Continuum of Care

The coordinated care that involves diagnosis and treatment, rehabilitative, supportive and maintenance services that address the needs of elderly adults.

Continuum of Care: NUTRITION

- Medical Nutrition Therapy
  - Screening
  - Assessment
  - Monitoring
  - Evaluation
- Education, training, nutritional counseling
- Food assistance programs
- Case management and clinical care services

Physiological Changes: Normal Aging

- Decreased height
  - Changes in vertebrae
  - Changes in posture associated with osteoporosis
- Changes in body composition
  - Men entering forties/Women entering fifties
    - Decreased lean body mass
    - Changes in fat stores
      - Accumulates around organs
      - Decreased subcutaneous fat around extremities
      - Increases around abdominal area
  - Increases risk for metabolic syndrome
    - High blood pressure
    - Hyperlipidemia
    - Insulin resistance
- Changes in taste and smell

Overview: Nutrition and Activity Recommendations for the Elderly

- Energy requirements
  - 25-30 kcal per kilogram
  - Calculate basal energy and apply activity factor
- Carbohydrates
  - 55-60% of total caloric intake
  - 25-35 grams of fiber per day
    - May aid in bowel issues, diverticular disease, diabetes, and hyperlipidemia
- Fat
  - Limit to 30% or less of total calories
  - Only 8-10% from saturated fat

Nutrition Recommendations for the Elderly

- Protein
  - Healthy adults at any age
    - RDA is 0.8 grams per kg
  - Elderly individuals
    - Closer to 1.1-1.2 grams per kg
  - Affected by changes in body fat and loss of muscle mass
  - Impacted by amount of exercise
    - Additional needed to maintain protein stores
    - Increases with wounds or infections
    - Decreases with liver and renal function
### Fluid Requirements

**General Rule**
- One milliliter of fluid for every calorie consumed

**Alternate Recommendations**
- 30mL of fluid for every kilogram of body weight
- 1500-2000mL of fluid per day

### Factors Affecting Fluid Intake

- Environmental
  - Weather
  - Humidity
  - Temperature
- Endocrine
  - Changes in renin-angiotensin system
- Physical
  - Reduced mobility
  - Chronic disease
  - Decreased ability to sense thirst
- Emotional
  - Fear of incontinence

### 2010 Dietary Guidelines

- Healthy Body Weight for adults ≥ 65 years
  - Overweight
  - No further weight gain
  - Obese
  - Lose weight
  - Weight loss decreases risk of and effects of chronic disease
- Sodium Intake for adults > 51 years
  - Decrease sodium intake to 1500mg/day
- Vitamin B12 for individuals > 51 years
  - Focus on consuming foods rich in vitamin B12
  - Consider adding supplement

### Dietary Reference Intakes

- Developed as estimates of appropriate nutrient intakes for healthy individuals
- Aid in planning nutritionally complete diets
- Include:
  - Recommended Daily Allowance (RDA)
  - Tolerable Upper Limit (TUL)
  - Quantifies the largest intake of a nutrient such that it will not result in adverse effects
  - Estimated Average Requirements (EAR)
  - Nutrient intake value estimated to be safe for 50% of the population
  - Adequate Intake (AI)
  - Benchmark intake for nutrients without an RDA established

### Dietary Supplements

- Often taken without physician knowledge or supervision
- Use caution when adding supplements to a regimen
  - Risks and effectiveness are not entirely known
- Most commonly used supplements by elderly individuals
  - Glucosamine and Fish oil – joint pain
  - Garlic – cholesterol control
  - Gingko biloba – improved claudication in the legs
  - St. John’s wart – depression
  - Kava – anxiety
  - Valerian – sleep disorders
  - Saw palmetto – male urinary problems/enlarged prostate

### Megavitamin Therapy

- Consuming greater than ten times the recommended dietary allowance of vitamins
- Belief in aiding treatment of various diseases
- Negative implications
  - Vitamin E
    - May interfere with warfarin and may cause a type of bleeding syndrome
  - Vitamin D
    - May cause hypercalcemia and cardiac arrhythmias
  - Vitamin C
    - May cause the urine to be more acidic
    - Can lead to changes in how drugs are absorbed
    - Drugs like ibuprofen or aspirin
    - Less drug excreted more rapidly
    - May interfere with warfarin
    - Reduced effect once stopped – possible scurvy

