

Sustainable Integrative Models of Care

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The Penny George Institute History

- Founded in 2003 through philanthropic donations to promote Health and Wellness and act as a “living lab” for healthcare transformation
- Largest Integrative Health program in the country that is integrated within a health system
- March of 2012, designated an Allina Health Clinical Service Line
 - Prevention and Wellness Service Line



Penny George Institute for Health & Healing

Impetus for Change

- A minimum of 40% of all deaths in US attributed to four behaviors:
 - Poor nutrition
 - Inadequate levels of physical activity
 - Smoking and exposure to tobacco
 - Hazardous drinking
- Only about 5% of the US population lives without an identifiable risk factor
- For the first time ever, children in the US are expected to live shorter lives than their parents

Here are ways in which some key body systems react.

1 NERVOUS SYSTEM

When stressed — physically or psychologically — the body suddenly shifts its energy resources to fighting off the perceived threat. In what is known as the “fight or flight” response, the sympathetic nervous system signals the adrenal glands to release adrenaline and cortisol. These hormones make the heart beat faster, raise blood pressure, change the digestive process and boost glucose levels in the bloodstream. Once the crisis passes, body systems usually return to normal.

2 MUSCULOSKELETAL SYSTEM

Under stress, muscles tense up. The contraction of muscles for extended periods can trigger tension headaches, migraines and various musculoskeletal conditions.

3 RESPIRATORY SYSTEM

Stress can make you breathe harder and cause rapid breathing — or hyperventilation — which can bring on panic attacks in some people.

4 CARDIOVASCULAR SYSTEM

Acute stress — stress that is momentary, such as being stuck in traffic — causes an increase in heart rate and stronger contractions of the heart muscle. Blood vessels that direct blood to the large muscles and to the heart dilate, increasing the amount of blood pumped to these parts of the body. Repeated episodes of acute stress can cause inflammation in the coronary arteries, thought to lead to heart attack.

5 ENDOCRINE SYSTEM

Adrenal glands
When the body is stressed, the brain sends signals from the hypothalamus, causing the adrenal cortex to produce cortisol and the adrenal medulla to produce epinephrine — sometimes called the “stress hormones.”

Liver

When cortisol and epinephrine are released, the liver produces more glucose, a blood sugar that would give you the energy for “fight or flight” in an emergency.

6 GASTROINTESTINAL SYSTEM

Esophagus

Stress may prompt you to eat much more or much less than you usually do. If you eat more or different foods or increase your use of tobacco or alcohol, you may experience heartburn, or acid reflux.

Stomach

Your stomach can react with “butterflies” or even nausea or pain. You may vomit if the stress is severe enough.

Bowels

Stress can affect digestion and which nutrients your intestines absorb. It can also affect how quickly food moves through your body. You may find that you have either diarrhea or constipation.



