contraception counseling involves identifying concerns about safety, socio-economic needs and cost, and discussing the most effective methods first.

The use of effective contraceptive methods along with condoms have been shown to effectively decrease unintended pregnancy, adolescent pregnancy, and abortion rates and prevent Sexually Transmitted Disease/Human Immunodeficiency Virus (STD/HIV) transmission and its serious medical consequences. Another part of the plan focuses on greater utilization of LARC devices such as IUDs and hormonal implants. LARC have been shown to decrease unintended pregnancy in a highly cost effective manner.

Partners
Health care providers, health insurers and managed care organizations, social services agencies, and education system.

Milestones
- Provide healthcare providers training on changes to contraceptive coverage, billing, and coding
- Implement pilot program with health care partners the One Key Question™ screening protocol
- Decrease unintended pregnancy rates
- Educate healthcare providers about client-centered counseling approach including screening and counseling adolescents for sexual risk behaviors, HIV and STD prevention and dating violence
- Provide services that are teen-focused (e.g. confidential, accessible location, and flexible hours) and culturally appropriate materials during health care visits

OBJECTIVE A-3: SUPPORT PARENTS AND EXTENDED OHANA AFTER CHILDBIRTH

Purpose
Create a healthy home environment and communities for newborns and families.

OBJECTIVE A-3-a: Reduce childhood injuries and poisoning.

Plan
Reduce unintentional poison exposures in newborns and siblings.

Partners
Health care providers, health insurers, Hawaii Poison Center, and managed care organizations, social services agencies, and the education system.

Milestones
- Increase educational programs and outreach to the community

OBJECTIVE A-3-b: Promote safe and nurturing home environments for families through home visiting and violence prevention programs.

Plan
Promote evidence-based home visiting practices to at-risk children and families to support their development. The DOH manages the Maternal, Infant, and Early Childhood Home Visiting Program (Home Visiting Program), and provides voluntary, evidence-based home visiting services to at-risk pregnant women and parents with young children.

The Home Visiting Program, which builds upon decades of scientific research, provides voluntary, culturally-appropriate, individually-tailored supports to families in their homes, including providing information about children's health, development, and safety, and when appropriate, referrals to support services. The DOH works with agencies and organizations throughout the State to prevent sexual violence, Intimate Partner Violence (IPV), domestic violence, and child abuse and neglect.

Partners
Healthcare providers, social service community agencies, and non-profits, child and family advocates and prevention organizations.

Milestones
- Promote the use of effective home visiting models
- Develop home visiting networks to include culturally-appropriate models
- Develop and conduct state-wide training for home visitors and supervisors
- Collaborate with coalitions to increase public awareness on violence and child abuse and neglect prevention through community education

OBJECTIVE A-4: PROMOTE DEVELOPMENTAL SCREENINGS AND SERVICES IN EARLY CHILDHOOD

Purpose
Starting at birth and continuing throughout childhood, children reach milestones in how they play, learn, speak, act, and move. Because children develop at their own pace it can be difficult to predict exactly when a child will learn a given skill. However, developmental milestones give a general idea of the changes to expect as a child gets older.

Developmental and behavioral screening plays an important role in early detection and an opportunity to provide appropriate supports for children who may be experiencing delays or challenges for any number of reasons. As many as 1 in 4 children aged 0 to 5 years may be at moderate or high risk for developmental, behavioral, or social delay.

Plan
Bring stakeholder communities together to develop strategies to address developmental milestones when not met. Work with health providers to examine and explore financial resources for funding.

Partners
Health care providers, health insurers and manage care organizations, social service agencies, and child care system

Milestones
- Increase the number of children screened for developmental, behavioral, and social delays using a standardized screening tool and referred to appropriate services
- Finalize a Memorandum of Understanding between the DOH and the University of Hawaii P-20 Data Exchange Partnership to obtain critical longitudinal data
- Facilitate the collection of family history and use of risk assessment to identify increased risks for health problems and

initiate early interventions to keep families and communities healthy

- Support an integrated child health profile electronic data system to improve tracking of screening, follow-up, treatment, intervention, management, and care coordination
- Assure newborn screening meets national efforts and is available to Hawaii families
- Promote access to vision and hearing services with appropriate follow-up care and management
- Promote childhood lead poisoning prevention

OBJECTIVE A-5: ENHANCE MATERNAL BONDING AND OBESITY PREVENTION THROUGH BREASTFEEDING

Purpose
It is recommended that most babies be fed only breast milk for the first 6 months of life and continue breastfeeding for at least 12 months thereafter. In Hawaii, 85% of babies initiate breastfeeding but by 6 months only 51% are breastfeeding. Breastfeeding helps protect against childhood obesity, and studies have shown that breastfeeding for 9 months reduces a child's risk of becoming overweight by more than 30%.

Plan
Provide technical assistance, trainings, and advocacy to increase the duration of exclusive breastfeeding through six months in healthcare, the workplace, and general community.

Opportunities include seeking insurance reimbursement for lactation support services from a certified lactation consultant to assist with breastfeeding after delivery and/or hospital discharge, increasing the number of hospitals that receive "Baby Friendly Hospital" designation, and including basic breastfeeding support as a standard of care for midwives, obstetricians, family physicians, nurse practitioners, and pediatricians.

Partners
Health care providers, health insurers and managed care organizations, and employers.

Milestones
- Increased in number of infants who were breastfed at 6 months
- Increased in number of infants who were breastfed exclusively through 3 months
- Increased in number of infants who were ever breastfed infants breastfed for at least 2 months
- Increase the number of hospitals in Hawaii that have infant feeding policies that align with the "10 steps to successful breastfeeding"

- Develop and begin implementation of early child care wellness guidelines to establish minimum standards based on national recommendations for wellness and childhood obesity prevention

OBJECTIVE A-6: ADDRESS CONDITIONS CONTRIBUTING TO CHILD AND MATERNAL MORTALITY

Purpose
A child's death is a sentinel event and can be a marker in a community of the health and safety of children. Efforts to understand the entire spectrum of factors that lead to a death may help prevent other deaths, poor health outcomes, injury or disability in other children.

Similarly, pregnancy-related deaths are also an indicator of the overall health of women of reproductive age. It is estimated that up to 50% of all maternal deaths are preventable, and while rare in the United States, there is evidence that rates are getting worse. According to the Center for Disease Control, the number of reported pregnancy-related deaths increased from 8.4 deaths per 100,000 live births in 1997 to a high of 17.8 deaths per 100,000 live births in 2011.

Child Death Review (CDR) is a process that works to understand child deaths in order to prevent harm to other children. It is a collaborative process that brings people together at a state or local level, from multiple disciplines, to share and discuss comprehensive information on the circumstances leading to the death of a child and the response to that death. Since a portion of these deaths are medication related, utilization of the Hawaii Poison Center maximizes toxicological resource use. These reviews can lead to action to prevent other deaths locally, at a state level and nationally. Include child morbidity data to help inform prevention efforts, as the same risk factors for many mechanisms of childhood injury apply to both fatal and nonfatal incidents.

Plan
Prevent child and maternal deaths by improving our community's understanding of the drivers of those deaths, which include an individual's health status and medical care system, but also the social and economic conditions the child or mother experienced. The DOH will reestablish the defunct child death review system and establish a new maternal mortality review system to provide data, analysis, and policy recommendations to decrease these sentinel events.

Partners
Health care providers, public health advocates, law enforcement, Hawaii Poison Center, social service agencies, education system, counties, and communities.

Milestones
- Enact and reaffirm statutory authority
- Establish dedicated department resources for comprehensive child death and mortality reviews

- Execute Business Associate Agreements and related legal artifacts required to request and analyze relevant data and information

OBJECTIVE A-7: PLAN FOR A SYSTEM OF CARE FOR ADOLESCENTS THAT ADDRESSES PHYSICAL AND EMOTIONAL HEALTH

Purpose

Approximately one out of five adolescents has a diagnosable mental health disorder, and nearly one third show symptoms of depression. Mental health disorders can disrupt school performance, harm relationships, and lead to suicide. Suicide was the second leading cause of death among teenagers in Hawaii, after motor vehicle crashes, but outnumbering deaths from cancer, heart disease and other chronic
diseases.

Unfortunately, an ongoing stigma regarding mental health disorders inhibits some adolescents and their families from seeking help. Effective treatments for mental health disorders, especially if they begin soon after symptoms appear, can help reduce its impact on an adolescent's life.

Plan

Improve healthy development and well-being of adolescents by improving the percent of adolescent ages 12 – 17, with preventive medical visit in the past year. The Bright's Futures guideline recommends that adolescents have an annual checkup starting at age 11. The visit should cover a comprehensive set of preventive services, such as a physical examination, discussion of health-related behaviors, and immunizations. It recommends that the annual checkup include discussion of several health-related topics, including healthy eating, physical activity, substance use, sexual behavior, violence, and motor vehicle safety.

Partners

Health care providers, health insurers and managed care organizations, social service agencies, education system, Prevent Suicide Hawaii Taskforce, Hawaii Poison Center, law enforcement and criminal justice system, and communities.

