Danish Parliament
Defense Committee
Deputation
8 December 2016

S. R. Noble-Letort, PhD Chairman
Nordic Integrative Medicine
www.nordicintegrativemedicine.com
What is Integrative Medicine?
Integrative Medicine (IM) emphasizes integrated patient care that empowers the patient by addressing the biophysical, emotional, mental, social, existential and environmental influences that affect a person’s health and coordinates care with the selected support of a team of integrative practitioners who develop a personalized health plan, which supports the renewal of health and prevention of disease.
PREVENTION & WELLNESS
PATIENT-CENTERED
LIFESTYLE MODIFICATION
GENETICS IS NOT DESTINY
COMPASSIONATE CARE
NEW PARADIGM RESEARCH
# NIM Center for Integrative Health and Prevention

*Moving Healthcare into Sustainability*

<table>
<thead>
<tr>
<th>HIGH TOUCH</th>
<th>Time to Talk with Team of Medical and Complementary Practitioners</th>
</tr>
</thead>
</table>
| Compassionate, Patient-Empowered Team-Integrated Healthcare | **HIGH TECH**  
Scientific Evidence-Based Complementary Therapies and Medicine working with Conventional Medicine and Innovative Biotech, Neuroscience and Genetic Risk Research |

Cost-Effective for Chronic Disease Management and Prevention
Complementary & Conventional

Stress Resilience
Medical Doctor

Patient
Clinical Nutrition
Psychology
Physiotherapy

- Physician Led Integrated Team: Personalized Health Plan
- Compassionate Focused Therapy (CFT)
- Clinical Nutrition: Garden to Table Nature Therapy
- Mind-Body: Yoga Therapy and Music Therapy
Unfortunately, access to health care services is severely limited:
- Many lack access to basic services
- Poor access leads to higher mortality from treatable diseases

Quality is an enduring challenge
- Basic standards of medical care a challenge in many developing countries

The cost of delivering health care is unsustainable:
- Unsustainable for countries with national healthcare coverage
- Cost of care is catastrophic for families in countries without strong insurance

© Shelley Noble-Letort, PhD
director@nordicintegrativemedicine.com
+45 2116 3939
### Epidemiological Disease Burden on Danish Society

<table>
<thead>
<tr>
<th>Disease</th>
<th>Most common diseases</th>
<th>Most new diagnoses</th>
<th>Most freq. cause of death</th>
<th>Most freq. hospitalization</th>
<th>Cause of early retirement</th>
<th>Cause of sick leave</th>
<th>Cost of treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>5</td>
<td>1 (b)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardio/Vasc.</td>
<td>2</td>
<td>1 (c)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>1 (e)</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Apoplexi</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backpain</td>
<td>1 (a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Arthritis</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1 (f)</td>
<td>2</td>
</tr>
<tr>
<td>Migraine</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Neck pain</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Depression</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Lung cancer</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brain hemorrhage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Black lungs</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Dementia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schizophrenia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Respir. Dis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 (d)</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Subs. abuses</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) 800,000 patients; (b) 29,000 patients; (c) 4,700 patients; (d) 42,000 patients; (e) 1,900 patients; (f) 5.5 million sick-days; (g) DKK 2.6 Bn
Need for Earlier Intervention

Development of Disease

Baseline Risk → Earliest Molecular Detection → Earliest Clinical Detection → Typical Current Intervention

Initiating Events

Personalized Medicine Tools
- Quantify Baseline Risk
- Monitor Progression
- Refine Risk Prediction
- Define Disease
- Monitor
- Personalize Therapy

Personalized Health Planning

© Shelley Noble-Letort, PhD
director@nordicintegrativemedicine.com
+45 2116 3939
IM Clinical Success

Conditions for Which the Centers Report the Most Clinical Success

- Chronic Pain: 75%
- Gastrointestinal Disorders: 59%
- Depression/Anxiety: 55%
- Cancer: 52%
- Stress: 52%

IM Therapies Applied

Therapies Used (by Number of Centers) for the Top Five Conditions

![Bar chart showing therapies used by number of centers for the top five conditions: Chronic Pain, Gastrointestinal Disorders, Depression/Anxiety, Cancer, Stress.]

## IM Practitioners Employed

| Percentage of Centers Employing the Following Practitioners Either Full or Part-time: |
|---------------------------------|---------------------------------|----------------|
| Physician                       | 96%*                            | Hypnotherapist  |
| Massage Therapist               | 86%                             | Holistic Nurse |
| Meditation Instructor           | 83%                             | Chiropractor   |
| Acupuncturist, LAc              | 79%                             | Pain Specialist|
| MBSR Instructor                 | 79%                             | Psychiatrist   |
| Dietician/Nutritionist          | 69%                             | Naturopath     |
| TCM Practitioner                | 62%                             | Physical Therapist |
| Yoga Instructor                 | 62%                             | Exercise Physiologist |
| Psychologist                    | 59%                             | Physician Assistant |
| Healing Touch/Reiki Practitioner| 55%                             | Health Coach   |
| Nurse Practitioner              | 55%                             | Osteopath      |
| Acupuncturist, MD               | 48%                             | Ayurvedic Practitioner |
| Biofeedback Practitioner        | 45%                             | Homeopathy Practitioner |
NATO Science and Technology Organisation (STO)
Human Factors and Medicine (HFM) Panel

NATO Task Force 195:
Integrative Medicine Interventions for Military Personnel
NATO-STO-RTG-TR-HFM-195 (2010-2014)

COUNTRY COORDINATION
USA

COUNTRIES PARTICIPANTS
FRANCE
GERMANY
HUNGARY
ITALY
NETHERLANDS
USA
What is the NATO Science and Technology Organisation (STO)?