### Physical Activity: Essential for Healthy Aging

- Reduces risk factors associated with coronary heart disease (CHD)
  - Blood pressure control
  - Lipid reduction
  - Blood glucose control
  - Weight control
- May relieve pain
  - Improved bone density
  - Reduction in vertebral fractures
- Positive effects on mental status
  - Mediated depression
  - Improved sleep quality
Physical Activity: Essential for Healthy Aging

- Exercise programs
  - Aerobic activity
  - Muscle strengthening
  - Range of motion/flexibility exercises
- Start slowly under supervision of MD or trained professional

https://www.cdc.gov/physicalactivity

Impacts on Nutritional Status

Changes in body composition
- 2-3% loss of lean body mass per decade possible
- Replaced by body fat
- 15-20% decrease in resting metabolic rate
- Loss of skeletal muscle

Consequences
- Decreased muscle strength/physical function
- Decreased energy requirements
- Increased risk of developing obesity-related chronic diseases

Impacts on Nutritional Status

- Cognitive function
  - Vitamin and mineral deficiencies may adversely affect cognitive function
  - Decreased neurotransmitters
  - Dementia/Alzheimer’s Disease
  - Depression

Impacts on Nutritional Status

- Medication Use
  - May alter taste perception
  - May cause anorexia or stimulate appetite
  - May cause nutrient deficiencies
  - Food may affect drug absorption

Impacts on Nutritional Status

- Changes in taste and smell
  - Affect appetite and intake
    - Decreased desire to eat bland tasting food
    - Food becomes less enjoyable
  - Changes in sweet and salty sensations
    - Enhanced sour and bitter sensations
  - Vitamin and mineral deficiencies
    - B vitamins
    - Vitamin A
    - Zinc
Impacts on Nutritional Status

Poor oral health
- Decayed teeth
- Gum disease
- Missing teeth
- Absence of dentures
- Poor-fitting dentures

Effects
- Mouth pain/tenderness
- Swelling
- Dry mouth (xerostomia)
- Negative self-image
- Ability to chew food adequately
- Ability to speak effectively

Effects on Nutritional Status: Poor Oral Health
- Change in ability to chew and swallow
  - Need for diet consistency change
  - Avoidance of food groups

Risks Associated with Poor Nutritional Status
- Development of pressure sores
- Unplanned weight loss
- Impaired digestion
- Chronic disease
- Dehydration
- Malnutrition

Chronic Disease: Diabetes Mellitus

<table>
<thead>
<tr>
<th>Signs/Symptoms (often vague and non-specific)</th>
<th>Screening (as recommended by the American Diabetes Association)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue</td>
<td>Check fasting glucose</td>
</tr>
<tr>
<td>Dizziness</td>
<td>- Begin at age 45</td>
</tr>
<tr>
<td>Frequent falls</td>
<td>- Every three subsequent years</td>
</tr>
<tr>
<td>Confusion</td>
<td></td>
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<tr>
<td>Excessive urination</td>
<td></td>
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<tr>
<td>Blurred vision</td>
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<tr>
<td>Hunger</td>
<td></td>
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<tr>
<td>Thirst</td>
<td></td>
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<tr>
<td>Weight changes</td>
<td></td>
</tr>
</tbody>
</table>

Screening
- Check fasting glucose
  - Begin at age 45
  - Every three subsequent years

Medicare Coverage for Diabetes

- Diabetes screening
  - Up to two screenings per year for individuals over the age of 65, who are overweight, or have risk factors for diabetes.
- Diabetes Self-Management Training
  - Available with a written, physician’s order.
  - Allows patient a pre-specified number of visits to a certified program.

Medicare Coverage for Diabetes

- Diabetes supplies and services
  - Supplies such as syringes, lancets, blood glucose test strips and monitors are covered.
  - Insulin is covered under the prescription drug program.
- Medical Nutrition Therapy
  - Covered with a physician order.
  - Must be provided by a Registered Dietitian or Medicare-approved professional.
Medicare Coverage for Diabetes

- Foot exams
  - Covered for patients with diabetes-related peripheral neuropathy.
  - Therapeutic shoes and inserts are also covered for those with diabetes-related food conditions.

Medicare B: Medical Nutrition Therapy

Medical Nutrition Therapy (MNT) is defined as nutritional diagnosis, nutrition therapy and counseling provided by a Registered Dietitian.

