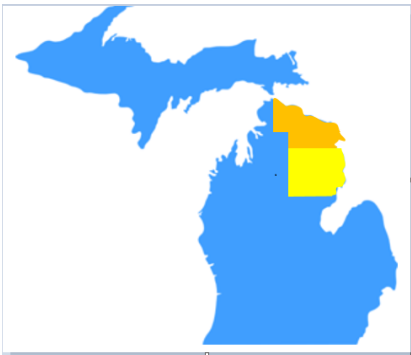# Public Health Sustainability – Creating Resilient Communities when Facing **A**vian Influenza to **Z**ika

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Health Officer

North-East Michigan

Objectives

- Participants will understand the decision making framework of sustainability.

- Participants will identify the structure of Incident Command; and understand the necessity of preparedness and timely, seamless implementation.

- Participants will be able to explain the pros and cons of Cross Jurisdictional Sharing, and how Cross Jurisdictional Sharing positively impacts community resiliency.

Introduction

- <u>Experience:</u>
  - Public Health Leadership - 22 years
    - Health Officer for two District Health Department (Eight rural counties in North East Michigan)
    - Kent County Health Department – 18 years (Supervisor - Communicable Disease Investigations,   STIs, HIV, & TB)
    - Adjunct Faculty/Davenport University – concurrent eight years: Biometrics, Anatomy, Medical Law & Ethics

- <u>Education:</u>
  - Michigan State University: Bachelors - Health Education, Kinesiology and Biology
  - Masters in Public Administration – Health Policy and Certified Masters - Sustainability
 - CDC: Disease Intervention Specialist (DIS)

District Health Department No. 2

- Consists of Alcona, Iosco, Ogemaw and Oscoda Counties
  - Total population of 67,168 (U.S. Census)
  - Average of 32.5% of children live in poverty (State of Michigan at 23%)
  - Average unemployment of 10.5% (State of Michigan at 7.3%)
  - Average of 20% of Adults and 6.5% of Children are uninsured.
  - Average Median Household Income $35,875.00 (Michigan $49,800.00)
  - DHD2 Service area deemed a Low Health Care Provider Service Area.

District Health Department No. 4

- Consists of Alpena, Cheboygan, Montmorency, and Presque Isle Counties
  - Total population of 78,891 (U.S. Census)
  - Average of 28% of children live in poverty (State of Michigan at 23%)
  - Average unemployment of 11% (State of Michigan at 7.3%)
  - Average of 19.25% of Adults and 6.25% of Children are uninsured.
  - Average Median Household Income $39,350.00 (Michigan $49,800.00)
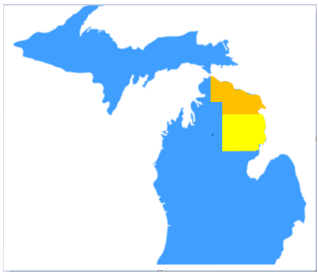
Public Health Sustainability Motto

"We the willing

Lead by the unknowing

Have been doing the impossible

For the ungrateful

We have done so much

For so long

With so little

We are now qualified to do
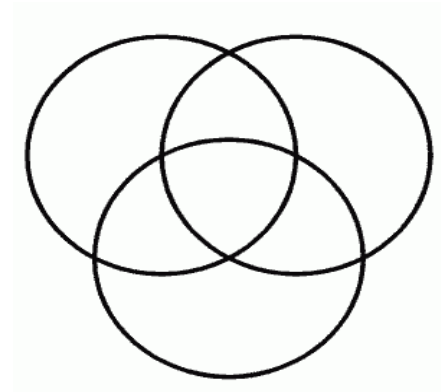
Anything with nothing."

By: Unknown

Sustainability

We cannot hope to create a sustainable culture with any but sustainable souls."

~ Derrick Jensen, *Endgame, Vol. 1: The Problem of Civilization*

Connecting the Triple Bottom Line:
♦ Economic ♦ Social & ♦ Environmental

Decisions making frame work fundamentally lies within the relationship of these three concepts.

Sustainability

- Definition: Sustainability is a "set of effective and efficient actions taken by an organization to ensure the economic stability, growth, and financial success with the most positive societal outcomes and the least negative environmental impact" (Alibasic, 2013).

- Application: "We must commit principles of sustainability, where the interdependency of the triple bottom line, fundamentally is the decision framework tied to all policy, budget and program decisions" (Alibasic, 2013).

Alibasic, Haris. (2013). *Application of Sustainability Principles to a Community Workshop.* GVSU.