Milestones

- Increase the number of youth who have a preventive medical visit
- Increase the number of youth with special health care needs who receive services necessary to make transitions to adult health care
- Increase data sharing for youth receiving services from multiple state agencies and other programs involved in youth services
- Develop strong relationships with community partners to support planning and policy development that promotes and maximizes the health of adolescents

- Provide outreach services to families and youth identified through standardized assessments
- Improve early diagnosis (including initial diagnosis) of mental health disorders in the home, health care or school setting.
- Decrease social stigma around mental health disorders and mental health care and suicide
- Assure parity for insurance coverage for mental health care consistent with substance use and medical care
- Increase data sharing between state agencies and programs involved in youth services
- Improve involvement of youth in peer-to-peer education and support services
- Improve access to suicide prevention gatekeeper training in health care, school and community settings
- Assure vulnerable populations such as children who are homeless, served by state child welfare and juvenile justice systems, or LGBT receive services
- Use Hawaii Poison Center data on adolescent poison exposures and suicide attempts to monitor problem and track change
- Establish priority goals for adolescent psychiatric clinical practice adoption of telehealth
- Increase the number of youth with special health care needs who receive services necessary to make transitions to adult health care
- Recommend standardized developmental assessments.
- Promote information about Bright Futures and available tools and resources
- Provide public education about new and ongoing important prevention topics such as immunizations, oral health, healthy weight, and emotional well-being
- Provide training that incorporate Bright Futures curriculum and update and revise all provider related materials
- Update or revise billing and payment policies for adolescent well-visits
- Educate all home visiting professionals and early education and child care professionals about Bright Futures Guidelines so that they can reinforce messages when appropriate and help prepare parents to be effective partners during their children's well-child visits

**B
Take Health to Where People Live, Work, Learn, and Play**

Invest in telehealth to improve health access 1
Prevent and contain Epidemics and Disease Outbreaks 2
Improve connections between Primary Care and Behavioral Health 3
Improve life trajectories for vulnerable persons 4
Partner with communities to identify and meet their needs 5
Create communities where the healthy choice is the easy choice 6
Improve home, school, and workplace safety and wellness 7

STRATEGIC PRIORITY B: TAKE HEALTH TO WHERE PEOPLE LIVE, WORK, LEARN, AND PLAY

OBJECTIVE B-1: INVEST IN TELEHEALTH TO IMPROVE HEALTH ACCESS

Purpose
Telehealth is the delivery of health services using technology in order to improve access to quality healthcare in rural and urban communities across the nation. It allows patients to access specialists and doctors they might not otherwise be able to within the comfort of their local community or sometimes even their home. Telehealth can also help minimize healthcare costs while reducing patient travel time and time away from work and family. Ultimately, telehealth can minimize the complication of disease and even save lives through more proactive screening and early diagnosis for cancer, diabetes, heart disease and other chronic diseases.

Plan
The State of Hawaii lacks clear objectives regarding telehealth, this despite recent increasing proliferation of cost-effective technology and supportive public policy. The DOH will work with community to establish governance and accountability in assuring telehealth as a sustainable, if not preferred modality for specialty provider shortages, long waitlists for specialists, geographic barriers, improve access to certain kinds of care, and to support specialty consultation to primary care practices. Community Paramedics is a developing venue for Telehealth.

Partners
Health care providers, health insurers and managed care organizations, Hawaii Emergency Medical Services (EMS), malpractice insurers, patient advocates, medical education system, and technology infrastructure vendors.

Milestones
- Establish a statewide telehealth council
- Enforce existing laws and regulations governing the delivery and support of telehealth services, including malpractice coverage and reimbursement parity
- Plan for and assure sufficient bandwidth and technology infrastructure, including Electronic Health Records
- Establish infrastructure to support medical specialty services to consult statewide including community paramedicine via telehealth
- Utilize telehealth for training and prevention efforts.
- Develop education and training strategy

OBJECTIVE B-2: PREVENT AND CONTAIN EPIDEMICS AND DISEASE OUTBREAKS

Purpose
To be prepared to prevent and reduce the likelihood of an outbreak, to detect it early, and when an outbreak occurs respond immediately and appropriately to mitigate the outbreak.

Plan
The DOH will develop an immediate and comprehensive protocol to address the emergence and spread of antimicrobial drug resistant organisms or emerging zoonotic (animal to human) disease outbreak. The DOH will utilize community paramedicine to identify underserved areas.

Partners
State and Federal agencies, Health care professionals, EMS Community Paramedicine, law enforcement, and the community.

Milestones
- Organize a team comprised of individuals including community paramedics who understand the disease and who can provide quick responses to the Director of Health, communications, and the public on action steps
- Organize team of individuals to develop immediate protocol procedures in the case of an epidemic
- Protocol will include who to contact and when and communication action plant to team, staff, and public
- Memorandum of Agreement if intra-departmental or inter-department individuals or offices are involved
- Authorize expanded community EMS services (similar to those used during the recent Dengue outbreak on Hawaii Island)
- Develop list of diseases and action plans on approach to the problem and resolution
- Appointment of a point person to be in charge of project management

OBJECTIVE B-3: IMPROVE CONNECTIONS BETWEEN PRIMARY CARE AND BEHAVIORAL HEALTH

Purpose
Many individuals have comorbid behavioral and physical health conditions, both of which need to be addressed and treated.

Unfortunately, the health care delivery system within the United States has become fragmented in such a way that those who have multiple physical and behavioral health needs sometimes must choose which among those needs will receive priority for seeking care. This decision is exacerbated for those who have the most severe and persistent mental illnesses.

Poverty, diminished educational attainment, and judgmental

impairment, all closely associated with these disorders, contribute to the individual's difficulty in finding appropriate care for their medical problems and in pursuing health promoting lifestyles. Studies show that untreated (or undertreated) behavioral health conditions adversely affect chronic conditions such as diabetes, cardiovascular disease, Chronic Obstructive Pulmonary Disease (COPD), and cancer.

Plan
Integrating behavioral health services into primary care settings offers a viable, efficient means of ensuring timely access to needed behavioral health services. Additionally, when behavioral health care is delivered in an integrated setting it helps minimize stigma and discrimination while increasing opportunities to improve overall health outcomes.

The DOH will work with community partners to provide training and ongoing learning opportunities to improve capacity of primary care providers (PCP) to address behavioral health in their practices; implement systems change to facilitate seamless referrals between PCPs and behavioral health specialists for patients with serious behavioral health conditions; expand access to health information technology for PCPs and behavioral health providers to ensure timely sharing of patient information and care coordination; and strengthen the health care delivery system to support behavioral health integration.

Additionally, outside funding opportunities will be maximized to pilot integration partnerships between PCPs and Community Mental Health Centers to offer primary care services on site where severely mentally ill residents receive their behavioral health care.

Partners
Primary care providers, health insurers and managed care organizations, peer specialists, patient advocates, health educators, medical education system, Community Mental Health Centers and behavioral health providers, Substance Abuse and Mental Health Services Administration (SAMHSA) and the National Council for Behavioral Health and other agencies providing funding for integrated primary and behavioral health care integration efforts.

Milestones
- Deploy the Improving Mood Providing Access to Collaborative Treatment (IMPACT) model to identify and treat mild-to-moderate depression and anxiety in the primary care practice setting
- Improve outcomes for chronic health conditions in individuals with Serious Mental Illness (SMI) enrolled in Living Well Hawai'i
- Implement a workforce development strategy for behavioral health professionals to increase hiring and retention of quality behavioral health providers
- Increase in the number of behavioral health providers actively working in primary care settings

- Develop a training program for peer specialists to assist individuals with SMI in healthcare navigation
- Improve electronic medical record interconnectivity and data sharing between primary care and behavioral health care systems

OBJECTIVE B-4: IMPROVE LIFE TRAJECTORIES FOR VULNERABLE PERSONS

Purpose
To improve services for vulnerable and disabled persons, by working with all stakeholders to maximize resources and improve the quality of services to this population.

Objective B-4-a: Improve the transition to employment and workforce development for people with intellectual and developmental and other disabilities.

Plan
Work with key stakeholders to address agreements, protocols and resources to improve benefits counseling, implement an "employment-first" initiative, and develop individual professional competencies in the field of developmental and other disabilities.

Partners
Private industry and employers, social service agencies, and communities; state agencies and the federal government.

Milestones
- Increase the number and percentage of individuals of working age (between 16 and 64) eligible for Department of Health services who are employed during any part of the fiscal year in competitive integrated employment
- Increase the number and percentage of people with disabilities accessing services
- Increase the number of staff and providers trained in person-centered planning curriculum
- Increase the number of staff and providers trained in positive behavior support concepts

Objective B-4-b: Assure continued quality services for Hansen's Disease patients through transition from the Department of Health to the federal government.

As of June 2016, there are currently 13 patient-residents remaining from the Kalaupapa Hansen's Disease registry. The patients' age ranges from 74 to 91 years; the median age is 81.1 years. Per the Cooperative Agreement between the National Park Service (NPS) and State of Hawaii, Department of Health, the NPS operates, preserves, and protect the Kalaupapa National Historical Park. The NPS is responsible for the flora and fauna, historical maintenance of the Settlement, road maintenance, operation and maintenance of the water distribution system, fire prevention, mule concession, barge scheduling, buildings, and waste management.

