Psychology’s Paradigm Shift

Can Psychology Successfully Transition from a Mental Health to a Health Profession?

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Presentation Overview

- The biomedical model and its legacy
  - Increased life expectancy
  - Mind-body dualism
  - Rise of the pharmaceutical industry
  - Rise in biomedical research

- Limitations of the biomedical model
  - Changing nature of disease
  - Rising health care cost
  - Increasing recognition of role of behavior in health
  - Failure to adequately address mental health

- A paradigm shift: biomedical to the biopsychosocial model
  - Implications for health care & professional education,
  - Implications for psychology
Biomedical Model: The Basis of Western Medicine

Preclinical Phase
- Exposure to pathogen
- Biological onset of disease

Clinical Phase
- Symptoms appear
- Therapy begun
- Diagnosis

‘Outcomes’ (cured; living with the disease; deteriorated; died)
(possible relapse & change in therapy)

http://phprimer.afmc.ca/print_frame.php?action=chapter&node=57965
Biomedical Model

- **Focus**: Disease
- **Reductionistic**: Disease is defined by a biologic defect
- **Exclusionary**: Problems not explained by a biologic defect are excluded
- **Mind-body dualism**
- **Biologic assays and biologic interventions**
Success of the Biomedical Model

- Germ theory of disease lead to
  - Sanitation
  - Antibiotics and rise of the pharmaceutical industry
  - Decline in infectious disease
  - Increased life expectancy

- Reductionism lead to
  - Identification and treatment of underlying biologic defect (e.g. insulin replacement in type 1 diabetes)
  - Mapping the human genome
### Success of the Biomedical Model: Elimination of Infectious Disease as the Leading Cause of Death in the United States

<table>
<thead>
<tr>
<th>cause of death</th>
<th>1900</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Tuberculosis</td>
<td>Heart Disease</td>
<td></td>
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<td>10 Diphtheria</td>
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CDC, National Center for Health Statistics (1900) and National Center for Injury Prevention and Control (1999)
Success of the Biomedical Model: Increasing Life Expectancy

Source: Kurian (2004, Tables 4-5, p. 71)
Success of the Biomedical Model: Type 1 Diabetes
Life Expectancy in the Pre- and Post-Insulin Era

Dublin, 1951; Brown et al, 2001
Biomedical Model’s Legacy: Reductionistic, Exclusionary, Dualistic Health Care

- Disease is defined as a derangement in an underlying physical mechanism
- Anything not caused by a physical derangement, is excluded
- Mental and physical health are treated separately; unless a behavioral disorder is the consequence of an underlying physical derangement, it is not a disease
Biomedical Model’s Legacy: Reductionistic, Exclusionary, Dualistic Health Care

- **Priority given to diagnosis and treatment of disease**
  - Physical complaints are given greater value
  - Resources are devoted to biologic assays and biologic interventions
  - Greater access provided to those with diseases
  - Multiple tests and visits to specialists may occur in search of a disease
  - Prevention a lower priority than treatment
Biomedical Model’s Legacy: Reductionistic, Exclusionary, Dualistic Health Care

- Mental or behavioral problems are excluded or devalued
  - Mental or behavioral problems are not considered “real”
    - Patients feel devalued or “not believed”
  - Mental health services are “carved out”
    - Patients may feel stigmatized
  - Fewer resources devoted to these services
    - Poorer access with higher co-pays
    - Many with mental or behavioral problems go untreated
Biomedical Model’s Legacy: US Health Expenditures Devoted Primarily to Physical Health

Mental Health Expenditures as a Percent of All Health Care Expenditures (2003)

Mental Health (MH) 6.2%

All Health = $1,614 billion in 2003
MH = $100 billion in 2003

Data courtesy of SAMHSA
Biomedical Model’s Legacy: Percent of US Population Using Prescription Drugs and Expenditures in Billions of US Dollars

http://meps.ahrq.gov/mepsweb/data_stats

AMERICAN PSYCHOLOGICAL ASSOCIATION
Biomedical Model’s Legacy: Mental Health Expenditures in Billions of US Dollars

