Development of a Sustainable, Resilient, and Healthy Food and Water Systems (SRHFWS) Concentration for Dietetics Students

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Learning Objectives

• Identify and describe the four foundational components of sustainable, resilient, and healthy food and water systems (SRHFWS).

• Describe perceived gaps in entry level RDN competencies in SRHFWS.

• Apply student activities from each of seven different components of the food system to meet SRHFWS competencies.
Improving Food Security: Dietitians Bring Nutrition Expertise to the Table

POSTED ON JUNE 14, 2012

Ethan Bergman, President of the Academy of Nutrition and Dietetics, addresses the Future of Food Conference in Washington, D.C. Photo courtesy of Washington Post Live.

By Ethan A. Bergman, PhD, RD, FADA, CD
President
Academy of Nutrition and Dietetics
Future of Food Resources for Members

• Hunger Actions and Resources added to www.kidseatright.org/volunteer

• Toolkits www.kidseatright.org/volunteer
  • Hunger in Our Community. What We Can Do.
  • Smart Choices. For a Healthy Planet. (English & Spanish!)
  • Tossed Treasures. How We All Can Waste Less Food. (English & Spanish!)

New!

• Feeding America’s Healthy Food Bank Hub www.healthyfoodbankhub.org

• Food Insecurity and Food Banking Supervised Practice Concentration www.healthyfoodbankhub.org
Future of Food Education for Members

- Webinars www.eatrightfoundation.org
- Infographics www.eatrightfoundation.org

- “Changing the Way We Look at Agriculture” 2015 Affiliate Presentations
Development of SRHFWS Concentration
Scheduled Release: August 2018
Background

2007: Sustainable Food System Task Force

- *Healthy Land, Healthy People*: Building a Better Understanding of Sustainable Food Systems for Food and Nutrition Professionals: A Primer on Sustainable Food Systems and Emerging Roles for Food and Nutrition Professionals
- Defined principles of a **sustainable** food system
  - Available at: [http://scholarworks.montana.edu/xmlui/handle/1/2973](http://scholarworks.montana.edu/xmlui/handle/1/2973)

2010: Principles of a Healthy, Sustainable Food System

- Academy of Nutrition and Dietetics, American Nurses Association, American Planning Association, and American Public Health Association
  - Defined principles of a **healthy, sustainable** food system

2014: Standards of Professional Performance in Sustainable, Resilient and Healthy Food and Water Systems

- Defined principles of a **sustainable, resilient and healthy** food and **water** system
Background

• Survey of DI Directors (2011) found that while 50% of respondents were incorporating activities related to sustainable food systems, 43% had high interest but no time or resources to develop.

Dietetics Education

ACEND Curriculum and Learning Activity Requirements for Didactic Programs (2017)

• Role of environment, food, nutrition and lifestyle choices in health promotion and disease prevention

• Food science and food systems, environmental sustainability, techniques of food preparation and development and modification and evaluation of recipes, menus and food products acceptable to diverse populations

• Fundamentals of public policy, including the legislative and regulatory basis of nutrition and dietetics practice
Systems Thinking Approach

The Food System is complex!

Systems Thinking approach
• Guiding interns to view the “big picture”
• Guiding interns to understand the interaction between food system sectors, rather than focusing on one sector
• Guiding interns to apply systems thinking in situation analysis and planning interventions/programs

GOAL - to educate dietetic interns about
• RDN’s role(s) in supporting a sustainable, resilient & healthy food and water systems
Applied Food System Model

• Farm Inputs
  • Land, soil, fertilizer, feed, seed, labor, equipment, energy farm support businesses

• Production
  • Foraged, produced, harvested

• Processing
  • Raw product or value-added to marketplace

• Wholesale Distribution
  • Aggregation, storage, delivery

• Retail Distribution
  • Stores, farmer’s mkt, CSA, hospitals, schools, restaurants, co-ops

• Consumer Demand

• Nutrient Management
  • Food waste, manure compost
Sustainable, resilient, and healthy food and water systems assure eaters have equitable and optimal access to food and water now and in the future. The foundation of these systems includes:

- **Nutrition & Health.** Assures dietary diversity through safe and secure food and water supplies.
- **Social, Cultural & Ethical Capital.** Promotes cultural diversity while empowering social responsibility and community engagement. Advances ethical, humane, and fair treatment of individuals and animals.
- **Environmental Stewardship.** Conserves, protects and renews natural resources (soil, water, air, energy, biodiversity); supports vibrant ecosystems; promotes a low-carbon footprint and mitigates climate change.
- **Economic Vitality.** Builds community wealth and is economically viable.