Plan

Develop a consensus strategic framework to identify solutions, stakeholders, and key strategic relationships needed to establish or enhance collaboration to transition Kalaupapa activities.

Partners
Department of Land and Natural Resources, Department of Hawaiian Homelands, Department of Transportation, National Park Services, Churches (Roman Catholic Church, Hawaiian Conference Foundation, etc.), Services Providers

Milestones
- Identify the stakeholders and coordinate as a working group
- Identify the issues and share information
- Resolve issues and transfer responsibility and resource for solid waste management that includes hazardous waste
- Cooperate in implementing a Phase I Environmental Site Assessment

OBJECTIVE B-5: PARTNER WITH COMMUNITIES TO IDENTIFY AND MEET THEIR NEEDS

Purpose
To enhance community health through a collaborative process driven from and lead by the community itself, as opposed to government. The Department of Health and state government in general, may play a role in facilitating a community's success, but should not impose its own solutions on locales.

Objective B-5-a: Increase access to health services in remote areas, such as Puna/Kalapana.

Plan
Create opportunities for external collaboration to outreach to the medically underserved that may include expanded financial support from the State. Limited access and knowledge of State-funded healthcare, nutritional programs, and free health screening services exacerbate provider shortages. A lack of public transportation and limited electrical and Internet connectivity further complicates outreach.

Partners
Non-profits and NGOs, state agencies, and other providers.

Milestones
- Collect stakeholder data
- Increase number of individuals who sign up for healthcare, receive free vision screening, of low income households to sign up for Supplemental Nutritional Assistance Program (SNAP) benefits to improve nutrition
- Increase number of youth and adults receiving screening for type II diabetes through HA1c testing
- Increase community education regarding health resources, programs, to increase health equity among low income population

Objective B-5-b: Assure consumers who access services can navigate through programs and programs can internally work with one another in assuring seamless transition of services for individuals receiving services within departments and other state programs.

Plan
Establish agreements, policies, and protocols, including data sharing, among state agencies working to achieve self-reliance, family stability, and good health.

Partners
Social services agencies, health care agencies, Hawaii EMS Community Paramedicine, Hawaii Poison Center, education system, criminal justice system, and communities.

Milestones
- Development of internal and intra-department programs listing; e.g., what kind of services are offered, how consumers are serviced, how are they linked to other services, when do they transition over, what kind of resources are needed, and there is help to assist consumers or individuals
- Establishment of joint inter-agency performance goals
- Increase the number of youth and adults receiving suicide prevention gatekeeper training and survivor support services
- Increase access to trauma care and maintain trauma facilities in all counties for better outcomes
- Implement community paramedicine-paramedicine programs to augment medical service to remote locations
- Promote telephonic delivery services such as those provided by the Hawaii Poison Center

OBJECTIVE B-6: CREATE COMMUNITIES WHERE THE HEALTHY CHOICE IS THE EASY CHOICE

Purpose
To optimize built environments and other socio-ecological institutions through policy, systems, and environmental changes to affect the we Hawaii residents live and minimize unhealthy options and influences.

Objective B-6-a
Change social norms so that regular physical activity and healthy eating are supported environmentally, systemically, and the default behavior for children in Hawaii's public schools.

Plan
Collaborate with the Department of Education to update its wellness policy to better align with national recommendations, strengthen implementation of wellness in schools, and continue to assess school wellness and utilize data to inform interventions in support of physical activity and nutrition.

Increase coordination between the island school garden networks to develop and share resources that contribute to the success of school gardens, increase student access to fresh local fruits and vegetables, and build capacity for teachers to conduct garden-based education.

Partners
Department of Education, Hawaii State Teachers Association

Milestones
- Update school wellness policies, assess needed improvements, and direct resources so children are healthy and ready to learn in their schools
- Increase number of professional development events offered on wellness
- Conduct annual fitness assessments and meets in grades 5, 7, and 9 in all schools
- Increase coordination with school garden networks so students have access to local fresh fruits and vegetables, and teachers have support to conduct garden-based education
- Increase student fresh fruits and vegetables consumption rates
- Increase youth physical activity rates

Objective B-6-b: Achieve Blue Zone status in at least one community in the state.

Plan
With particular focus on Hawaii Island, lead a community well-being transformation initiative, where the healthy choice becomes the easy choice through permanent changes in environment, policy, and social networks.

Partners
County Mayors; County agencies (elderly services, parks and recreation, etc.); private business and chambers of commerce; churches; universities and colleges; state agencies.

Milestones
- Decrease in community Body Mass Index, adult obesity, and childhood obesity
- Increase fresh fruit and vegetable consumption
- Increase in physical activity
- Increase in public transportation, public transportation, or bike/active transportation
- Decrease in diabetes and heart disease rates
- Decrease in tobacco use
- Reduced healthcare costs

Objective B-6-c: Encourage healthy workplace by offering healthy foods and encourage healthy habits.

Plan
Organize Department wide and inter-Departmental committee to help to develop plan for increasing and encouraging workplace and/or site wellness:
- Develop implementation plan
- Develop incentive program to maintain wellness
- Model healthy food environments where people work through state agencies adopting a healthy food guideline so health promoting options are available wherever food is sold in government buildings.
- Demonstrate retail food and beverage initiative to increase healthy options that is economically viable and beneficial to the health of consumers.
- Enlist and support retailers to adopt healthy food and beverage initiative to expand the availability and access to health promoting options

Partners
Department of Human Resources Development, Department of Accounting and General Services, Department of Labor and Industrial Relations, Hawaii Government Employees Association, United Public Workers

Milestones
- Incorporate the CDC Worksite Health Score Card (HSC) to identify
- gaps in the DOH promotion programs and to prioritize high-impact
- strategies for health promotion at worksites including: organizational
- supports, tobacco control, nutrition, physical activity, weight
- management - stress management, depression, high blood
- pressure, high cholesterol, diabetes, signs and symptoms of heart
- attack and stroke, and emergency response to heart attack and stroke.

Objective B-6-d: Increase physical activity through multi-modal transit community planning.

Plan
Develop statewide multi-modal transit plan with Governmental Departments, providers, and users or consumers.

Partners
Counties, government agencies, public transportation, environmental stakeholders, and private developers.

Milestones
- Develop implementation plan in stages – include curriculum and training plan

- Conduct a statewide multi-modal transit summit to include – Department of Health, Department of Human Services, Department of Education, Department of Transportation, City and County – The Bus, Rail, Bike clubs, traffic, environmental groups, clean air, water, and land
- Implement city and state transportation plan to increase safe and active transportation
- Continue to invest in healthy community initiatives like World Health Organization's (WHO) Age Friendly Cities for the aging population

OBJECTIVE B-7: IMPROVE HOME, SCHOOL, AND WORKPLACE SAFETY

Purpose
To reduce injuries and deaths by enhancing protective factors in common social, economic, and family environments, as well as increase opportunities to improve or maintain personal health.

Objective B-7-a: Reduce falls through safety practices that maintain mobility and independence among older adults.

Plan
Encourage safety practices and use of programs that reduce risk for
falls through evidence-based practices that include: exercise for strength and balance, medication review, vision screening, and home safety modifications. Encourage use of an electronic safety calling device.

Partners
Fall Prevention Consortium members including neighbor island alliances, health care centers, senior living facilities, professional associations, pharmacies, senior centers, and hardware stores.

Milestones
- Continue to implement and evaluate 2013-2018 Hawaii Falls Prevention State Plan

Objective B-7-b: Assure the safety and health of school-aged children from the health hazards of asbestos.

Plan
Secure additional asbestos abatement specialists and collaborate with State Department of Education and private school organizations to discuss potential partnership in continued compliance if our 2 DOH enforcement staff are no longer funded (all K-12 schools will still be regulated by the state/federal rule).

Collaborate with the asbestos abatement industry (contractors, consultants, laboratories, and training programs) to discuss possible raising of fees (already supporting two program staff) to support staff currently funded by federal grant. Enhance asbestos management resources along federal, state, and private continuum

and assure safe and healthy classrooms through enforcement and abatement efforts.

Partners

Hawaii Department of Education, federal government agencies.

Milestones

- Maintaining the effectiveness of the current comprehensive State Asbestos Program with adequate compliance/enforcement capabilities for the State requirements on asbestos in schools, asbestos requirements during renovation and demolition activities, training and certification of a qualified asbestos abatement workforce
- Maintaining staff to provide adequate implementation of the comprehensive program as mentioned above

C
Create a Culture of Health throughout Hawaii

Invest in better mental health
1

Enforce public health and environmental regulations
2

Make public health and environmental data more accessible
3

Improve and protect Hawaii's water, air, and land
4

Adapt to and mitigate effects of climate change
5

Enhance public health communications to influence, educate, and motivate
6

Enhance laboratory and scientific services
7

STRATEGIC PRIORITY C: CREATE A CULTURE OF HEALTH THROUGHOUT HAWAII

OBJECTIVE C-1: INVEST IN BETTER MENTAL HEALTH

Purpose
There is a lack of capacity to address serious mental illness in the community and connect those who suffer from serious mental illness with appropriate care and services. There is a lack of facilities to provide sub-acute mental health services to individuals needing immediate help but not hospitalization. Few alternatives to commitment to the State for custody exist for courts considering for persons who may have mental health complications.