- Physician referral is required
- May be provided only for:
  - Diabetes
  - Renal Disease
- Future coverage:
  - Obesity
  - Hyperlipidemia

Medicare B: Medical Nutrition Therapy

- Academy of Nutrition and Dietetics developed evidence-based nutrition practice guidelines/protocols
  - Recommended number of visits
    - Year one – 3 hours of individual counseling
    - Year two – 2 hours of individual counseling
    - Additional visits may be extended based on physician input

Dehydration

Potential causes:
- Medication use
  - Escalates with the number of meds
  - Prominent when using four or more
  - Diuretics/Laxative use and abuse
- Feeding difficulties
- Mental status
- Enteral/Parenteral feeding dependence
- Incontinence/Diarrhea/Vomiting
- Chronic infections

Malnutrition: Statistics

- 1:3 patients is malnourished
  - Up to 50% of hospitalized elderly patients
  - Up to 40% of nursing home patients
- Patients diagnosed with malnutrition have a 3 times longer length-of-stay
- Surgical patients with malnutrition have a 4 times higher risk of developing pressure ulcers
- Annual cost of disease-associated malnutrition in the U.S. is $156.7 billion
Malnutrition: ASPEN Criteria

- Two or more of the following:
  - Insufficient energy intake
  - Significant weight loss
    - 5% loss in 30 days
    - 10% loss in 180 days
    - 20% loss in 1 year
  - Loss of muscle mass
  - Loss of subcutaneous fat
  - Localized generalized fluid accumulations
  - Diminished functional status as measured by hand-grip strength

Malnutrition: Effect on Organ Function

- May cause loss of respiratory muscle mass
  - Includes atrophy of diaphragm
  - Decreased lung function
- May affect immune function
  - Increased risk for infections
- Associated with increased mortality

Malnutrition: Epidemic

- Of the 30%-50% of malnourished hospitalized adults, only 7% are discharged with the diagnosis of malnutrition
  - The rest:
    - No dietary plan
    - Incomplete continuum of care
    - Increased likelihood of readmission

Malnutrition: Four Steps to Improve Elderly Crisis

- Screen
- Assess
- Diagnose
- Intervene

- Decreases healthcare costs
- Improves patient outcomes
- Reduces readmissions
- Supports healthy aging
- Improves overall quality of healthcare

Nutrition Assessment vs. Screening

**Assessment**
- Determination of nutritional status for implementation of appropriate interventions.

**Screening**
- Identification of individuals at risk for compromised nutritional status using a screening tool.

Malnutrition Screening Tools

- Nutrition Screening Initiative (NSI)
- DETERMINE Checklist
- Malnutrition Screening Tool (MST)
- Mini Nutritional Assessment (MNA®)
- Malnutrition Universal Screening Tool (MUST)
- Nutrition Risk Screening (NRS-2002)
- Subjective Global Assessment (SGA)
- Seniors in the Community: Risk Evaluation for Eating and Nutrition (SCREEN)
Screening for... Based on: - Medical, interventions - Functional - Dietary - BMI... use determine... on: - Social - Various habits - Level of assessment... who - Unable to stand: use bed scale.

**Weight**

- To ensure consistent measurements:
  - Without shoes
  - Light clothing
  - Same time of day (ideally in the morning before breakfast and after the bladder has been emptied)
  - Weigh to the nearest 0.1kg
  - If able to stand: use upright beam scale with moveable weights or digital scale
  - Unable to stand: use bed scale

**Body Mass Index (BMI)**

- Designated as an anthropometric tool specifically for evaluating patients 25-65 years of age
- Estimate of fat
- Does not account for fat distribution or muscle mass
- Nutrition Screening Initiative (NSI) uses BMI to document nutritional risk in elderly adults
  - Elderly individuals with BMIs greater than 27 or less than 24 are at risk of poor nutritional status
    - Below 24: possible correlation with a decline in functional status and an increase in mortality

**Serum Albumin as a Nutritional Screening Tool**

- Visceral protein produced by the liver
- Assessment of protein status
  - Cost effective
  - Not greatly affected by aging
  - Less than 3.5g/dL may be indicative of protein-calorie malnutrition
    - Further investigation is warranted
  - Less than 3.0g/dL associated with increased mortality
    - Study of Medicare patients showed low serum albumin coupled with weight loss positively correlated with higher rates of rehospitalization

**Screening Tool: Nutrition Screening Initiative (NSI)**

**Level One**

- Used after the initial tool identifies individuals who require further nutritional assessment
- Based on:
  - BMI
  - Dietary habit evaluation
  - Living situation
  - Functional Status
- For use by various types of caregivers
- Can determine need for further medical, social service, or nutritional interventions

**Level Two**

- Must be completed by specially trained provider
- Involves:
  - Anthropometric assessment
  - Laboratory tests
  - Full evaluation of medication use
  - Assessment of:
    - Social living situation
    - Eating habits
    - Functional status
    - General health
    - Drug utilization

**Serum Albumin as a Nutritional Screening Tool**

- Caution!
  - Affected by many factors
    - Dehydration
    - Overhydration
    - Liver disease
    - Infection
    - Immobility
  - Long half-life
  - Tests will not show immediate response to nutrition intervention

**Screening Tools: DETERMINE Checklist**

The acronym “DETERMINE” is the basis for the nutritional checklist, which identifies warning signs for nutrition problems.