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**Sustainable, Resilient, & Healthy Food & Water Systems**

- **Environmental Stewardship**
  - Conserves, protects and renews natural resources (soil, water, air, energy, biodiversity)
  - Supports vibrant ecosystems
  - Promotes a low-carbon footprint
  - Mitigates climate change

- **Nutrition & Health**
  - Assures dietary diversity
  - Assures safety of food and water supplies
  - Assures optimal access to food and water in order to meet nutritional requirements

- **Social, Cultural & Ethical Capital**
  - Promotes cultural diversity
  - Empowers social responsibility and community engagement
  - Advances ethical, humane and fair treatment of individuals and animals

- **Economic Vitality**
  - Builds community wealth
  - Is economically viable and sustainable
Development Timeline

- **February 2016 Webinar**-food systems experts
  - Outcome: Developed objective of concentration: “to provide practical application experiences to prepare future RDNs to support a healthy, sustainable, and resilient food system in any food and nutrition career path.”

- **June 2016 Survey**-food systems experts
  - Outcome: Based on SOPP, determined concentration competencies
  - Outcome: Identified experts willing to write activities, review activities, or pilot activities

- **August 2016 Assembled “Activity Writing Teams”**
  - Outcome: teams agreed to serve; scheduled 9/9/16 webinar

- **December 2016 First Draft of Activities**
- **Spring 2017 First Pilot of Activities**
- **Fall 2017 Second Pilot of Activities**
- **Spring 2018: Final Pilot**
- **Fall 2018: Concentration to be released**
Concentration Work Group

• Identified the knowledge & skills necessary for an entry-level RDN in SRHFWS
  • Reviewed SOPP and surveyed stakeholders about standards that could be applied in an education practice setting.

• Matched to Core Knowledge & Competencies to each of the sectors.

• Activity writing teams developed learning activities to achieve identified knowledge & skills
Food System Knowledge Standards

Knowledge of how to identify science-based information from multiple disciplines and sources (e.g., government, national/international NGO publication, alternative literature sources).

Understanding of privacy of customer’s personal information, including the protection of personal health information where applicable.

Knowledge of how to identify sustainable, resilient, and healthy food and water systems relevant databases.

Understanding of ethical and professional integrity when integrating sustainable, resilient, and healthy food systems principles into practice (e.g., dietetic credentialing and/or licensure protocol, organizational policies, performance standards).

Understanding of safe, resilient, and healthy food and water system.

Understanding of production, processing, marketing, procurement and waste management standards that support sustainable, resilient, and healthy food and water systems.

Understanding of the importance of transparency within food and water systems.
Food System Practice Competencies

Ability to think critically and problem solve when communicating sustainable, resilient, and healthy food and water systems with others.

Ability to communicate current, evidence-based knowledge related to sustainable, resilient, and healthy food and water systems as an aspect of the profession of nutrition and dietetics.

Ability to demonstrate ethical and responsible practices that consider human, environmental, social and economic resources.

Ability to promote programs and services that are aligned with evidence-based practice guidelines.

Ability to communicate principles of disease prevention and behavioral change appropriate to the target population.

Ability to work within existing programs or policies to conserve natural resources and minimize waste.

Ability to consider social determinants of health when linking messages and modes of communication to the needs of a target population.

