T&CM Experiences and Capacity at National University of Natural Medicine (NUNM)

Ryan Bradley, ND, MPH
Director of Research
National University of Natural Medicine
Portland, OR USA
Relevant Experience in T&CM: Education

• NUNM: Founded in 1956
  – Over 60 years of education experience in T&CM
• Doctoral degrees:
  – Naturopathy (ND)
  – Classical Chinese Medicine (DAOM)
• Masters of Science (MS) degrees:
  – Whole Foods Nutrition
  – Integrative Medicine Research
  – Global Health (focused on T&CM)
  – Integrative Mental Health
• Bachelors degrees:
  – Integrative Health Sciences
  – Nutrition
What Makes Us Healthy:
- Genetics 20%
- Environment 20%
- Healthy Behaviors 50%
- Access to Care 10%

What We Spend On Being Healthy:
- Medical Services 88%
- Other 8%

Source: Bipartisanpolicy.org
Diet is the number 1 risk factor in the global burden of disease
Lancet, September 10, 2015
Relevant Experience in T&CM: Practice Models

• Naturopathy as Primary Attention (Primary Care) Providers

• Teaches pluralism & “articulative” medicine

• Health care on a foundation of:
  – Health promotion, self-care and preventive services
  – Nutrition
  – Mind-Body therapies/stress management
  – Herbal medicine
  – Hydrotherapy
  – (Evidence-based prescriptive therapies)
Your Health, Your Way

NUNM Health Centers offer naturopathic and Chinese medicine care that meets your needs. We offer patients a full spectrum of naturopathic and Chinese medicine interventions and educational services. Our health centers are staffed by the best naturopathic physicians, classical Chinese medicine providers, and the brightest medical students in a team based model. **We are a Tier 3 Patient Centered Primary Care home as certified by Oregon Health Authority.**
T&CM: Many contributions…to Health.
Why Naturopathy as Primary Attention Providers? The Alternative to T&CM in Type 2 Diabetes

Why Naturopathy as Primary Attention Providers? Because It May *Prevent* Disease

**Delivery of Health Promotion Counseling**

<table>
<thead>
<tr>
<th></th>
<th>Diet</th>
<th>Exercise</th>
<th>Stress Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND-DM2 (Bradley, 2009)</td>
<td>100</td>
<td>94</td>
<td>69</td>
</tr>
<tr>
<td>ND-HTN (Bradley, 2010)</td>
<td>98</td>
<td>68</td>
<td>0</td>
</tr>
<tr>
<td>ND-DM2 (Bradley, 2012)</td>
<td>100</td>
<td>92</td>
<td>47</td>
</tr>
<tr>
<td>MD-Mixed CVD Risk (Ma, 2005)</td>
<td>45</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>MD-Adult (Lin, 2005)</td>
<td>28</td>
<td>21</td>
<td>3.5</td>
</tr>
</tbody>
</table>
Assessing and managing cardiovascular risk in people with risk factors who have not yet developed clinically manifest cardiovascular disease (primary prevention)

<table>
<thead>
<tr>
<th>DIETARY CHANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>All individuals should be strongly encouraged to reduce total fat and saturated fat intake. (1+, A)</td>
</tr>
<tr>
<td>Total fat intake should be reduced to about 30% of calories, saturated fat to less than 10% of calories, transfatty acids intake should be reduced as much as possible or eliminated and most dietary fat should be polyunsaturated (up to 10% of calories) or monounsaturated (10–15% of calories). (1+, A)</td>
</tr>
<tr>
<td>All individuals should be strongly encouraged to reduce daily salt intake by at least one third and, if possible, to &lt;5 g or &lt;90 mmol per day. (1+, A)</td>
</tr>
<tr>
<td>All individuals should be encouraged to eat at least 400 g a day of a range of fruits and vegetables as well as whole grains and pulses. (2+, A)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHYSICAL ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>All individuals should be strongly encouraged to take at least 30 minutes of moderate physical activity (e.g. brisk walking) a day, through leisure time, daily tasks and work-related physical activity. (1+, A)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WEIGHT CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>All individuals who are overweight or obese should be encouraged to lose weight through a combination of a reduced-energy diet (dietary advice) and increased physical activity. (1+, A)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ALCOHOL INTAKE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals who take more than 3 units of alcohol(^c) per day should be advised to reduce alcohol consumption. (2++, B)</td>
</tr>
</tbody>
</table>