Elements of Sustainability

- Built environment
- Energy
- Water supply
- Wastewater
- Stormwater
- Natural environment
- Transportation
- Food production/agriculture
- Solid waste
- Economics
- Public engagement and education
- Effective and passionate team leader

Coyle. S.J. (2011). *Sustainable and resilient Communities: A comprehensive action plan for towns, cities, and regions.* Hoboken, New Jersey: John Wiley & Sons, Inc.
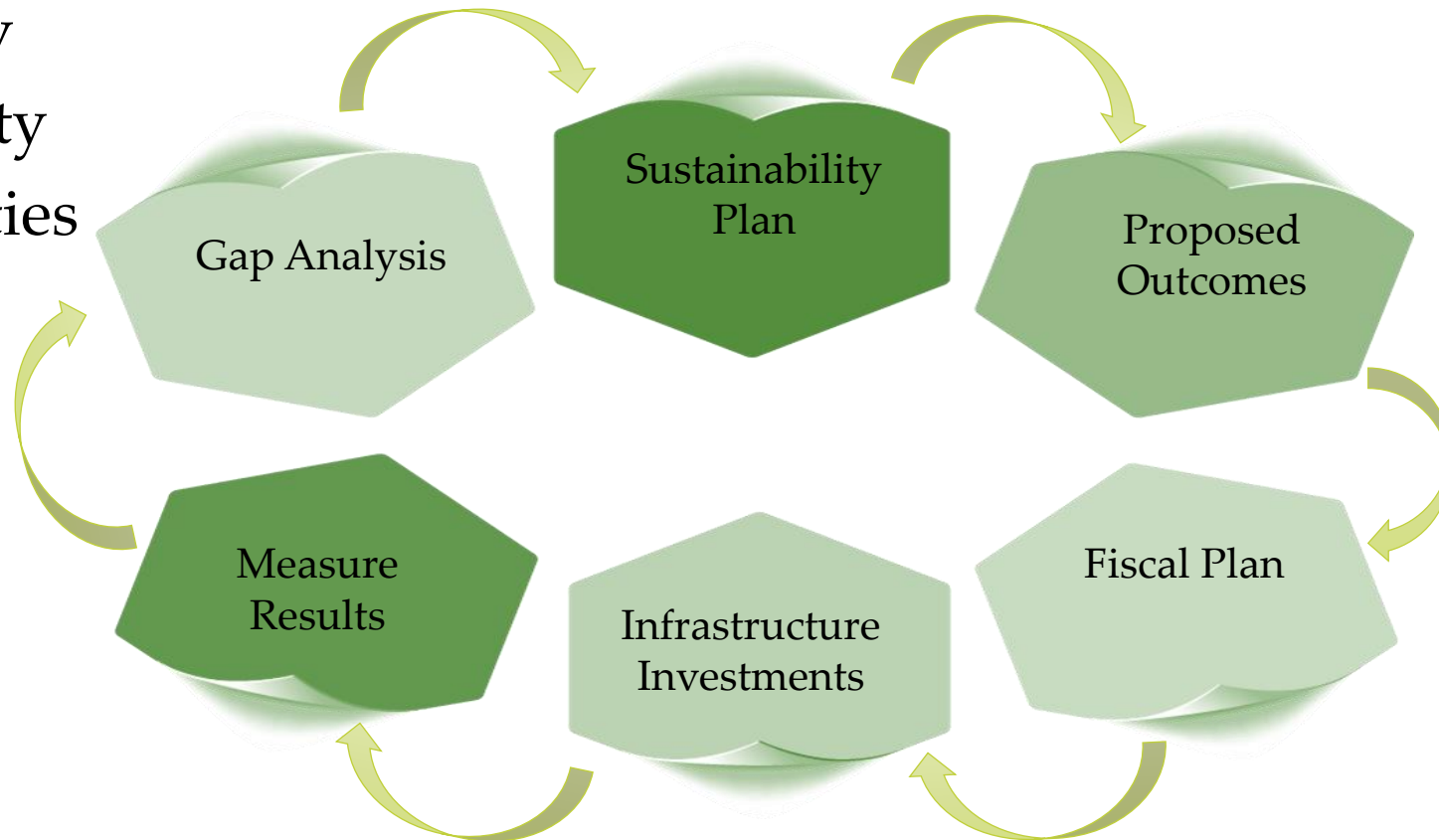
Picture credit: Bryan, D.

Think Public Health 3.0 / PHAB

- Strategic Planning
- Workforce Development
- CHA and CHIP
- Staff and community engagement
- Performance Management with dashboard/data
- Cross Jurisdictional Sharing

Sustainability Planning - Annual

- Plan-Do-Study-Act
- Transparency
- Accountability
- LEAN activities

Sustainability Planning

- 1. A stable community is derived from stable businesses.

- 2. Imperative to track, measure and report progress.