Mark et al, Health Affairs, 2011

American Psychological Association
Biomedical Model’s Legacy: Dualistic Training Programs

- Mental health and physical health providers are trained separately
- Within this system, psychologists - experts on behavior, cognition and emotion – are “mental health” and physicians are the “physical health” providers
- Neither is trained in inter-professional practice
Despite the success of the biomedical model, by the end of the 20th century, medicine was on the verge of a paradigm shift as a result of:

- Changing nature of disease
- Rising health care costs
- Increasing recognition of role of patient and provider behavior
- Failure to adequately address mental health

This in turn lead to the emergence of the biopsychosocial model.
# Leading Causes of Death in the United States

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CDC, National Center for Health Statistics (1900) and National Center for Injury Prevention and Control (1999)
Changing Nature of Disease in the US

- 7 of 10 US deaths are the result of chronic disease
- In 2005, 133 million Americans – almost 1 in 2 adults – had at least one chronic illness
- One quarter of those with a chronic illness have a major activity limitation
- Chronic diseases account for 75% - $1.9 trillion- of the nation’s healthcare costs

US Leads the World in Health Care Costs with Lower Life Expectancy

http://ucatlas.ucsc.edu/health/accessprint.html
# Increasing Recognition of the Role of Behavior

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<td>Diet/Activity</td>
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<td>3</td>
<td>Stroke</td>
<td>Alcohol</td>
</tr>
<tr>
<td>4</td>
<td>Pulmonary Disease</td>
<td>Microbial Agents</td>
</tr>
<tr>
<td>5</td>
<td>Accidents</td>
<td>Toxic Agents</td>
</tr>
<tr>
<td>6</td>
<td>Diabetes</td>
<td>Motor Vehicles</td>
</tr>
<tr>
<td>7</td>
<td>Pneumonia/Influenza</td>
<td>Firearms</td>
</tr>
<tr>
<td>8</td>
<td>Alzheimer’s</td>
<td>Sexual Behavior</td>
</tr>
<tr>
<td>9</td>
<td>Kidney disease</td>
<td>Illicit Drug Use</td>
</tr>
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</table>

*JAMA. 2004;291:1238-1245*
Increasing Recognition of the Role of Behavior: Determinants of Health

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Access to Care</td>
<td>10%</td>
</tr>
<tr>
<td>Genetics</td>
<td>20%</td>
</tr>
<tr>
<td>Environment</td>
<td>20%</td>
</tr>
<tr>
<td>Health Behaviors</td>
<td>50%</td>
</tr>
</tbody>
</table>

CDC, 2010
Increasing Recognition of Role of Behavior: Reports of the US Surgeon General

- 1964-2012 there have been 37 reports on Smoking and Health
- 1972 Impact of Television Violence
- 1979 Healthy People
- 1988 Report on Nutrition and Health
- 1992 HIV Infection and AIDS
- 1996 Physical Activity and Health
- 1999 and 2001 Mental Health
- 2001 Youth Violence
- 2001 Call to Action to Prevent and Decrease Overweight and Obesity
Increasing Recognition of the Role of Behavior: Healthy People Reports

- Healthy People 1990: Promoting Health/Preventing Disease: Objectives for the Nation
- Healthy People 2000: National Health Promotion and Disease Prevention Objectives
- Healthy People 2010: Objectives for Improving Health
- Healthy People 2020 focus: Four overarching objectives - health status; quality of life, social determinants of health, and disparities
Increasing Recognition of Role of Behavior: Institute of Medicine (IOM) Reports

- Promoting Health: Intervention Strategies from Social and Behavioral Research (2000)
- Health and Behavior: The Interplay of Biological, Behavioral, and Societal Influences (2001)
Increasing Recognition of Role of Behavior