\(^c\) One unit (drink) = half pint of beer/lager (5 % alcohol), 100 ml of wine (10 % alcohol), spirits 25 ml (40% alcohol)
The Promise of T&CM = Humble Collaboration & New Models of Innovative Care
Clinical Management Guidelines when Articulating T&CM

Evaluate Hemoglobin A1c

If <6.5%
1. Reinforce lifestyle and self-management practices for maintenance of control
2. Adjust supplementation and medication* as needed for maintenance of control

If 6.5-10.0%
1. Lifestyle change counseling: diet, exercise, stress management.
2. Consider appropriate supplementation.
3. Consider glucose-lowering medications, depending on other risk factors and patient adherence.
4. Set HbA1c goal‡

If >10%
1. Lifestyle change counseling: diet, exercise, stress management.
2. Rx or referral for glucose-lowering medication.
3. Consider appropriate supplementation.
4. Set HbA1c goal‡

3 month HbA1c Assessment

If HbA1c remains > 7.5% for > 6 months, without reaching incremental HbA1c goals, recommend, prescribe and/or refer for glucose-lowering medications

Applies:
• Accepted management milestones
• Categories of treatment
• Time

* A 6-12 month period with HbA1c <6.5% is recommended before considering medication reduction, unless earlier reductions are needed to prevent hypoglycemia

‡A minimum HbA1c reduction of 0.5-1.0% is recommended for interim goal setting
Relevant Experience in T&CM: T&CM Research

• Research Training Program Materials in:
  – Evidence-informed practice
  – Clinical research in T&CM
  – Case reporting

• Research subject matter expertise in:
  – Methods: Practice-based research and clinical networks, Pragmatic and Clinical Trials, Patient-reported outcomes, Qualitative research
  – Nutrition, Mind-Body therapies, Natural products
  – Disciplines: Naturopathy, CCM/TCM, AYUSH
  – Clinical conditions: NCDs, Neurological, Gastrointestinal disorders, Pain

• Technical support in:
  – Research design and protocol development
  – Ethics review (IRB) in a culture of T&CM
  – Electronic data collection
  – Biostatistics consultation and support
  – Publication
Research in T&CM: Improvements in Self-Care, Mood and Stress from Naturopathy in Type 2 Diabetes

Change in Patient-reported Outcomes During Adjunctive Naturopathic Care (ANC)

- Change over time in glucose, mood, activity, self-efficacy, stress, diet, % non-depressed, lifestyle, commitment, mood, stress.

Mood ↑34%
Self efficacy in self-care ↑26%

Research in T&CM: Reduced Risk from Naturopathy in Patients at High Risk for Cardiovascular Event

RCT Evidence of Reduced 10-year Framingham CVD Risk during Naturopathic Care

-3.04 % (-4.35, -1.78); p < 0.001

RCT Evidence of Reduced Metabolic Syndrome during Naturopathic Care

-16.9 % (-29.5, -4.3); p=0.002

Innovative Models of Practice-based Research

- Initial Intake
- Primary Clinician
- Chart/EHR, as applicable
- Data entry

- Patient
- RN reviews consent and copies if signed
- Research Assistant/Coordinator

Supported by: NIH/NCRR 1KL2RR025015-01

Bradley R. 2012
Applying Research Technology to T&CM

• Mobile tablets for data collection in the clinic
• Data entered to the cloud, accessible anywhere there’s wifi or cellular data access
  – REDCap (Vanderbilt University)

Supported by: NIH/NCRR 1KL2RR025015-01
Building Clinical Research Capacity for T&CM through Inter-professional Research Training

We train PhDs & MDs in:
- Biomedical pathophysiology
- Rigorous clinical research methods
- Exposure to T&CM clinical practices and philosophies
- Natural Products including Quality Control and Product Integrity
- Unique research considerations in T&CM

We train T&CM clinicians in:
- Epidemiology and Biostatistics
- Rigorous clinical research methods
- Natural Products including Quality Control and Product Integrity
- Unique research considerations in T&CM

Capacity in T&CM Clinical Research

Supported by grant 5R90AT00892403 from the National Center for Complementary and Integrative Health (NCCIH)
NUNM is eager to share in the creation of health!!