- Disease
- Eating poorly
- Tooth loss/mouth pain
- Economic hardship
- Reduced social contact
- Multiple medicines
- Involuntary weight loss or gain
- Needs assistance with self-care
- Elder years – above age 80
Screening Tools: DETERMINE Checklist
• Consists of 10 questions:
  – Impact of illness on
    • Eating
    • Fruit, vegetable, and dairy intake
    • Alcohol consumed
    • Social and financial situation
    • Condition of teeth
    • Medication use
    • Weight changes

Screening Tool: Malnutrition Screening Tool (MST)
• Patient population
  – Inpatients
  – Outpatients
  – Residential aged care facilities
• Nutrition screening parameters
  – Recent weight loss
  – Recent poor intake
• Completed within 24 hours of admission and then weekly
• Results
  – Risk of malnutrition
  – Patients at high risk had longer length of stay

Screening Tool: Malnutrition Screening Tool (MST)
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Screening Tools: Mini Nutritional Assessment (MNA)
Assessment of:
• Changes in appetite
• Weight changes
• Ability to move around
• Recent life stressors
• Living situation
• Medication use
• Skin status
• Meal frequency
• Self-feeding ability
• Self-perception of nutritional status compared to peers
Calculation of:
• BMI
• Mid-arm circumference
• Calf circumference
Results:
• Total score
  – Degree of malnutrition
  – Referral to registered dietitian
• Developed by Nestle for use in geriatric population to identify malnutrition

Screening Tools: MUST
• Patient population:
  – Acute-care and community settings
• Nutrition screening parameters
  – BMI
  – % weight loss
• Acute disease effect
• Results
  – Mortality risk
  – Length of stay
  – Discharge destination in acute-care patients

Screening Tools: Subjective Global Assessment
• Setting
  – Acute-care
  – Rehab
  – Community
  – Residential Aged Care
• Nutritional assessment parameters
  – Medical history
    – Weight, height, GI symptoms, functional capacity
  – Physical examination
• Results
  – SGA A (well nourished)
  – SGA B (mild-moderate malnutrition)
  – SGA C (severe malnutrition)
• Requires training
• Easy to administer

Barriers to Nutritional Assessment
• Obstacles for proper assessment
  – Skewed self-reporting due to memory loss/cognitive impairment
  – Physical impairments
    • Impedes ability to read, write or answer questions
  – Visual impairments
    • Affecting one’s ability to measure portion sizes
  – Data gathering by caregivers
Malnutrition: Clinical Signs
• Weight loss
• Cholesterol levels <160mg/dL
• Temporal wasting
• Loss of subcutaneous fat
• Poor wound healing

Nutrition-Focused Physical Examination
•Performed by Registered Dietitian (RD)
•Identifies:
  – Possible nutrient deficiencies
  – Hydration status
  – Presence of muscle/temporal wasting
  – Changes in musculo-skeletal status
  – Skin condition
  – Signs of malnutrition
  – Swallowing status
  – Adverse effects to nutrition status

Food Insecurity
Factors
• Fixed income
• Lack of availability of fresh produce and meats
• Living situation
• Education level
• Transportation issues
• Lack of confidence or motivation
• Literacy levels
• Cultural factors
• Fear or resistance to technology
Effects
• May inappropriately substitute foods higher in calories, fat or carbohydrates

Example scenario:
✓ Lives in own home
✓ Assistance required
Options include:
  – Home-delivered meals
  – Congregate meals
  – Dining out
  – Assistance with home health aide

Example scenario:
✓ Unable to live at home
✓ Assistance required
Options include:
  – Retirement homes
  – Assisted-living facilities
  – Skilled-care facilities
*depends on financial resources

Older Americans Act (OAA)
• Reduce hunger and food insecurity
• Promote socialization
• Promote health and well-being
• Delay adverse health conditions
**Nutrition Programs**