Ability to involve customers/target populations in decision making that supports sustainable, resilient and healthy food and water systems.
“Activity Writing Teams”

- Overall Food System
- Production
- Processing
- Distribution
- Preparation
- Retail
- Consumption
- Waste Management
Learning activities developed

One team of 2-3 food RDNs per team

Activity descriptions developed

Matched to standards and competencies

Detailed activity instructions developed

Separate team of food systems experts reviewed activities/provided feedback before being finalized for pilot testing.
Informal Initial Testing

Spring 2017

Total of 14 activities tested
8 sites, 2-3 activities each

Revisions made based on feedback
13 activities tested with 7 sites
Each site tested 1-3 activities

Online surveys collecting feedback from:
• RDN preceptors
• DI program directors
• Dietetic Interns
## Participating Sites

<table>
<thead>
<tr>
<th>Organization</th>
<th>Time</th>
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<tbody>
<tr>
<td>Montana State University</td>
<td>Spring 2017</td>
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<tr>
<td>Mayo Clinic</td>
<td>Spring 2017</td>
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<tr>
<td>Oregon Dairy Council</td>
<td>Spring 2017</td>
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<tr>
<td>University of New Hampshire</td>
<td>Spring 2017</td>
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<tr>
<td>Iowa State University</td>
<td>Spring 2017</td>
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<tr>
<td>St. Louis Department of Veterans Affairs</td>
<td>Spring 2017</td>
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<tr>
<td>Dominican University</td>
<td>Spring 2017</td>
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<tr>
<td>Long Island University</td>
<td>Spring 2017</td>
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<tr>
<td>East Tennessee State University</td>
<td>Fall 2017</td>
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<tr>
<td>University of Illinois</td>
<td>Fall 2017</td>
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<tr>
<td>Ohio State University</td>
<td>Fall 2017</td>
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<tr>
<td>University of Texas, Southwestern</td>
<td>Fall 2017</td>
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<tr>
<td>Missouri State University</td>
<td>Fall 2017</td>
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<tr>
<td>New York University</td>
<td>Fall 2017</td>
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Final Pilot: In Progress

12 activities tested with 5 sites
2-3 activities per site

Online surveys collecting feedback from:
- DI program directors/preceptors
- Dietetic Interns
<table>
<thead>
<tr>
<th>Activity</th>
<th>Sector</th>
<th>Proposed Rotation</th>
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</thead>
<tbody>
<tr>
<td>Foundational Activity</td>
<td>Overall Food System</td>
<td>Foodservice, clinical or community</td>
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<tr>
<td>Farm Tour and Statewide Agricultural Assessment</td>
<td>Production</td>
<td>Community or class field trip</td>
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<tr>
<td>School Foodservice</td>
<td>Processing</td>
<td>Foodservice or community</td>
</tr>
<tr>
<td>Food Manufacturing Tour</td>
<td>Processing</td>
<td>Foodservice or class field trip</td>
</tr>
<tr>
<td>Federal Food Distribution</td>
<td>Distribution</td>
<td>Foodservice, clinical or community</td>
</tr>
<tr>
<td>Menu Analysis</td>
<td>Preparation</td>
<td>Foodservice</td>
</tr>
<tr>
<td>Food Preservation and Food Safety Workshop</td>
<td>Preparation</td>
<td>Community</td>
</tr>
<tr>
<td>CDC Healthier Food Retail Assessment</td>
<td>Retail</td>
<td>Community</td>
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## Activities Piloted

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<thead>
<tr>
<th>Activity</th>
<th>Sector</th>
<th>Proposed Rotation</th>
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</thead>
<tbody>
<tr>
<td>Merchandising-Create Endcap Display</td>
<td>Retail</td>
<td>Foodservice or community</td>
</tr>
<tr>
<td>Consumer Food Waste</td>
<td>Consumption</td>
<td>Foodservice or community</td>
</tr>
<tr>
<td>Food Waste Audit</td>
<td>Waste Management</td>
<td>Foodservice</td>
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<tr>
<td>Food Policy and Nutrition Care Process</td>
<td>Overall Food System</td>
<td>Foodservice or community</td>
</tr>
<tr>
<td>Capstone Project</td>
<td>Overall Food System</td>
<td>Foodservice, clinical, or community</td>
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<td>Class day presentation</td>
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Finalizing the Concentration

Final revisions will take place this summer and will be available to all educators by Fall 2018 through NDEP Portal and Academy foundation.

Will offer programs flexibility; adopt some or all activities.

Publication about the development and evaluation process—JAND approved—coming soon!
Thank you!

Questions?

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