- 3. Citizen engagement.

(Alibasic, Workshop, May 2013)

Operational Goals

- To reduce transmission of communicable disease.

- Improve health for women of childbearing age, pregnant women and children.

- Improve access to health care.

- Reduce preventable illnesses, injuries, and deaths in children and adults.

Strategic Plan, 2013.

Operational Goals

- Create efficient and effective public health emergency response which is timely and responsive to mitigate loss of life and property damage. Enhancing organization and community resiliency.

- Recognize the direct correlation of a healthy environment (land, water and air) positively impacting human health.

- To provide protection against vaccine-preventable diseases through the administration of vaccines and the assurance of effective immunization coverage levels.

- Transparency and accountability in all financial matters and responsible stewardship of assets and resources.

Strategic Plan, 2013.

Economic Metrics:

ECO 1 – Strong Economy/Sustainability

ECO 1.1 Outcome: <u>Financial Management.</u>

- All Divisions are responsible for the management of their budgets. Finance Department is additionally held accountable for ensuring that revenue and expenses are managed in a transparent, accountable and responsible manner.

Economic Metrics

- Target 1: Ensure that all operating and budgeting practices recognize the full cost of services by September 30, 2018.

- Target 2: Decrease reliance on General Fund dollars by 5% annually.

- Target 3: Increase State-cost sharing revenue to 50% contribution for all mandated Services by September 30, 2018.

- Target 4: Cost of service per resident will decrease in each of the four departments by 2% annually.

ECO 2.0 Outcome: Increase employee skills and performance in delivering services.

To best serve our clients, employees are adequately trained and participate in quality improvement strategies.

- Target 1: Ensure 100% of employees complete the required organization orientation, the program training, and all Emergent Preparedness NIMS modules by the completion of probation on an annual basis.

- Target 2: Ensure 100% of all newly hired employees complete a cultural competency training within one year of hire date annually.

SOC 1 – Healthy Lifestyles and Healthy Environment

Soc 1.1 Outcome: Increase and maintain human health and wellness.
 Healthy residents create a healthy community. Every resident, regardless of social-economic status has the right to have access to health care and live in a manner to optimize their health and well-being.

- Target 1: Decrease low birth weight and prematurity by 10% by September 30, 2018.

- Target 2: Reduce infant mortality rate in all counties below the State rate by September 30, 2018.

ENV 1 - Energy and Climate Protection

- **ENV 1.1 Outcome: Reduce greenhouse gas emissions (carbon footprint) and impact on climate change.**
The impact of climate change has already made an impact. We must take steps to mitigate the effects of human-caused GHG emissions, while adapting to climate change and creating effective emergent response plans that will promote community resiliency.

- Target 1: Create baseline for calendar year 2018 of GHG emissions. Compare annually and create strategy to reduce the GHG emissions by 2% annually.

- Target 2: Decrease the total vehicle miles traveled by employees by at least 5% annually by September 30, 2014.

- Target 3: Reduce total direct and indirect CO_2 emission by 5,000 metric tons by September, 30, 2018.

Emergency Preparedness

- Preparedness efforts must be in place to mitigate loss of life and property:
- Climate Change with weather related events
- Global and Domestic Terrorist Acts
- Pandemic and Cluster Disease Outbreaks
  - Zika

Emergency Preparedness

- Federal, State and Local Preparedness Responses
  - Clear Roles and Responsibilities

- Plans

- Exercises

- Collaborative Partnerships - MOUs

- Media

Incident Command

"The Incident Command System (ICS) is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. ICS is normally structured to facilitate activities in FIVE MAJOR FUNCTIONAL AREAS: COMMAND, OPERATIONS, PLANNING, LOGISTICS, INTELLIGENCE & INVESTIGATIONS, FINANCE, AND ADMINISTRATION.

It is a fundamental form of management, with the purpose of enabling incident managers to identify the key concerns associated with the incident—often under urgent conditions—without sacrificing attention to any component of the command system."

Picture credit: J. Groom/KCHD

Source: FEMA

District Health Department No. 2 & 4

- Weapons of mass destruction And Threats to Community Health (WATCH) Team: Core group of staff (Incident Command Structure) leading the response to a public health issue/situation.
  - Typically includes: Health Officer, Epidemiologist, Emergency Preparedness Coordinator, Public Information Officer, Nursing Director, Environmental Health Director, Subject Matter Experts and Clerical Support.

Avian Influenza Outbreaks in North America

2002 Virginia

2003 New York

2004 Canada and Texas

2014-2015 Twenty-One (21) States and Canada.

2016 Indiana

2017 – Tennessee and Alabama (maybe)

Source: CDC

Avian Influenza

- In March 2017, two locations in Tennessee, which are commercial suppliers, have tested positive (Tennessee Department of Agriculture).