Plan
The department will investigate and advocate for adequacy of crisis intervention/outreach programs and post-booking jail-diversion programs, ensure adequate funding and support for mental health courts, and provide training to judges to understand mental illness; provide crisis intervention training to law enforcement to identify and appropriately respond to mentally ill but non-dangerous individuals in the field, refer to care/services. Support for workforce development across the mental health spectrum is critical.

Partners
Health care providers, law enforcement and criminal justice system, higher education, social service agencies, and communities.

Milestones
- Prevalence of mental illness in jails
- Average length of stay in jails for mentally ill persons
- Recidivism rate for mentally ill persons
- Number of defendants in mental health court
- Graduation rate from mental health court
- Recidivism rate for mental health court graduates
- Hawaii State Hospital (HSH) Census
- HSH average length of stay
- Percent adults with serious mental illness who received treatment
- Percent adults with serious mental illness who are employed

OBJECTIVE C-2: ENFORCE PUBLIC HEALTH AND ENVIRONMENTAL REGULATIONS

Purpose
To enhance the State's statutory compliance and the department's regulatory and legal preparedness to address emerging threats, environmental pollution, chronic diseases, and other national public health priorities and to improve use of laws and regulations to support program activities.

Plan

Ensure the presence of sufficient numbers of effective regulatory and legal authorities (i.e. inspectors and surveyors) to carry out essential public health services in the community and court systems. Work with private sector and industry to ensure compliance, and balance prevention and efficient governmental business practices.

Coordinate regulatory efforts across jurisdictions and sectors to protect communities and promote health and wellness across local-state-federal dimensions and among multiple public and private sector entities. Develop and make accessible information about public health regulatory and legal best practices.

Partners

Private sector, counties, state agencies, federal agencies, judiciary, legislature.

Milestones

- Assure a sufficient and competent workforce for inspection and surveys of licensed health care facilities
- Assure a sufficient and competent workforce for inspection of food establishments and other non-health care commercial entities
- Assure a sufficient and competent workforce for inspection of environmental pollution-related complaints

OBJECTIVE C-3: MAKE PUBLIC HEALTH AND ENVIRONMENTAL DATA MORE ACCESSIBLE

Purpose

Public health informatics address the intersection of data, systems, policies, and people to support public health goals. It includes analysis of health information, but also economic, social, geographical, and biological aspects – and any and all quantifiable factors that may influence individual or population health.

Plan

DOH proposes to establish a dedicated public health and informatics office in the Office of the Director of Health. Enhance, stabilize, and coordinate existing data resources for environmental management, environmental health services, and epidemiology.

Partners

Healthcare providers, health insurers and managed care organizations, regulatory agencies

Milestones

- Strengthen legal framework to obtain, analyze, and share relevant population health data
- Develop statewide health informatics plan and priorities
- Establish data use and sharing agreements among state agencies and private sector

- Establish an All Payer Claims Database
- Establish an intra-departmental expert panel to provide guidelines on data dissemination
- Stabilize workforce and resources for the Environmental Information Management Office
- Enhance online restaurant inspection service

OBJECTIVE C-4: IMPROVE AND PROTECT HAWAII'S WATER, LAND, AND AIR

Purpose
Improve and protect human health and the environment in Perpetuity for all future generations through best practice engineering design, streamlined comprehensive permitting, regular monitoring, investigating, inspecting, researching and enforcement.

Plan
DOH has delegated authority from the U.S. Environmental Protection Agency to enforce many Federal environmental acts including the Clean Water Act, Safe Drinking Water Act, Solid Waste Disposal Act, Insecticide, Fungicide, and Rodenticide Act, Toxic Substances Control Act, Comprehensive Environmental Response Compensation, and Liability Act (CERCLA – Superfund sites), and the Clean Air Act. Implement State and Federal Environmental Acts.

Partners
U.S. Environmental Protection Agency, Other State Departments, all Counties, Educational Institutions, Office of Hawaiian Affairs (OHA), Communities, Business Sector and Environmental Groups.

Milestones
- Ensure safe drinking water
- Update the State Water Quality Plan
- Clean up contaminated lands if feasible
- Update the Integrated Solid Waste Management Plan
- Maintain the safety of chemicals
- Reduce pollution
- Assure compliance with State and Federal regulations

OBJECTIVE C-5 ADAPT TO AND MITIGATE EFFECTS OF CLIMATE CHANGE

Purpose
Minimize negative human health and environmental impacts.

Plan
Expand capacity to manage an increase in vector outbreaks (e.g., Zika); Plan for sea level rise through managed retreat from shorelines; Examine the effects of changing weather patterns on ocean water; Update land use guidance to prepare for impacts.

Partners
U.S. Environmental Protection Agency, U.S. Centers for Disease Control, American Public Health Association, American Planning

Association, Other State Departments, all Counties, Educational Institutions, Communities, Business Sector, Environmental Groups, World Health Organization, and the United Nations – Intergovernmental Panel on Climate Change.

Milestones
- Reduce State Greenhouse gas emissions back to 1990 levels
- Implement the Clean Power Plan
- Incorporate health and environmental concerns into the State Interagency Climate Adaption Committee (ICAC) Legislative Report

OBJECTIVE C-6: ENHANCE PUBLIC HEALTH COMMUNICATIONS TO INFLUENCE, EDUCATE, AND MOTIVATE

Purpose
Public health means different things to different people at various times. Conveying the value, mission, roles, processes, programs, and interventions of the health department is a necessary step in building effective public health programs and ensuring sustained funding levels.

Disparities in access to health information, services, and technology
can result in lower usage rates of preventive services, less knowledge of chronic disease management, higher rates of hospitalization, and poorer reported health status.

Public health information must be understandable and usable by the
target audience. Information should be accessible to all audiences In the jurisdiction served, whether they are non-English speaking, are hearing impaired, or have low literacy.

Plan
Provide information on public health issues and public health functions through multiple methods to a variety of audiences to improve population health outcomes and health care quality, and to achieve health equity.

Partners
Government agencies, private sector, media.

Milestones
- Deliver accurate, accessible, and actionable health information that is targeted or tailored
- Increase social media presence
- Enable quick and informed action to health risks and public health emergencies
- Increase health literacy skills
- Provide new opportunities to connect with culturally diverse and hard-to-reach populations

- Provide sound principles in the design of programs and interventions that result in healthier behaviors

OBJECTIVE C-7 ENHANCE LABORATORY AND SCIENTIFIC SERVICES

Purpose
Protect the public from food borne illnesses, HIV and sexually transmitted infections, and tuberculosis (TB).

Plan
Increase monitoring of all food products imported and exported. Use technology to improve rapid identification of HIV and sexually transmitted infections to enhance prevention activities (contact tracing and treatment) and prevent spread of infection. Use new laboratory tests to better track TB infection and determine appropriate period of isolating contagious individuals.

Milestones
- Develop monitoring protocols for all food products
- Identification of staff to conduct the food testing and/or inspection
- Development of communication plan and protocols on informing producers, retail, consumers, and health officials
- Increase collaboration between state, federal, industry, and academic partners
- Increase collaboration with health care providers and laboratories

STRATEGIC INTENTS, ROWS D – F

D   Address the Social Determinates of Health

"**§321-1 General powers and duties of the department.** (a) The department of health shall have general charge, oversight, and care of the health and lives of the people of the State, and shall pursue as a goal, the achievement of health equity. *The department shall consider social determinants of health in the assessment of state needs for health.*" – Hawaii Revised Statutes, Chapter 321

"Health inequities are unjust and avoidable. In order to reduce health inequities, there is a need to address the wider socioeconomic and structural factors – the conditions in which people are born, live, grow and age – that influence how people become sick, what risk factors they are exposed to, how they access services, and how they use those services. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. Integrated policy approaches are necessary in order to address the complexity of health inequities, including through national social protection floors, which address income security and the goal to establish universal access to health care simultaneously.

Health policy generally, and health equity in particular, to a large extent depend on decisions made in sectors other than health, and are fundamentally linked to several interrelated issues such as governance, environment, education, employment, social security, food, housing, water, transport and energy. It means that health outcomes cannot be achieved by taking action in the health sector alone, and that actions in other sectors are critical. On the other hand, improving health outcomes contributes to achieving goals in other sectors. For example, a healthier population improves the overall level of productivity in the economy, increases employment and thus helps to reduce poverty, and improves school attendance of children. Healthy workers are fundamental for the productivity of businesses and livelihoods. Thus, health is a contributor to as well as an indicator of development."

(Joint statement of the UN Platform on Social Determinants of Health. (n.d.). Retrieved from http://www.who.int/social_determinants/advocacy/health-post-2015_sdh/en/)

E   Use Evidence-based Practices and Make Data-Driven Decisions

"An ever-expanding evidence base, detailing programs and policies that have been scientifically evaluated and proven to work, is available to public health practitioners. The practice of evidence-based public health (EBPH) is an integration of science-based interventions with community preferences for improving population health. The concept of EBPH evolved at the same time as discourse on evidence-based practice in the disciplines of medicine, nursing, psychology, and social work. Scholars in these related fields seem to agree that the evidence-based decision-making process integrates 1) best available research evidence, 2) practitioner expertise and other available

resources, and 3) the characteristics, needs, values, and preferences of those who will be affected by the intervention.