- Disease etiology
- Disease prevention
- Disease management
  - ~30% of patients fail to adhere to short-term regimens
  - ~50% of patients fail to adhere to long-term regimens
  - ~70% of patients fail to comply when asymptomatic
  - ~75% of patients have difficulty making lifestyle changes
  - Chronic disease requires long-term often complex medical regimens; many require lifestyle changes
  - Poor medical regimen adherence associated with increased health care costs

Clinical Therapeutics, 2000, 22:858-871; Johnson, Psychosocial clinical guidelines for the care of patients with diabetes, 2012
Increasing Recognition of the Role of Behavior: Provider Behavior is Important Too!

- Providers often fail to communicate successfully with their patients
- Doctors make mistakes!
  - Institute of Medicine report: To Err is Human: Building a Safer Health Care System (1999): medical errors are the 8th leading cause of death in the US
  - >50% of medical recommendations are inappropriate

Increasing Recognition of the Role of Provider Behavior

- **Evidence Based Medicine**
  - Medical practice is based on science

- **Practice Guidelines**
  - Professional, national, governmental agencies

- **Medical Informatics**
  - A science addressing how best to use information to improve health care; National Library of Medicine is the government leader (www.nlm.nih.gov)

- **Patient Safety Initiatives**
  - Electronic medical record
  - Decision support systems
Failure to Adequately Address Mental Health

- Mental health concerns are common
  - 26% of US adults have a mental disorder
  - 6% have a serious mental disorder
- Mental disorders are the leading cause of disability in the U.S.

Failure to Adequately Address Mental Health

- Mental health concerns are common in primary care settings
- However, mental health concerns seen in primary care are often:
  - Unrecognized
  - Untreated
  - Treated inappropriately
Proportion of Persons with Depression or Anxiety Disorders Receiving Appropriate Treatment

Young et al, Arch Gen Psychiatry, 2001
Failure to Adequately Address Mental Health

- Mental health disorders are frequently co-morbid with physical disorders, complicating their effective treatment and increasing costs
  - 25-40% of medical outpatients and ≥ 40% of medical inpatients are comorbid for mental health disorders  
    Kessler et al J Occup Environ Med 2003

- Those with mental health disorders seen in mental health facilities often fail to get adequate treatment for co-morbid physical disorders
  - 75% of seriously mentally ill patients are comorbid for a physical disorder  
    Kessler et al J Occup Environ Med 2003
## Per Capita Healthcare Costs in Medically Ill, Depressed, and Comorbid Patients

<table>
<thead>
<tr>
<th></th>
<th>Medical Ill only</th>
<th>Depression only</th>
<th>Comorbid for Medical Illness and Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Care Costs</td>
<td>$3853</td>
<td>$3417</td>
<td>$7407</td>
</tr>
<tr>
<td>Sick days</td>
<td>6.64</td>
<td>8.79</td>
<td>13.48</td>
</tr>
<tr>
<td>Health and Disability Costs</td>
<td>$4646</td>
<td>$4675</td>
<td>$7906</td>
</tr>
</tbody>
</table>
Figure 1-1 A model of the determinants of health. Source: Reprinted from R.G. Evans and G.L. Stoddart, 1990, Producing Health, Consuming Health Care, Social Science and Medicine 31:1347-1363, with permission from Elsevier Science Ltd, Kidlington, UK.

Biomedical model indicated in red
World Health Organization (WHO)
Definition of Health: Consistent with the Biopsychosocial Model

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946

Biomedical
- Focus: Disease
- Reductionism – disease is defined by a single biologic defect
- Dualism – mind and body are separate
- Biologic assays and treatments emphasized

Biopsychosocial
- Focus: Well-being
- Multi-factorial – well-being is a product of multiple factors
- Integrative – mind and body are not separate
- Treatments may be behavioral, biologic, or environmental
- Prevention is a focus
Patient-Centered Integrated Care: US Health Care of the Future?