- March 14, 2017 – Alabama issues Stop Movement Order on certain poultry as three investigations are on-going in Northern Alabama (Alabama Department of Agriculture and Industries).

- In 2015, several states, including Michigan, cancelled all exhibits of waterfowl and domestic poultry because of avian flu outbreak. (includes county fairs)

Public Health Challenges

- 2002 Nicotine Poisoning (Kent County) – Second Largest Poisoning event in the history of the USA.

- 2008 – Dr. Stokes exposed 13,000 patients to unsanitary equipment and reused sutures etc. (Kent County).

- 2009 - H1N1 Influenza Mass Vaccination Clinics (Michigan/National)

- 2013 - Historical Flood Event (Kent County)

- 2016 – Chemical Contamination (PFAS) of ground water wells from Air Force Base (Iosco County)

- 2017 – Frozen Strawberry Recall (Michigan/National)

Zika in Michigan

- As a State, Michigan is considered "Low Risk" for mosquito transmission of the virus. Mosquitos that spread the disease have just recently been found in Michigan. (One species) Many have not been found in Michigan yet.

- Primary transmission in Michigan is travel/sexual transmission.

- (March 2017) There have been 73 identified cases in Michigan, including three (3) pregnant women.

- Prevention funding will result in high return on investment ratio.

Source: Michigan Department of Health and Human Services.

Community Resiliency

- Resiliency planning takes into consideration emergency preparedness, energy planning, health and safety issues.

- "Bouncing back" on complex issues that may be require a long term response and recovery based on multi-agency involvement with limited and/or changing revenue allocation.

- Zika – perfect example of long term needs, multi-agency involvement with financial limitations.

- Leaders often need to "defend" slow recovery and negative impacts to health consequences, loss of life, and repairing infrastructure.

Alibasic (2013). Local Governments Must Take Charge of Building Resilient Communities.

Stakeholders

- According to Coyle (2011), "public involvement in the process is imperative" (p.38).

- Doppelt (2010) advises, "look for your champion/s" (p.2).

- Seek diversity! Engagement of the stakeholders should be done early in the process and be inclusive to existing partners, but also put considerable effort into forming new alliances that perhaps have been previously unrepresented.

- Utilization of social media, waiting room brainstorming boards that request public comment, surveys, employee meetings and formal presentation of work group work data and actions plans, summaries, and education sessions on topics by subject matter experts.

Local vs. Regional Approach

- Know who has the authority to make decisions
- Timelines lengthen the larger the scope
- Potential to gain expertise and resources
- Monitor data integrity
- Competing agendas with broader scope so ensure buy-in and accountability

Spectrum of Cross-Jurisdictional Sharing

Informal ← → Formalized

- Informal and Customary Arrangements – "Handshake, MOU, Coordination

- Service-Related Arrangements – Mutual Aid, Lease of staff time

- Shared Function and Joint Oversight – Joint Projects, Shared capacity

- Regionalization – Creation of a new local public health entity by merging two or more existing local public health (LPH) agencies. Consolidation of one or more LPH into an existing LPH agency.

Cross Jurisdictional Sharing

- Fragility of our economy
- Competitiveness for funding in political environment
- Collective voice
- Leveraging resources and expertise
- Rethinking our Boundaries

K. Fozley, Oakland County

Determining and Distributing Costs of Shared Public Health Services

- By Center for Sharing Public Health Services (April 2015)

- "CJS capabilities and services demands careful attention to costs. Each jurisdiction must measure and evaluate the relevant costs; distribute costs equitably."

Northern Michigan Public Health Alliance

- Our mission is to develop, implement and sustain models of shared public health services that increase capacity, contain costs, maximize assets and more effectively impact health outcomes in the 25 counties served by six local health departments.
- The Alliance's Strategic Plan for 2015-2017 includes an explicit goal to conduct CHNA/CHIP on a regional basis in partnership with hospitals and other community partners.
- Six local health departments (LHDs) form the core of the cross-sector Alliance. It operates with a Memorandum of Understanding signed by the Chairs of six Boards of Health and a Charter signed by their Health Officers, who form the Alliance Steering Committee.
- Contiguous 16-county region representing nearly 400,000 residents of rural Northern Michigan.

This is Sustainability:

- Cost effective
- Connected
- Harmony
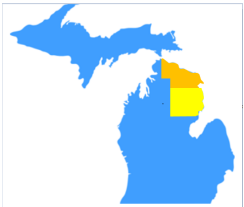- Ethical and value-driven
- Proactive
- Resilient

Questions

Contact Information

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Public Health
Prevent. Promote. Protect.

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