Public health decision making is a complicated process because of complex inputs and group decision making. Public health evidence often derives from cross-sectional studies and quasi-experimental studies, rather than the so-called "gold standard" of randomized controlled trials often used in clinical medicine. Study designs in public health sometimes lack a comparison group, and the interpretation of study results may have to account for multiple caveats. Public health interventions are seldom a single intervention and often involve large-scale environmental or policy changes that address the needs and balance the preferences of large, often diverse, groups of people.

The formal training of the public health workforce varies more than training in medicine or other clinical disciplines. Fewer than half of public health workers have formal training in a public health discipline such as epidemiology or health education. No single credential or license certifies a public health practitioner, although voluntary credentialing has begun through the National Board of Public Health Examiners. The multidisciplinary approach of public health is often a critical aspect of its successes, but this high level of heterogeneity also means that multiple perspectives must be considered in the decision-making process.

Despite the benefits and efficiencies associated with evidence-based programs or policies, many public health interventions are implemented on the basis of political or media pressures, anecdotal evidence, or "the way it's always been done." Barriers such as lack of funding, skilled personnel, incentives, and time, along with limited buy-in from leadership and elected officials, impede the practice of EBPH. The wide-scale implementation of EBPH requires not only a workforce that understands and can implement EBPH efficiently but also sustained support from health department leaders, practitioners, and policy makers."

Jacobs JA, Jones E, Gabella BA, Spring B, Brownson RC. Tools for Implementing an Evidence-Based Approach in Public Health Practice. Prev Chronic Dis 2012;9:110324. DOI: http://dx.doi.org/10.5888/pcd9.110324
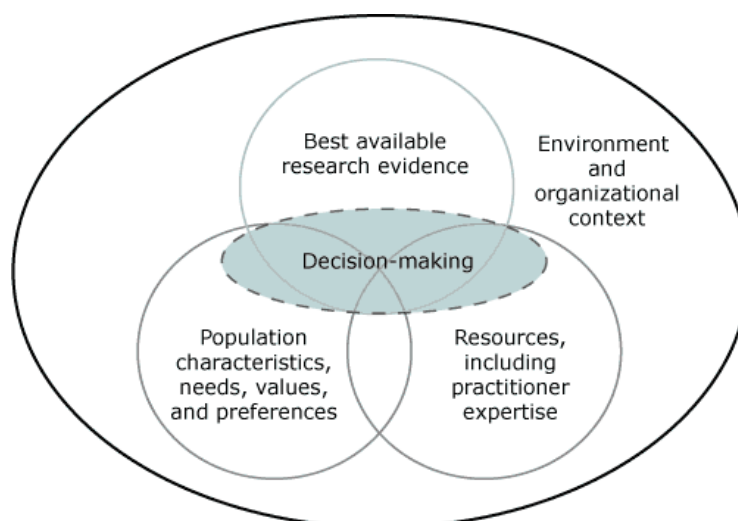
F   Improve Core Business Services and Customer Satisfaction

"Organizational administration and management is the process of organizing, leading, and controlling the efforts of organizational human and other resources to make decisions and achieve organizational goals. Health departments must have a well-managed human resources system, be competent in general financial management, have data management capacity and capability, and be knowledgeable about public health authorities and mandates. And, because of the nature of public health – the focus on the collective good, the employment of government action, and the objective of population-based outcomes – public health leaders need an infrastructure to ensure that decisions, policies, plans, and programs are ethical and address health equity. Health department leaders and staff must be knowledgeable about the structure, organization, and financing of their public health department and other agencies and organizations that provide public health services."

Public Health Accreditation Board. "Standards and Measures, Domain 11: "Maintain Administrative and Management Capacity, Version 1.5." Web. 21 June 2016. http://phaboard.org

Appendix

Resource Document for Strategic Priority A: *Invest in Healthy Babies and Families*

Purpose

This document supplements the Hawaii Department of Health's strategy map and strategic plan, "Make Health Our Shared Value," with additional context, resources, and references. It should not be considered an operational document.

Introduction

On October 3, 2000 our understanding of the importance of the early life of children forever changed. The National Research Council and the Institute of Medicine of the National Academies released From Neurons to Neighborhoods: The Science of Early Childhood Development, an update and synthesis of current scientific knowledge of child development from birth to age five. [1] This document explores and explains critical concepts and organizing principles to guide investments in a child's early years to maximize the potential for children to be healthy and thriving throughout school and their adult lives.

In 2007, the National Scientific Council on the Developing Child brought together cross sector leaders in the field of pediatrics, neuroscience, the economy and child development to review literature in their respective fields with the objective of moving beyond the most recent study to a cumulative knowledge base from which policy recommendations could be drawn. The recommendations highlighted the need to address significant inequalities in opportunity, beginning in the earliest years of life, noting it is both a fundamental moral responsibility and a critical investment in our nation's social and economic future.
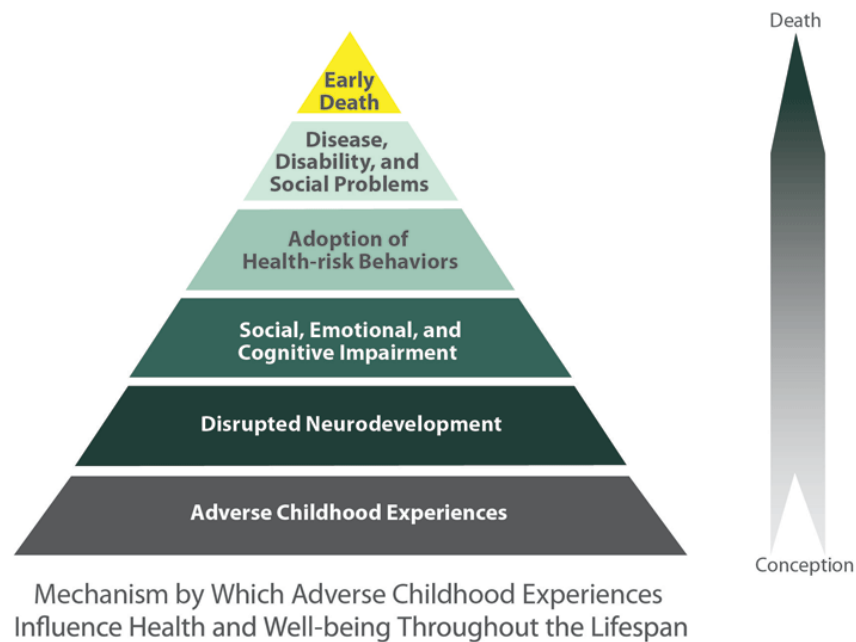
Critical Concept 1: Adverse Early Childhood Experiences (ACES)

Advances in neuroscience, molecular biology, and genomics are converging on three compelling conclusions: (1) early experiences are built into our bodies; (2) significant adversity early in life can produce physiological disruptions or embedded biological "memories" that undermine the development of the body's stress response systems and affect the developing brain, cardiovascular system, immune system, and metabolic regulatory functions; and (3) these physiological disruptions can persist far into adulthood and lead to lifelong impairments in both physical and mental health.

These broadly accepted scientific principles send two clear and powerful messages to decision-makers who are searching for more effective ways to improve the health of the nation. First, health promotion and disease prevention policies focused on adults would be more effective if evidence-based investments were also made to strengthen the foundations of health in the prenatal and early childhood periods. Second, the increasing prevalence of chronic disease across the life course could be lowered by reducing the number and severity of Adverse Childhood Experiences threatening the well-being of young children and by strengthening the protective relationships that help mitigate the harmful effects of toxic stress. [2]

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1 http://www.naeyc.org/resources/research/fromNeurons
2 Center on the Developing Child at Harvard University (2010). The Foundations of Lifelong Health Are Built in Early Childhood. http://www.developingchild.harvard.edu

Mechanism by Which Adverse Childhood Experiences
Influence Health and Well-being Throughout the Lifespan

https://www.cdc.gov/violenceprevention/acestudy/about.html

ACEs can be prevented through education and interventions at individual, family, and community levels. ACEs are categorized into three groups: abuse, neglect, and family/household challenges, the extent of which is determined in large part by a standardized questionnaire referring to the respondent's first 18 years of life.[3]

- Abuse
    - Emotional abuse: A parent, stepparent, or adult living in your home swore at you, insulted you, put you down, or acted in a way that made you afraid that you might be physically hurt.
    - Physical abuse: A parent, stepparent, or adult living in your home pushed, grabbed, slapped, threw something at you, or hit you so hard that you had marks or were injured.
    - Sexual abuse: An adult, relative, family friend, or stranger who was at least 5 years older than you ever touched or fondled your body in a sexual way, made you touch his/her body in a sexual way, attempted to have any type of sexual intercourse with you.
- Household Challenges
    - Mother treated violently: Your mother or stepmother was pushed, grabbed, slapped, had something thrown at her, kicked, bitten, hit with a fist, hit with something hard, repeatedly hit for over at least a few minutes, or ever threatened or hurt by a knife or gun by your father (or stepfather) or mother's boyfriend.
    - Household substance abuse: A household member was a problem drinker or alcoholic or a household member used street drugs.
    - Mental illness in household: A household member was depressed or mentally ill or a household member attempted suicide.
    - Parental separation or divorce: Your parents were ever separated or divorced.
    - Criminal household member: A household member went to prison.
- Neglect