Provide access to:
- Healthy meals
- Nutrition education
- Nutrition counseling

Funded by:
- State and local governments
- Foundations
- Fundraising
- Voluntary contributions

**Nutrition Programs: Target**

Adults, age 60 and older
- Low income
- Minorities
- Rural communities
- Limited English Proficiency
- At risk of institutional care

**Nutrition Quality Standards (OAA)**

All meals must:
- Adhere to the current dietary guidelines
- Provide a minimum of 1/3 of the DRIs
- Meet food safety and sanitation requirements
- Appeal to older adults

**Congregate Nutrition Services**

- Under the Elderly Nutrition Program (ENP)
- Prevent the need for costly medical interventions
- Contributes to health and well-being
  - Social engagement
  - Healthy aging education
  - Volunteer opportunities
- Serves ages 60 and older
  - Additionally caregivers, spouses and/or persons with disabilities

**Home-Delivered Nutrition Services**

- Under the Elderly Nutrition Program (ENP)
- Target:
  - Homebound/isolated older individuals
    - Caregivers, spouses and/or persons with disabilities
- Provides:
  - Wholesome meal
  - Safety check
  - Socialization
- Meals on Wheels America

**Meals on Wheels**

- Home-delivered hot, cold, or frozen meals
- For homebound seniors, individuals with disabilities, or those recuperating from hospital stays
- Eligibility
  - Determined by case manager on visit
- Sign-up
  - Call local MOW office
  - Online forms
- How Much Does it Cost?
  - Varies, depending on financial circumstances
  - Funding sources available to those in need
  - Financial Assistance is available to eligible clients who need assistance
Meals on Wheels (Northampton Co.)
- Chef's Pack Program
  - Choice of 17 frozen entrees and 2 soups
  - Can be ordered by clients, those recuperating from hospital stays, and active older adults who want to eat healthier
- Group Dining Services
  - Catered congregate meals for adult day centers, senior centers, child care centers and other Meals on Wheels programs
- Anti-Meals
  - Distribution of donated pet food for home-delivered meal client's cats, dogs, birds, and fish
- Grocery Shopping
  - Shopping for and delivering groceries to homebound seniors and individuals with disabilities that are unable to shop for themselves

Child and Adult Care Food Program
- Provides aid to adult institutions
  - Adult Day Care Centers
  - Emergency Shelters
- Must meet specific meal patterns and portion sizes

Adult Daycare Programs
Three Types
- Social
  - Geared towards high-functioning seniors requiring minimal assistance
  - Meals provided
  - Special diets accommodated
  - Activities (music, arts and crafts, games, low level exercise, and discussion groups)
  - Field trips
- Health
  - Staff nurse available to provide medications
  - Possibility of tracheotomy and tube feeding
  - Nursing assistants available to assist with personal care needs
- Combo (social/health)

Benefits
- Social stimulation
- Nutritional meals
- Safe environments
- Improved mental and physical well-being
- Improved levels of independence

Commodity Supplemental Food Program
- To improve the health of low-income elderly persons at least 60yo
- Supplements diets with nutritious USDA Foods
- Eligibility
  - Income-based/Household size
    - 1 - $15,678 annually
    - 2 - $21,112 annually
    - 3 - $26,546 annually
    - 4 - $31,980 annually
- To apply: Contact State Distributing Agent
  - Joseph Quattrochi, Director, Bureau of Food Distribution
  - Tel: (717) 787-2940
  - Fax: (717) 787-2387
  - Email: BFD@pa.gov

Supplemental Nutrition Assistance Program (SNAP)
- Previously the federal Food Stamp Program
- Helps low-income individuals/families
  - Grocery stores and other retailers that sell food
  - Senior centers
  - Meal delivery services
- EBT card - refilled monthly
- https://www.benefitscheckup.org

SNAP Challenges
- Participation rates are low among elderly
- Reluctance due to stigma
- Application process
- Use of EBT cards
Senior Farmers Market Nutrition Program

- Provides low-income seniors with coupons that can be exchanged for eligible foods at farmers' markets, roadside stands, and community-supported agriculture (CSA) programs
- Fruits
- Vegetables
- Honey
- Fresh-cut herbs

To apply for vouchers, contact:
Sandy Hopple
Assistant Director, Pennsylvania Department of Agriculture
2301 North Cameron Street
Harrisburg, PA 17110-9408
United States
Phone: (717) 772-2693
Fax: (717) 787-2387
Email: shopple@pa.gov

The Emergency Food Assistance Program

- Supplemental food program
- Emergency food assistance at no cost

Eligibility:
- Based on income
- Participation in other existing Federal, State or local food, health, or welfare programs, for which eligibility is income based