- Based on the biopsychosocial model
- The patient is viewed as a whole person
- All of the patient’s needs are addressed
- By inter-professional health care teams
- That include health and mental health expertise
- In a non-stigmatizing environment that considers the patient’s preferences and culture
Benefits of Integrated, Patient-Centered Care Models

- Higher quality of care
- Greater access
- Reduced stigma
- Greater patient satisfaction
- Lower cost
Biopsychosocial Model: Implications for US Health Care

- Increased emphasis on disease prevention
- Increased emphasis on functioning and quality of life as health outcomes
- Use of multiple intervention options, including behavioral interventions

  - US Preventives Services Task Force recommendations:
    - Screening and Behavioral Counseling Interventions in Primary Care to Reduce Alcohol Misuse (2004)
    - Counseling and Interventions to Prevent Tobacco Use and Tobacco-Caused Disease in Adults and Pregnant Women (2009)
    - Screening for and Management of Obesity in Children (2010)
    - Behavioral Counseling to Prevent Skin Cancer (2012)
    - Screening for and Management of Obesity in Adults (2012)

http://www.uspreventiveservicestaskforce.org;www.pcori.org
Biopsychosocial Model: Implications for Health Providers

- Science-based Health Care
  - Health care practice is based on science
- Practice Guidelines
  - Professional, national, governmental agencies
- Medical Informatics
  - A science addressing how best to use information to improve health care; National Library of Medicine is the government leader (www.nlm.nih.gov)
- Patient Safety Initiatives
  - Electronic medical record
  - Decision support systems
Affordable Care Act is Consistent with the Biopsychosocial Model

Essential health benefits include mental health, preventive and wellness services, and chronic disease management

- US Preventive Services Task Force (A and B) recommendations must be covered with no cost sharing

- Emphasizes patient-centered coordinated care, patient safety, reduction of medical errors, reduction in health disparities

- Emphasizes patient functioning and quality of life as health outcomes
  - Established the Patient-Centered Outcomes Research Institute (PCORI) which focuses on “outcomes that people notice and care about such as survival, function, symptoms, and health related quality of life”

Biopsychosocial Model: Implications for Health Provider Education

- Increased behavioral science in medical education
  - MCAT will have an increased focus on behavioral and social sciences ([https://www.aamc.org/newsroom/newsreleases/273712/120216.html](https://www.aamc.org/newsroom/newsreleases/273712/120216.html))
  - Focus on patient-centered care ([http://www.lcme.org/pubs.htm](http://www.lcme.org/pubs.htm))
    - Patient-provider communication skills
    - Medical impact of common societal problems
    - Impact of patient culture and beliefs
    - Impact of provider bias and beliefs

- Increased training in inter-professional practice: Core Competencies for Interprofessional Collaborative Practice adopted by six professional organizations (medicine, nursing, osteopathy, dentistry, pharmacy, public health) and endorsed by APA ([http://www.aacn.nche.edu/education-resources/ipecreport.pdf](http://www.aacn.nche.edu/education-resources/ipecreport.pdf))
Implications of the Biopsychosocial Model: Challenges for Psychological Practice

- Reduction in mental health delivery by independent practitioners providing services in isolation
- Increased practice on health care teams in larger group practices and institutional settings
- Increased demand for expertise in a wide array of behavior issues in addition to “mental health” (e.g., compliance, pain management, coping with disability, lifestyle behavior change)
Implications of the Biopsychosocial Model Challenges for Psychological Practice

- Need to adapt to the larger health care culture
  - Evidence-based practice
  - Treatment guidelines
  - Electronic health records
- Need for increased collaboration with a wide range of health providers and organizations
  - To develop new payment models for patient-centered integrated care
  - Treatment guidelines
Implications of the Biopsychosocial Model: Challenges for Professional Education in Psychology