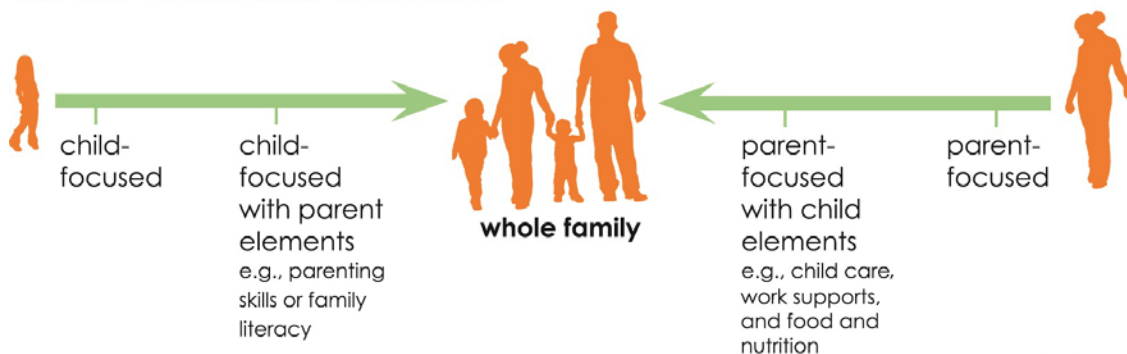[3] https://www.cdc.gov/violenceprevention/acestudy/index.html

- o Emotional neglect: Someone in your family helped you feel important or special, you felt loved, people in your family looked out for each other and felt close to each other, and your family was a source of strength and support.
- o Physical neglect: There was someone to take care of you, protect you, and take you to the doctor if you needed it[2], you didn't have enough to eat, your parents were too drunk or too high to take care of you, and you had to wear dirty clothes.

Critical Concept 2: The Two-Generation Approach ('Ohana Nui')

For many years policy makers and providers of direct services have known that in order to be effective in changing child wellbeing outcomes the needs of the child must be addressed in the context of their family and community. But too often funding and programs are not designed to reflect what we know to be successful. Programs serve either the child or an adult. The Two Generation Approach, which has been fostered by the Aspen Institute and others like the Annie E. Casey Foundation, makes the case for creating opportunity for families by addressing the needs of parents and their children simultaneously. *Creating Opportunity for Families: A Two-Generation Approach* describes a new approach to reducing poverty, which calls for connecting low-income families with early childhood education, job training and other tools to achieve financial stability and break the cycle of poverty — and recommends ways to help equip parents and children with what they need to thrive.

In Hawaii, under the leadership of the Department of Human Services and Department of Health, this approach is called 'Ohana Nui, or our Larger Family.

The Two-Generation Continuum

child-focused | child-focused with parent elements e.g., parenting skills or family literacy | whole family | parent-focused with child elements e.g., child care, work supports, and food and nutrition | parent-focused

Schools and early-education, home-visiting and job-training programs are just some of the existing platforms that offer opportunities to factor in the needs of parents and children at the same time.[4]

- *A child raised in poverty is more likely to become an adult living in poverty — less likely to graduate from high school or remain consistently employed.[5]*
- *Forty-two percent of children born to parents at the bottom of the income ladder stay there.[6]*

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[4] http://www.aecf.org/resources/creating-opportunity-for-families
[5] Ratcliffe, C., & McKernan, S.-M. (2012, September). *Child poverty and its lasting consequence* (Low-Income Working Families Paper No. 21). Washington, DC: The Urban Institute. Retrieved August 2014, from www.urban. org/UploadedPDF/412659
[6] Isaacs, J. B. (2008, February). Economic mobility of families across generations. In J. B. Isaacs, I. V. Sawhill, & R. Haskins, *Getting ahead or losing ground: Economic mobility in America* (pp. 15–26). Washington, DC: The Brookings Institution.

Critical Concept 3: Health in All Policies

Health in All Policies (HiAP) is a collaborative approach to improving population health by incorporating health considerations into decision-making across sectors and policy areas. HiAP is response to increasingly siloes of government structures, rising healthcare costs, growing inequities, and growing awareness of the impact of the social determinants of health. [7] This interrelationship is visually show below.

Effective health promotion and disease prevention depend on more than access to high-quality medical care. A wide range of service systems could improve outcomes significantly by applying a unified scientific understanding of the early childhood origins of health, learning, and behavior across multiple sectors. In other words, child welfare agencies could help prevent adult physical and mental health impairments, not just provide immediate child protection. Zoning and land-development policies could facilitate improved population health (and reduced health care costs), not just generate commercial profit. High-quality early care and education programs that buffer young children from excessive stress could promote health and prevent disease, not just prepare the children to succeed in school.[8]

An example of HiAP is provided below with the graphic "Healthy Policies for a Healthy Hawaii," which was derived from a series of community and stakeholder planning meetings representing over 140 entities in 2015. The illustration represents what a healthful environment looks like when supported by prevention-oriented policies, economic incentives, and health-literate individuals and families.

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7 http://www.phi.org/focus-areas/program=health-in-all-policies

8 Center on the Developing Child (2010). The Foundations of Lifelong Health (InBrief). Retrieved from www.developingchild.harvard.edu
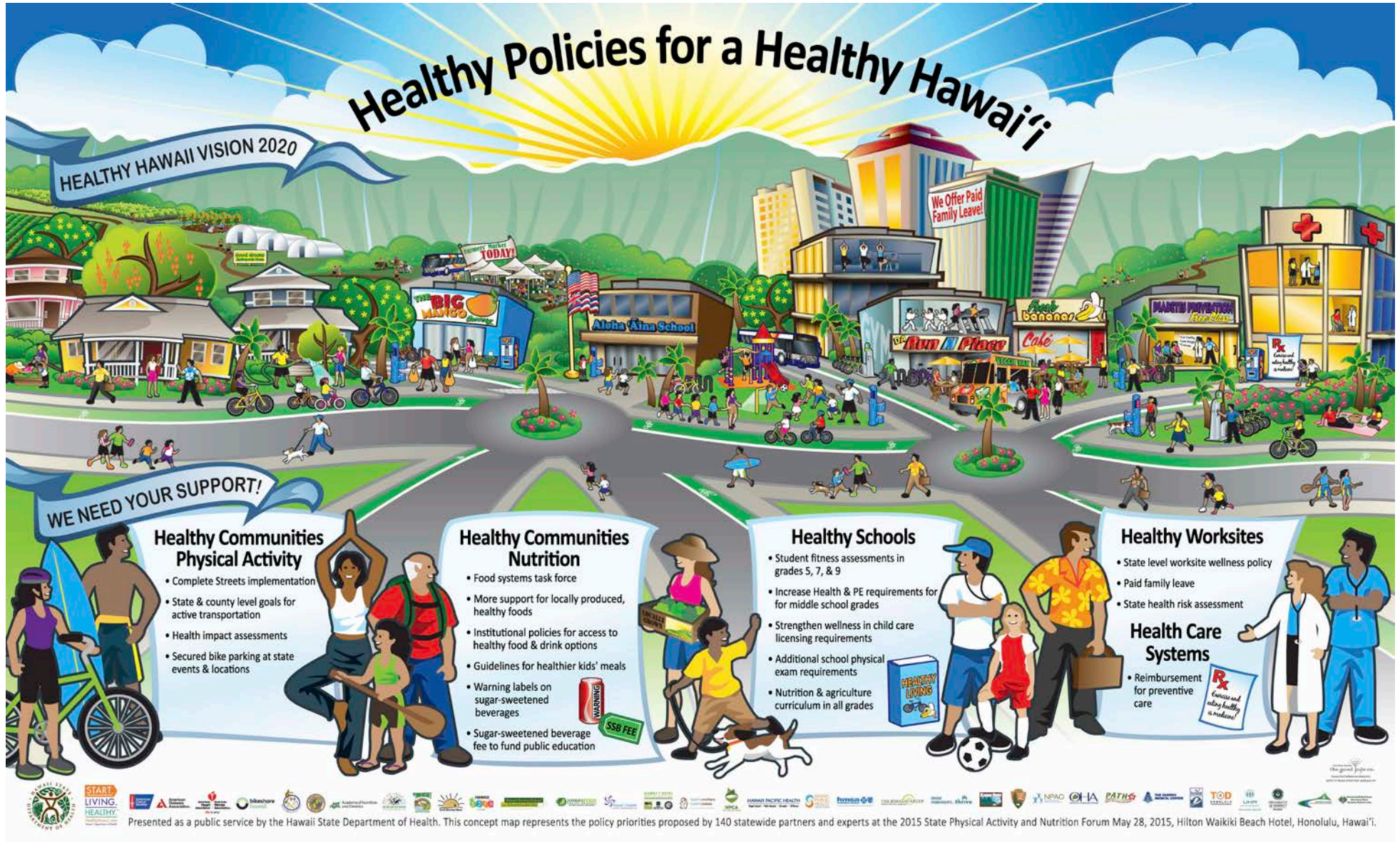
Critical Concept 4: Social Determinants of Health