7 REPRODUCTIVE SYSTEM

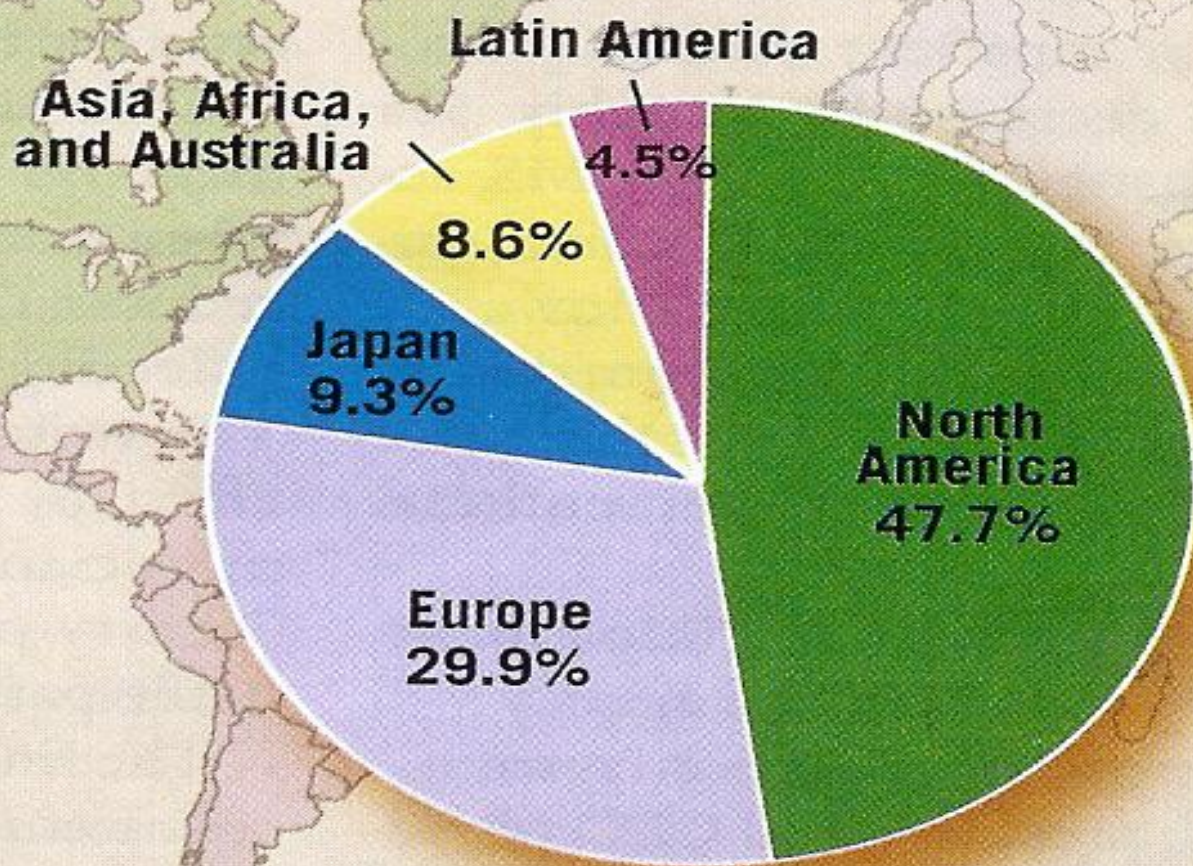
In men, excess amounts of cortisol, produced under stress, can affect the normal functioning of the reproductive system. Chronic stress can impair testosterone and sperm production and cause impotence.

In women, stress can cause absent or irregular menstrual cycles or more-painful periods. It can also reduce sexual desire.

- 70-90% of all visits to health care are related to stress disorders

DATA WATCH

North America Makes Up Almost Half of All Global Pharmaceutical Sales



Source: 2006 data, IMS Health Inc.

Unsustainable Costs Unacceptable Outcomes

- 2.5 trillion spent in the current healthcare system (70% Of spending) on lifestyle related diseases
- 4.3 trillion by 2023
- 16% of nation's GDP
- Double the amount of other developed nations
- US ranked 37th in the world in health outcomes



Mission

- Empowering patients
- Utilizing the mind-body-spirit approach
- Patient centered care
- A philosophy of wellness at any stage of care
- A vehicle for health care transformation—triple aim

We combine leading medical practice with ancient healing wisdom, to optimize health and wellness in the whole person – body, mind and spirit.



Allina Health

- Serves MN and Western WI
- 13 hospitals
- 90 clinics
- Abbott Northwestern Hospital (ANW) is a 629 bed tertiary care hospital



Penny George™ Institute for Health and Healing

- Inpatient (services began 2003)
- Outpatient Clinic (2004)
- LiveWell Fitness Center (2006)
- Integrative Health Research Center (2007)
- Cancer Center Unity Hospital (Oct 2010)
- Healthy Communities Partnership(2012)
- Learning and Development (2013)
- St Francis Hospital (2013)
- New Ulm Hospital (2013)
- WestHealth Clinic (2014)
- Owatonna Hospital and Clinic (2015)
- St Francis Clinic (2015)
- Woodbury Combined Clinic (2015)

Penny George Institute Overview

Combining leading medical practice with ancient healing wisdom to optimize health and wellness in the whole person – mind, body and spirit.

