Harvest to Health: Recovery through Aquaponics for Persons with Severe and Persistent Mental Illness

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Severe and Persistent Mental Illness (SPMI)

- About one in five Americans experiences a mental disorder in the course of a year.
  - Notably, only one in four Americans receive mental health treatment.
- More than two million Americans experience chronic mental illness; SPMI is characterized by repeated episodes of institutionalization.
  - These individuals are highly vulnerable to stress, deficient in the basic coping skills required for everyday living, dependent on massive support from families or institution to survive, unable to maintain competitive employment, and usually unable to develop close interpersonal relationships.
- Persons with SPMI have diagnoses of schizophrenia, affective disorders, personality disorders, and other psychoses.

Psychosocial Rehabilitation

- PSR is a service that helps clients evaluate their strengths and weaknesses and their own goals for optimal functioning in the community.
- PSR philosophy emphasizes common sense and practical needs like vocational, social/recreational, residential, and educational services aimed at teaching the essential skills of living.
- Clients are encouraged to play an active role in their own recovery.
- An important aspect of PSR is the atmosphere of hope and the expectation that all individuals have the emotional strength and coping skills to attain a level of functioning that will bring them a sense of satisfaction and accomplishment.

Hawaii State Hospital

- Only free-standing psychiatric facility in Hawaii; State-run.
- Licensed capacity of 202 beds; current census is 175.
- Utilized by persons with severe and persistent mental illness (SPMI) and persons with other treatment issues (i.e. substance abuse, dementia, traumatic brain injury, etc).
- 99% of the population is admitted through the judiciary therefore one of the challenges for treatment teams is to manage a patient’s legal issues in addition to clinical issues. A significant portion of the Hospital population presents with medical problems and/or complications related to aging.

Psychosocial Rehabilitation at Hawaii State Hospital

- Formally established in 2002 as a part of the Department of Justice’s Remedial Plan for Compliance.
- Emphasis of PSR programming is placed upon: (1) Community Reintegration, (2) Living Skills, (3) Recreation, and (4) Vocational Rehabilitation.
- Currently offer eight on-campus work programs:
  - Aloha Garden
  - Animal Care
  - Aquaponics
  - Auto Detailing
  - Grounds/Maintenance
  - Positive Incentive Program Snack Shop
  - Printshop/Kokua Workshop
  - Woodworking

The Hawaii State Hospital Aquaponics Story: People, Purpose, and Possibilities
HSH Aquaponics Story: People

- People are the foundation of the HSH Aquaponics Program:
  - HSH clients and staff
  - University of Hawaii College of Tropical Agriculture and Human Resources Administrators and Staff
  - Community supporters and volunteers

HSH Aquaponics Story: Purpose

- HSH clients partake in every aspect of their work program:
  - Plant and transplant seedlings
  - Prune and recycle vegetation (vermicast)
  - Measure plant/fish growth
  - Harvest, weigh, and package yield
  - Research new crops
  - Perform validation trials for CTAHR
  - Weigh fish food, feed fish
  - Clean tanks, pumps, pipes, gravel, etc.
  - Maintain written records
  - Provide customer service for on-campus open market sales
  - Expansion of program: cooking, art (gyotaku on cards and t-shirts), construction of vermicast bins, static hydroponic systems.

HSH Aquaponics Story: Purpose

- On campus open-market sales of manoa lettuce, bok/kiwai choy, and green onions between May and August 2010 totaled approximately $500.
- Since September 2010, the Aquaponics Program has provided over 280 pounds of vegetables and herbs to the Hospital’s kitchen.
- Since March 2010, over 200 pounds of tilapia have been donated, sold, and served.

HSH Aquaponics Story: Purpose

- Approximately 40 patients have engaged in the Aquaponics program since March 2010.
- Participation ranges from 1 hour to 10 hours per week; patients earn $1.55/hour.
- Therapeutic outcomes include but are not limited to:
  - Enhanced mood.
  - Reduced arousal/agitation.
  - Improved concentration, task engagement, problem solving, and frustration tolerance.
  - Development of interpersonal skills and personal identity within a social group with similar interests and goals.
  - Increased physical activity and awareness of healthful eating.

HSH Aquaponics Story: Possibilities

- Aquaponics — art, culinary, educational programs
- Community service — community support
- Vocational rehabilitation during hospitalization — employment in the community
- Hospitalization — Hope — Health
“Recovery does not refer to an end product or a result. It does not mean that one is being “cured.” In fact, recovery is marked by an ever deepening acceptance of our limitations. But now, rather than being an occasion for despair, we find our personal limitations are the ground from which spring our own unique possibilities . . . Recovery is a process. It is a way of life. It is an attitude and a way of approaching the day’s challenges.”

Patricia Deegan, Ph.D. (1994)