Social determinants of health are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. Resources that enhance quality of life can have a significant influence on population health outcomes. Five commonly accepted determinants are:

Economic Stability
- Poverty
- Employment
- Food Security
- Housing Stability

Education
- High School Graduation
- Enrollment in Higher Education
- Language and Literacy
- Early Childhood Education and Development
- Social and Community Context

Social Cohesion
- Civic Participation
- Discrimination
- Incarceration

Health and Health Care
- Access to Health Care
- Access to Primary Care
- Health Literacy

Neighborhood and Built Environment
- Access to Healthy Foods
- Quality of Housing
- Crime and Violence
- Environmental Conditions

Examples of these resources include safe and affordable housing, open space and parks, access to quality early care and education, public safety, availability of healthy foods, health services, and environments free of life-threatening toxins.
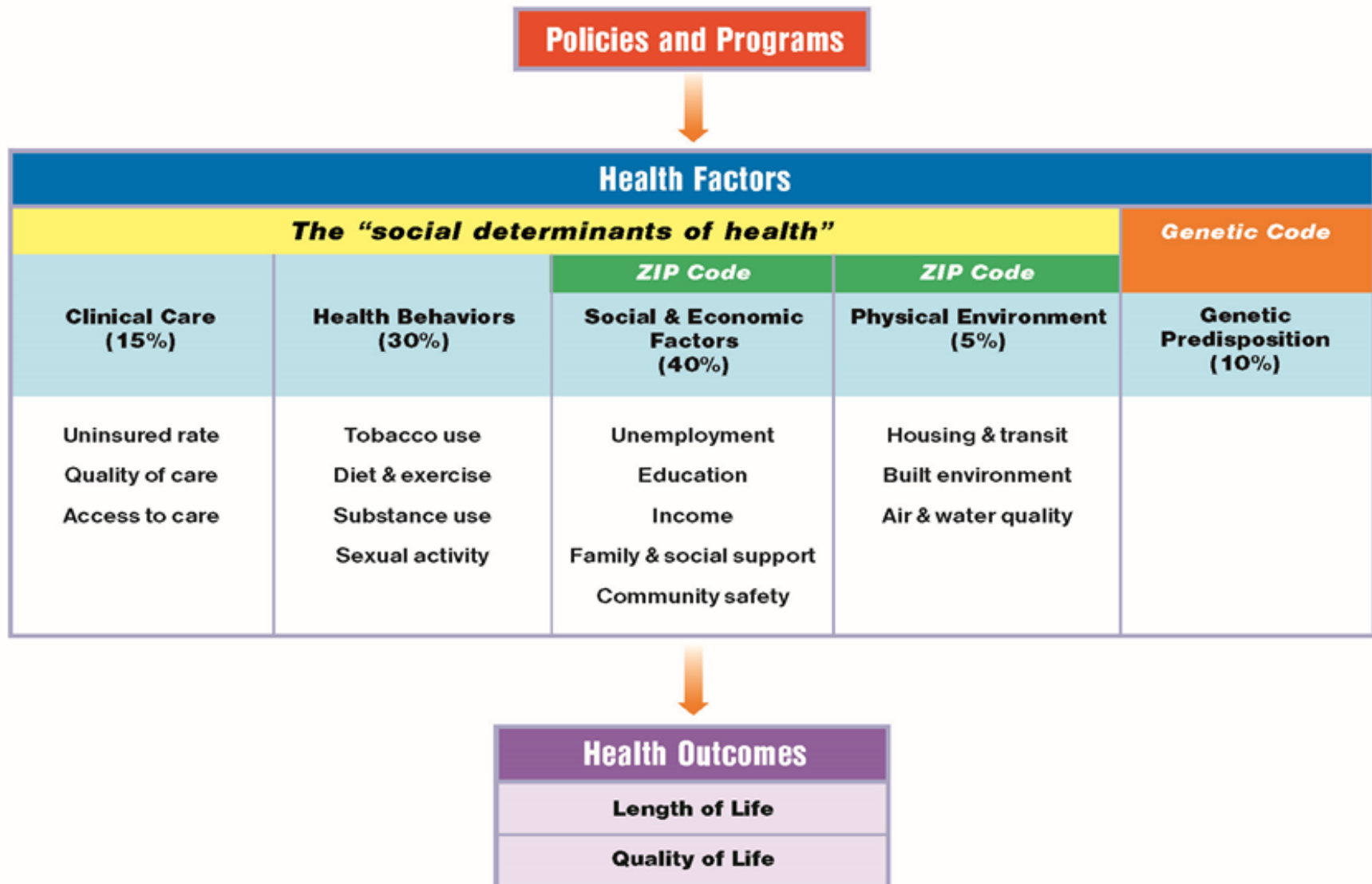
Critical Concept 5: Life Course Approach

The Health Resources Services Administration (HRSA) stresses the importance of the life course approach to conceptualizing health care needs and services. The approach evolved from research documenting the important role early life events play in shaping an individual's health trajectory. The interplay of risk and protective factors, such as socioeconomic status, toxic environmental exposures, health behaviors, stress, and nutrition, influence health throughout one's lifetime.

The emerging science on gene-environment interactions touches on several aspects of public health, including health disparities, fetal origins of adult disease, and outcomes related to prenatal and preconception health and health care. Since introduced, life course has become a prominent framework for conceptualizing health, and scholars and practitioners are exploring application to maternal and child health practice. [9]

The graphic below illustrates the interplay of risk and protective factors along an individual's life span and the potential outcomes.

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[9] http://mchb.hrsa.gov/lifecourse
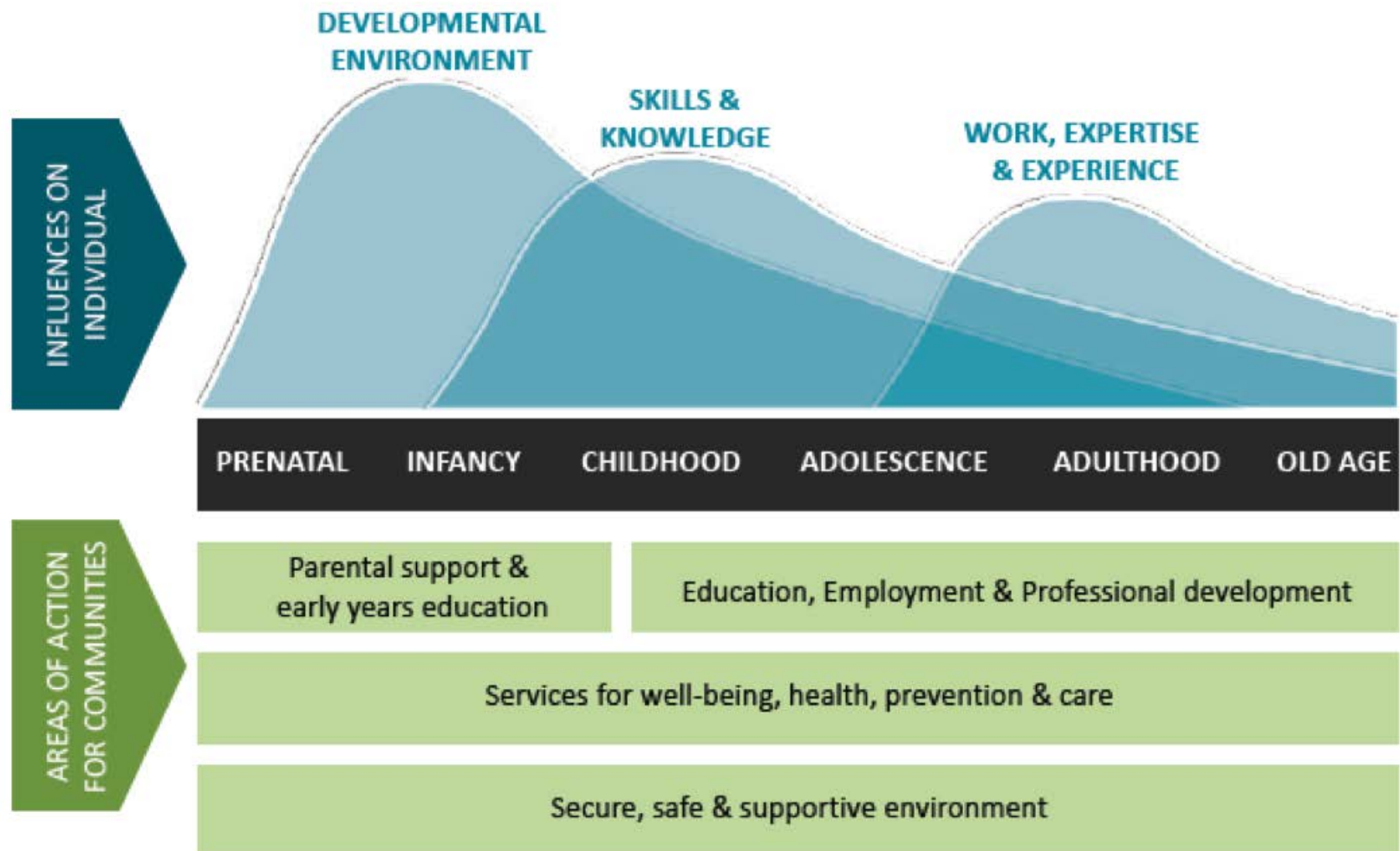
Other Useful Concepts

The Protective Factor Framework
Using the Strengthening Families Approach, more than 30 states are shifting policy, funding and training to help programs working with children and families build protective factors with families. Many states and counties also use the Protective Factors Framework to align services for children and families, strengthen families in the child welfare system and work in partnership with families and communities to build protective factors. [10]

The Five Protective Factors are: parental resilience, social connections, concrete support in times of need, knowledge of parenting and child development, and social and emotional competence of children. Research studies support the common-sense notion that when these Protective Factors are well established in a family, the likelihood of child abuse and neglect diminishes.