Penny George Institute for Health and Healing Integrative Health, Prevention and Wellness Clinical Service Line

Outpatient Services	Inpatient Services	Healthy Lifestyle Programs	Training & Innovation
<ul style="list-style-type: none"> • Integrative Medicine • Integrative Nutrition • Acupuncture • Biofeedback • Massage • Spiritual Direction • Integrative Psychology • Fitness Consults • Shared Medical Appointments 	<ul style="list-style-type: none"> • Holistic Nursing • Massage Therapy • Acupuncture (individual & group) • Music Therapy • Aromatherapy • Reiki 	<ul style="list-style-type: none"> • Integrative Health & Wellness Coaching • Resilience Training • Mindfulness Training • Tobacco Cessation • Take Action Program for Weight Mgmt • Am I Hungry? Mindful Eating Program • Biometric Screening 	<ul style="list-style-type: none"> • Transformative Nurse Training • Aromatherapy • Service-line specific trainings (e.g., M-B) • Products (aromatherapy inhalers, guided imagery CDs, MP3s, etc.)

CROSS PROMOTION & SHARED RESOURCES

Research

Philanthropy



Model of Care

- Consultative-based
- Out-patient clinic is insurance-based
- Average of 80% insurance coverage
- In-patient is covered by hospital operations

Outpatient

- New Program Development:
 - Integrative psychology (PGIHH-WH)
 - Shared Medical Appointments including menopause and insomnia



Ribbon cutting event at PGIHH-Owatonna, April 2015

Scorecard Measure	2015
Encounters	23,542 (56.5% ↑ PY)
Unique Patients (defined as seen in last 2 years)	2,067 (34% ↑ PY)
Quality of Life Improvement – Physical	4.76% (N-3754)
Quality of Life Improvement - Mental	6.36% (N-3772)



Integration of Practice

- Weekly meeting with outpatient practitioners
- Weekly meeting of inpatient team
- Monthly all-staff meeting between various sites
- Inpatient team meets every morning to discuss patients

Results: Cardiovascular

Pre- to post-IM therapy percent decrease in pain and anxiety scores

		Any Cardiovascular Disease
Any Treatment	No. Pain Obs	5,981
	% Decrease in Pain	46.5
	95% CI	(45.5 – 47.4)
	p-value	<0.001
	No. Anxiety Obs	3,109
	% Decrease in Anxiety	54.8
	95% CI	(53.7 – 55.9)
	p-value	<0.001

Results: Joint Replacement

Length of hospital stay by IM therapy status (n=3,834)

	No IM Therapy (n=1,696)	IM Therapy (n=2,138)	p-value
<i>Length of Stay (standard deviation)</i>	3.5 (2.0)	3.3(2.2)	0.004

Results: Joint Replacement

Pre- to post-IM therapy percent decrease in pain scores

		Any Joint Replacement
Any Treatment	No. Pain Obs	2,176
	% Decrease in Pain	49.9
	95% CI	(47.9 – 51.8)
	p-value	<0.001

Results: Oncology

Pre- to post-IM therapy percent decrease in pain and anxiety scores

		Any Cancer Site
Any Treatment	No. Pain Obs	1,514
	% Decrease in Pain	46.9
	95% CI	(45.1 – 48.6)
	p-value	<0.001
	No. Anxiety Obs	1,074
	% Decrease in Anxiety	56.1
	95% CI	(54.3 – 58.0)
	p-value	<0.001

Inpatient

Scorecard Measure	2015
Visits with Services Provided (by PGIHH practitioners, Allina wide)	12,756 (3.2% ↑ PY)
% Reduction in Pain (Allina wide)	-45.78%
% Improvement in Ability to Cope (Allina wide)	+23.46%
Integrative therapy interventions by Allina RNs	15,297

Cost Analysis: Inpatient IM

GOAL:

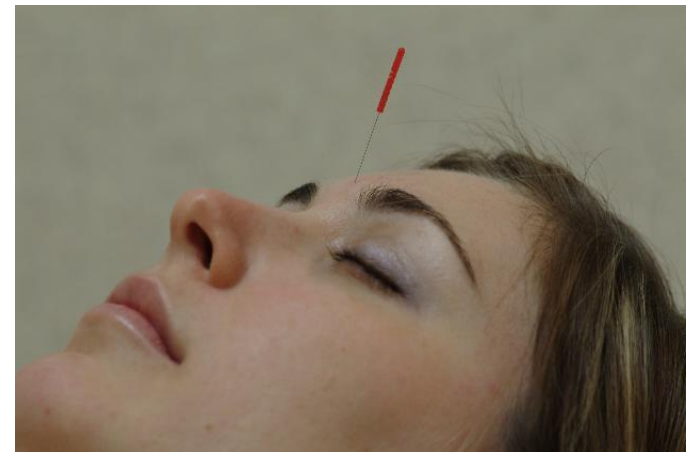
- To examine whether the effect of pain reduction following an IM session would impact the total cost of the patient's hospitalization.
- We used a statistical technique (multiple regression) to estimate the relationship between a patient's reduction in pain and their total hospital cost.
- We compared this to the patient's cost without accounting for their reduction in pain.
- The result was an average savings of \$905 (per hospitalization) for all patients who received an IM session for relief of pain. Savings of about \$87.