To apply:
- Contact State Distributing Agent
Joseph Quattrochi, Director, Bureau of Food Distribution
Tel: (717) 787-2380
Fax: (717) 787-2387
Email: Jquattrocc@pa.gov

Resources: National Nutrition Organizations

- Academy of Nutrition and Dietetics
- Feeding America
- Food Research and Action Center
- Meals on Wheels America
- National Association of Area Agencies on Aging
- National Association of Nutrition and Aging Services Programs
- National Association of States United for Aging and Disabilities
- National Council on Aging
- National Resource Center on Aging
- Society for Nutrition Education and Behavior
- Wholesome Wave Fruit and Vegetable Prescription Program

Academy of Nutrition and Dietetics

- [www.eatright.org](http://www.eatright.org)
  - Find a Registered Dietitian
  - Nutrition tip sheets
  - Good Nutrition Reading List
- [www.eatrightpa.org](http://www.eatrightpa.org)
  - Pennsylvania affiliate
  - Links to district affiliates

Registered Dietitians

- Referral recommended after prescribing diet and/or lifestyle changes
- Provide assistance with menu planning, meal pattern development, recipe analysis
- Available in many settings
  - Hospitals
  - Rehab centers
  - Skilled nursing facilities
  - Long-term care facilities
  - Physician-offices
  - Private practice/Consulting services
  - Local and state health bureaus

Wholesome Wave Fruit and Vegetable Prescription Program

“Empowering doctors to prescribe produce to patients before they develop diet-related illness, rather than prescribing medication after it’s too late.”

“Empowering doctors to prevent disease — not just treat it.”

[https://www.wholesomewave.org](https://www.wholesomewave.org)
**Wholesome Wave Fruit and Vegetable Prescription Program**

- Doubling SNAP
  - Find participating farmers market or grocery store
  - Shop with SNAP
  - Receive double the value to spend on produce
- Produce Prescriptions
  - Enroll at participating hospital or clinic
  - Meet with doctor and receive produce prescription
  - Bring prescription to participating market or grocery store to purchase fruits and vegetables

**Wholesome Wave Fruit and Vegetable Prescription Program**

- Berwick Area United Way, Berwick
- Chester County Food Bank, Chester County
- The FoodCentres Project, Central Pennsylvania
- Greensgrow Farms, Philadelphia
- Greater Pittsburgh Community Food Bank, Duquesne
- Fair Food Philly, Philadelphia
- Penn State Health St. Joseph Hospital, Berks County
- HungryHarvest Mid-Atlantic (Philly & Surrounding Suburbs into South New Jersey, to Northern Virginia, All of DC, Most of Maryland) and South Florida (Miami, Ft. Lauderdale, Boca)

**USDA (Nutrition.gov)**

- FoodKeeper App
- USDA Food Composition Databases
- Heart-healthy recipes
- Seasonal Produce Guides
- MyPlate

**USDA MyPlate**

- Replaced Food Pyramid in 2011
- Visually illustrates daily recommendations
  - Vegetables 30%
  - Grains 30%
  - Fruits 20%
  - Protein 20%
  - Dairy (one cup)

**Healthy Eating Plate**

- Developed by the Harvard School of Public Health
  - Adds plant-based oils
  - Stresses whole grains
  - Recommends water
  - Reminder for physical activity

**Team Approach to Continuing Care**

"Although hospitals and healthcare providers can screen for malnutrition, it is the acute care, community and home-based settings that must work together to ensure care transitions adequately address a person’s ongoing nutritional requirements."
Outcomes of Nutrition Intervention

- Increased knowledge
- Behavior-related changes
- Improved nutritional status
- Changes in laboratory values
- Changes in clinical condition/improved overall status
  - Blood pressure
  - Blood glucose control
  - Weight
  - Reduction of risk factors
  - Reduction in symptoms
- Improved quality of life
- Improved ability to care for oneself or be self-sufficient
- Decrease in medication use
- Reduction of healthcare costs
- Fewer hospital admissions or delayed admission to skilled nursing facility

References

- [Administration for Communities Living](https://www.acf.hhs.gov/acf/)
- National Council on Aging – Malnutrition Screening and Assessment Tools
- National Council on Aging
- [Validated Malnutrition Screening and Assessment Tools: Comparison Guide](https://www.health.qld.gov.au/masters/copyright.asp) consensus document from Dietitians from the Nutrition Education Materials Online, "NEMO" team