Research studies support the common-sense notion that when these Protective Factors are well established in a family, the likelihood of child abuse and neglect diminishes. Research shows that these protective factors are also "promotive" factors that build family strengths and a family environment that promotes optimal child and youth development.

Parental Resilience

No one can eliminate stress from parenting, but a parent's capacity for resilience can affect how a parent deals with stress. Resilience is the ability to manage and bounce back from all types of challenges that emerge in every family's life. It means finding ways to solve problems, building and sustaining trusting relationships including relationships with your own child, and knowing how to seek help when necessary.

Social Connections

Friends, family members, neighbors and community members provide emotional support, help solve problems, offer parenting advice and give concrete assistance to parents. Networks of support are essential to parents and also offer opportunities for people to "give back", an important part of self- esteem as well as a benefit for the community. Isolated families may need extra help in reaching out to build positive relationships.

Concrete Support in Times of Need

Meeting basic economic needs like food, shelter, clothing and health care is essential for families to thrive. Likewise, when families encounter a crisis such as domestic violence, mental illness or substance abuse, adequate services and supports need to be in place to provide stability, treatment and help for family members to get through the crisis.

Knowledge of Parenting and Child Development

Accurate information about child development and appropriate expectations for children's behavior at every age help parents see their children and youth in a positive light and promote their healthy development. Information can come from many sources, including family members as well as parent education classes and surfing the internet. Studies show information is most effective when it comes at the precise time parents need it to understand their own children. Parents who experienced harsh discipline or other negative childhood experiences may need extra help to change the parenting patterns they learned as children.

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[10] http://strengtheningfamiliesga.net

<u>Social and Emotional Competence of Children</u>

A child or youth's ability to interact positively with others, self-regulate their behavior and effectively communicate their feelings has a positive impact on their relationships with their family, other adults, and peers. Challenging behaviors or delayed development create extra stress for families, so early identification and assistance for both parents and children can head off negative results and keep development on track.

Evidence Based Practices and Metrics and their Measurement
Evidence Based Practices and Metrics and their Measurement go hand in hand.
Improvements in data tracking and reporting, contract design and monitoring, coordinating funding and programs across divisions and branches of the Department of Health to minimize duplication and maximize resources. The business of health care has changed dramatically in the last decade and even more rapidly since passage of The Affordable Care Act. These changes will require investments in infrastructure. In light of the priorities outlined in the plan the DOH will reassess staffing patterns and workforce development with a stronger focus on coordination of young children's physical and social emotional development across divisions and branches.

Public Awareness and Improved Access through Technology
New technologies have the potential to extend the reach of health professionals while improving quality and efficiency and reducing costs. Technology can also help to level the playing field by using data to effectively address the social determinants of health that are impacted by geography, economic capacity, language and culture (i.e. use of social media and telehealth).

Center for the Scientific Study of the Developing Child Recommendations
- Policy initiatives that promote supportive relationships and rich learning opportunities for young children create a strong foundation for higher school achievement followed by greater productivity in the workplace and solid citizenship in the community.
- Substantial progress toward this goal can be achieved by assuring growth-promoting experiences both at home and in community- based settings, through a range of parent education, family support, early care and education, preschool, and intervention services.
- When parents, informal community programs, and professionally staffed early childhood services pay attention to young children's emotional and social needs, as well as to their mastery of literacy and cognitive skills, they have maximum impact on the development of sturdy brain architecture and preparation for success in school.
- When basic health and early childhood programs monitor the development of all children, problems that require attention can be identified in a timely fashion and intervention can be provided.
- The basic principles of neuroscience and the technology of human skill formation indicate that later remediation for highly vulnerable children will produce less favorable outcomes and cost more than appropriate intervention at a younger age.
- The essence of quality in early childhood services is embodied in the expertise and skills of the staff and in their capacity to build positive relationships with young children. The striking shortage of well- trained personnel in the field today indicates that substantial investments in training, recruiting, compensating, and retaining a high quality workforce must be a top priority.
- Responsible investments in services for young children and their families focus on benefits relative to cost. Inexpensive services that do not meet quality standards are a waste of money. Stated simply, sound policies seek maximum value rather than minimal cost. [11]

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[11] Closing the Gap Between What We Know and What We Do, National Scientific Council Center on the Developing Child at Harvard University, 2007

Health Impact Assessment: Stories from the Field
The Health Impact Assessment (HIA) website contains success stories from health departments using HIA in collaboration with urban planning professionals to develop healthier places. HIA helps public and planning professionals evaluate the potential health effects of a plan, project, or policy before it is built or carried out. HIA brings potential public health impacts and considerations to the decision-making process for plans, projects, and policies that fall outside of traditional public health topics, such as transportation and land use.

Pregnancy Intention and Its Relationship to Birth and Maternal Outcomes, OBSTETRICS AND GYNECOLOGY 109(3):678-86 · MARCH 2007

The rationale for inclusion of each of the seven health behaviors and how healthy levels of behavior were defined is described here. Proper nutrition prior to conception and during pregnancy has been shown to improve pregnancy outcomes [9–14], and daily fruit and vegetable consumption is recommended by the American Dietetic Association for preconceptional and pregnant women [15]. Thus, we considered consumption of fruit and vegetables at least once daily as healthy preconception behaviors. Folic acid supplementation has been shown to reduce the risk of neural tube defects [16, 17]. The March of Dimes [18], the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists (AAP/ACOG) [19], the Institute of Medicine [20], and the U.S. Public Health Service [21] recommend daily use of a multivitamin containing 400 mcg of folic acid in women capable of reproduction; we thus considered daily consumption of a multivitamin with folic acid as a healthy preconception behavior.

Physical activity in the preconception period is important for achieving and maintaining a healthy weight, as maternal obesity is associated with numerous pregnancy-related complications [22]. Exercise has also been shown to decrease the risk of postpartum weight retention [23]. For healthy women before, during, and after pregnancy, ACOG recommends exercise at least 30 min a day on most, if not all, days of the week [23]; we thus used these guidelines as our definition of healthy preconception physical activity. Adverse effects of alcohol likely occur early in pregnancy (before a woman realizes she's pregnant) and no established safe level of alcohol consumption during pregnancy has been established. Alcohol is associated with preterm birth, miscarriage, growth retardation, and the fetal alcohol syndrome, making it the leading preventable cause of birth defects and developmental disabilities in the United States [24–27]. In view of the high prevalence of binge drinking (five or more drinks on an occasion) in the sample, we defined the absence of binge drinking in the past month as a healthy preconception behavior. Smoking has also been associated with numerous maternal and fetal complications, such as low birthweight, preterm birth, and intrauterine growth retardation [28–31]; we thus considered abstinence from smoking as a healthy preconception behavior. Vaginal douching was included since evidence suggests an association with preterm birth and adverse pregnancy outcomes [32, 33]. No douching in the past 12 months was considered a healthy preconception behavior. For each of the seven behaviors, it was determined whether women were engaging in healthy levels of behavior at the baseline and follow-up time points.

Effects of Prenatal Exposure

Table 2: Potential Effects of Prenatal Exposure to Alcohol, Tobacco, and Common Illicit Drugs	
Substance	Possible Effects
Alcohol	Preterm birth, spontaneous abortion and stillbirth; Fetal Alcohol Spectrum Disorders, the most serious of which is Fetal Alcohol Syndrome which may include: facial anomalies, growth retardation, below average intelligence, impairment of memory and attention, serious behavioral difficulties, and congenital abnormalities
Tobacco	Premature birth, miscarriage, increased risk of sudden infant death syndrome (SIDS), impairment of fetal nutrition and growth, reduction in blood flow and oxy- gen to the fetus, birth defects, pathologic changes in the lungs of the fetus and in the fetal brain, cognitive and neurobehavioral deficits
Marijuana	Neurological development problems, attention and memory problems, problem- solving deficits
Methamphetamine	Neurobehavioral patterns of decreased arousal, lethargy, increased CNS stress, poor quality of movement, effect on verbal memory network
Cocaine	Pre-term delivery, possible low birth weight, small head circumference, growth retardation, possible neurobehavioral deficits, deficits in cognitive performance with differences between genders
Heroin	Possible low birth weight, prematurity, neurodevelopmental impairment, Neonatal Withdrawal Syndrome
Prescription Opioids	Neonatal Withdrawal Syndrome, possible impairment of learning and memory, birth defects
Benzodiazepines	Evidence of birth defects, cognitive deficits in animals, withdrawal syndrome in humans