The **NATO Science and Technology Organisation (STO)** promotes and conducts co-operative scientific research and exchange of technical information amongst 28 NATO nations and 38 NATO partners.

The largest such collaborative body in the world, the STO encompasses over 3000 scientists and engineers addressing the complete scope of defence technologies and operational domains.

This effort is supported by an executive agency, the Research and Technology Agency (RTA), that facilitates the collaboration by organising a wide range of studies, workshops, symposia, and other forums in which researchers can meet and exchange knowledge.
What is the Mission of the
HUMAN FACTORS AND MEDICINE (HFM) Panel?

The mission of the Human Factors and Medicine Panel (HFM) is to provide the science and technology base for optimising health, human protection, well being and performance of the human in operational environments with consideration of affordability.

This involves understanding and ensuring the physical, physiological, psychological and cognitive compatibility among military personnel, technological systems, missions, and environments.

This is accomplished by exchange of information, collaborative experiments and shared field trials.

More than 50% of the military population, including dependants, have used CAM interventions in recent years, and 66% of active duty personnel use dietary supplements.

Objectives

- Identify and evaluate countries’ data on the use of CAM among military personnel.
- Determine how personnel in each country access CAM interventions (directly or by prescription), and with what frequency.
- Assess how important, accepted, and regulated is the use of CAM in the therapeutic arsenal
- Share all available research on the indications and effects of any type of CAM interventions, as well as any possible adverse effects on military readiness.
Innovative Financing: Public-Private Cooperation and Noncommunicable Diseases (NCD)

**Public private collaboration for NCDs**

<table>
<thead>
<tr>
<th>Collaboration Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborations with private sector</td>
<td>59%</td>
</tr>
<tr>
<td>Collaborations with UN agencies</td>
<td>68%</td>
</tr>
<tr>
<td>Collaborations with academia</td>
<td>72%</td>
</tr>
<tr>
<td>Collaborations with other, non-health government ministries</td>
<td>80%</td>
</tr>
<tr>
<td>Collaborations with community-based organizations and civil society</td>
<td>82%</td>
</tr>
</tbody>
</table>

- 70% – upper-middle and high income countries
- 37% – low income countries

Source: WHO 2012
Re-thinking the ROI of healthy populations will... change the direction of discourse and help to fuel investments into healthy populations

Why is there a need for re-thinking?

- Beneficiary stakeholders of healthy populations have very different lenses:
  - Understanding and capturing those very different benefits is on top of the agenda but has not been solved to date

The status quo of the debate...

- ... does not facilitate investments
- ... does not address the specifics of multi-stakeholder investments
- ... does not provide a concept to assess investment opportunities

A discussion on the ROI concept...

- ... will force the debate about the value of healthy populations
- ... will assess investment opportunities in the eco-system of healthy populations
- ... will help to change the discourse to shift from investments into care to investments into prevention
U.S. Air Force & Duke Integrative Medicine Research Collaboration

Genetic Risk and Health Coaching for Type 2 Diabetes and Coronary Heart Disease

• (U.S. Air Force funded) The purpose of this study is to examine whether the use of genetic test information and/or health coaching in patient risk counseling for heart disease and diabetes affects health behaviors and health outcomes in active-duty Air Force, beneficiaries or dependents and Air Force retiree patients. Participants are being recruited from the David Grant Medical Center at Travis Air Force Base and the McClellan Outpatient Satellite Clinic in California.

https://www.dukeintegrativemedicine.org/research/current-research-studies/
What can the Danish Defense Committee Do?
Collaborate with Health Committee
Create Version 2.0 of NATO Task Force 195 Integrative Health and Prevention (IHP) Expert Committee

STEP 1: Invite NATO Task Force Group to Denmark / Determine Healthcare Needs for Danish Military Personnel/Veterans and Public/Provider (Patients and Healthcare Personnel)

STEP 2: Fund Epidemiological Study (Update Cambrella 2012 Data)

STEP 3: Build the IHP Team

STEP 4: Fund IHP Pilot Study on PTSD for Military Personnel and Veterans (Translational/Interventional)
Collaborative Actions:
Danish Parliament Defense and Health Committees

ACTION 1: Spring 2017 - Parliamentary Hearing on Integrative Health and Prevention (IHP)

ACTION 2: Selecting Multipartisan Expert Committee on IHP

ACTION 3: Funding Research
- A. Epidemiological
- B. IHP Pilot Studies (NATO/Danish Defense, PTSD) Provider (stress), Public (cancer)

ACTION 4: Funding a Center for Integrative Health and Prevention (Clinical and Research)