Results: Acupuncture in the ED

- Acceptance rate of 86%
- Gender: 68% Female, 32% Male
- Average length of treatment 23 minutes
- Primary reason for Acupuncture referral:
 - ✓ Pain 75% of time, Anxiety 11%
- **Improved patient outcomes**
 - ✓ 38% decrease in pain
 - ✓ 51% decrease in anxiety
 - ✓ 61% decrease in nausea
 - ✓ 38% increase in coping
- Hundreds of acupressure & acupuncture treatments given to staff members to address pain, stress, anxiety and nausea

What Have We Learned...

- Where does integrative medicine provide the most value?





LiveWell

- Largest vendor for our employee benefit
- Multiple platforms: *Learn it Live* online educational site webinars, classes and eLearning courses
- Take Action Program for Weight Management™ and Am I Hungry?™
- Partnership with the Allina Medical Weight Loss Program. PGIHH exercise physiologists and integrative health and wellness coaches deliver exercise and motivational sessions to all patients

LiveWell

Scorecard Measure	2015
Individual Coaching Sessions	4650 (308% ↑ PY)
Unique Coaching Clients	1084 (278% ↑ PY)
Encounters	32,088
Willingness to Recommend	81.4%
Quality of Life Improvement - Physical	6.0%
Quality of Life Improvement – Mental	10.1%
Operating Margin %	22%

Resilience Training

- The Resilience Training (RT) program is an 8-week long group-based skills building program for persons with chronic depression conducted at the George Institute Outpatient Clinic.
- Key elements of the program include 1:1 assessments from psychiatrist, nutritionist and exercise physiologist.

Resilience Training: Research Results

- 63-70% reduction in depression
- 48% reduction in stress
- 23% reduction in anxiety
- Numerous improvements in quality of life, including a 52% reduction in lost productivity.
 - Cost analysis showed reduction of ~\$1,800 in lost time at work (presenteeism).
- Most psychological improvements persisted up to 12 months after completion of the Resilience Training program.



External Partnerships / Business Development

- Mindfulness Training for City of MPLS employees
- Provided Bod Pod and BodyGem® assessments for Aveda corporate offices
- Developed I'mPOWER, a teen based resilience program
- Continued collaboration with General Mills Global Health for on-site Integrative Health & Wellbeing Coaching services and expanded educational presentation offerings

Center for Training & Innovation

- Mindfulness training
- PGIHH Guided Imageries have been downloaded and streamed around the world through Spotify, Google Music Store, Apple iTunes, CD Baby, Amazon MP3, to name a few, creating a passive revenue stream of over \$1,100 in our first year
- Transformative nurse training
- Aromatherapy training
- Art of Healing



Alignment with Allina Health 2016 Strategic Outcomes



Strategic Outcomes	Strategic Priorities, 2014 – 2016
Patient Care	<ul style="list-style-type: none"> Continue to improve lifestyle management across the following areas: <div style="display: flex; justify-content: space-around; align-items: center; margin: 10px 0;"> <div style="text-align: center;"> HEALTHY WEIGHT</div> <div style="text-align: center;"> HEALTHY EATING</div> <div style="text-align: center;"> PHYSICAL ACTIVITY</div> <div style="text-align: center;"> HEALTHY SLEEP</div> <div style="text-align: center;"> TOBACCO CESSATION</div> <div style="text-align: center;"> PAIN MANAGEMENT</div> <div style="text-align: center;"> LIFE BALANCE</div> </div> Lead efforts to measure patient self-reported outcomes, including Health-related Quality of Life (PROMIS-10)
Patient Experience	<ul style="list-style-type: none"> Achieve and maintain 90th percentile patient experience Improve patient access for programs and services
Population Health	<ul style="list-style-type: none"> Measurably improve population health Engage patients and pre-patients outside traditional healthcare setting through technology
Affordability	<ul style="list-style-type: none"> Lead payment reform initiatives, rewarding value over volume Reduce total cost of care through lifestyle management programs
Organizational Vitality	<ul style="list-style-type: none"> Expand integrative health and wellness offerings <u>within</u> and <u>outside</u> the traditional care system Pursue external partnerships Improve employee engagement

What to Expect...





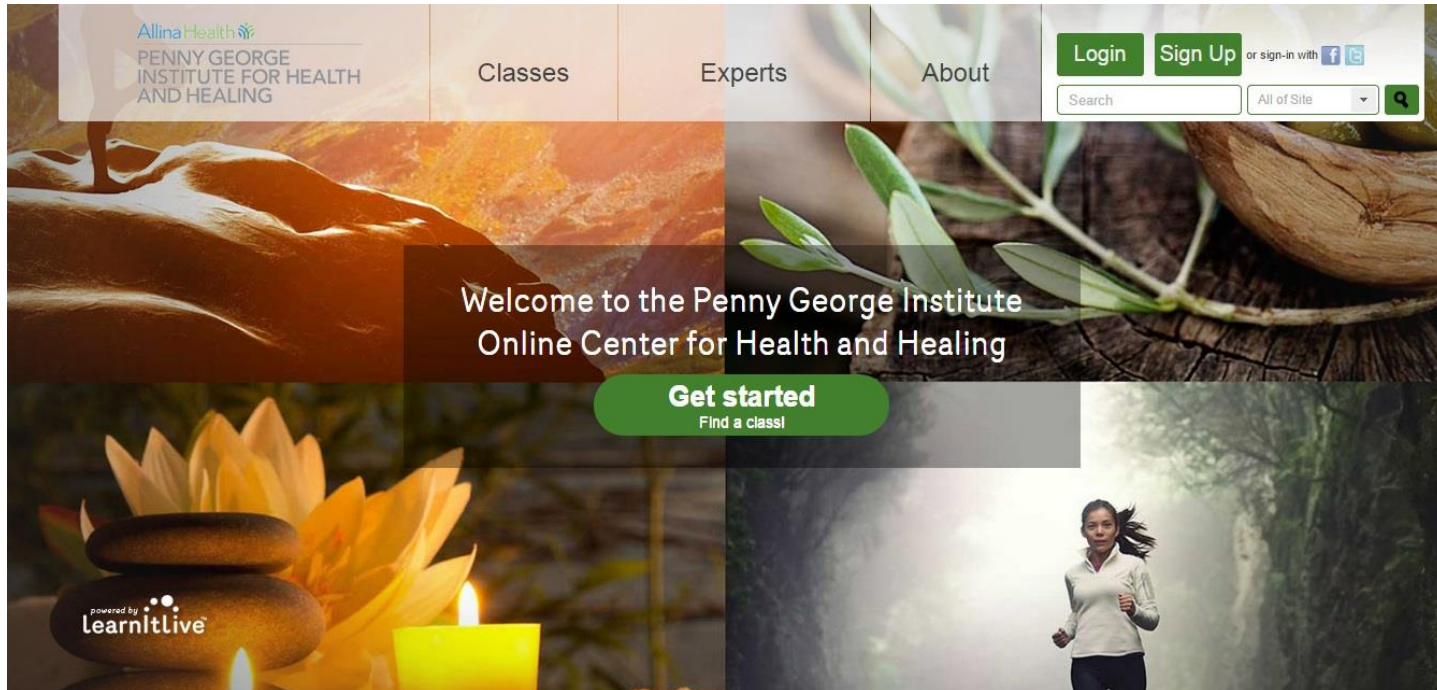
2017—Transforming Healthcare

- 5 new outpatient clinics in 2017
- Partnering with health plans
- Integrative health as a differentiator
- Internal fellowship(s)

Lessons Learned...Things to Consider

- How Silo'd do you want to be?
- What does success look like for you?
- Do you want to serve a certain population?
- Common metrics, common language
- Using multiple angles to make this work
- Being strategic with philanthropy

Questions?



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