- Professional psychologists must be educated to:
  - function as health providers - not just mental health providers - expanding skills beyond mental health,
  - delivering patient-centered care,
  - on interprofessional teams
Changing from a Mental Health to a Health Profession is a Huge Paradigm Shift for Psychology

- Many practicing psychologists feel threatened
- They have not worked on health care teams
- They lack expertise in health psychology
- They are unfamiliar with the larger health care culture
- It is unclear how they will be paid
- This paradigm is foreign to their experience and their training
Practicing Psychology Must Embrace this Paradigm Shift

For Psychology’s Survival
- Medicine has accepted patient centered care and inter-professional practice and is training the next generation of physicians in that model
- If psychology does not embrace this paradigm shift, other mental health professionals will serve in this role on the health care teams of the future

For Quality Patient Care
- Attends to all of the patient’s concerns
- Increases access to quality treatment
- Reduces stigma
- Increases patient satisfaction
- Reduces cost
Psychology’s Paradigm Shift: APA Leading the Way

- Policy
- Strategic Plan
- Strategic Initiatives
- Education and Training
- Center for Psychology and Health
APA Policy

- 1996: Recognition as Health Service Providers
- 1999: Changing U.S. Health Care System
- 2000: Criteria for Evaluating Treatment Guidelines
- 2003: Health Service Psychologists as Primary Health Care Providers
- 2005: Evidence Based Practice in Psychology
- 2007: Principles on Health Care Reform

- 201?: First treatment guidelines ever done by APA (on depression)
- 201?: Second treatment guidelines ever done by APA (on obesity)
APA’s Strategic Plan

- Maximize Organizational Effectiveness
- Expand Psychology’s Role in Health
- Increase Recognition of Psychology as a Science
APA Strategic Initiatives

- **Psychology Workforce Analysis**
  - Workforce needs very different if psychology is seen as a health vs mental health profession

- **Treatment Guidelines**
  - To assure all providers and patients have access to all evidence-based interventions, not just biologic interventions

- **Public Education**
  - To assure the public views psychology as critical to health not just mental health
  - Stress in America campaign: emphasizes the link between stress and health

APA Education & Training Initiatives in Primary Care

- Directory of Education and Training Programs in Primary Care

- Report of the Inter-organizational Work Group on Competencies for Psychological Practice in Primary Care (APA Division 20, Adult Development and Aging; APA Division 38, Health Psychology; APA Division 54, Society of Pediatric Psychology; Association of Psychologists in Academic Health Centers; Collaborative Family Healthcare Association; Council of Clinical Health Psychology Training Programs; Society of Behavioral Medicine; Society of Teachers of Family Medicine; and the VA Psychology Training Council)


- To be published in AP and will inform:
  - Practicing psychologists interested in obtaining new skills
  - Professional psychology training programs
  - Other health providers as to the skills they can expect from a psychologist on an integrated care team
APA’s Center for Psychology and Health
APA’s Center for Psychology and Health: Scope and Selected Activities

- Address APA’s strategic goal to increase psychology’s role in health
- Education and training
  - Expand opportunities for training in interprofessionalism and integrated health care
- Advocacy
  - Address reimbursement issues relevant to psychological service delivery in integrated care
- Public education and outreach
  - Develop partnerships with primary care and community agencies
- Member communication and education
Psychology’s Paradigm Shift: How Can KPA Lead the Way

- State regulatory activities to assure psychologists inclusion in integrated care
- Kentucky is a leader in providing access to health care through ACA; how well is psychology integrated into the health programs offered?
- Develop training partnerships with the VA (a leader in integrated care), Kentucky accredited doctoral, internship and post-doctoral programs, and APA to provide training opportunities for interested students and practitioners in integrated care
- Encourage more accredited doctoral, internship, and post-doctoral programs focusing on integrated care
Some final thoughts….

- The biopsychosocial model and integrated care is consistent with psychology’s world view.
- From personal experience, integrated care is engaging and rewarding.
- Not everyone needs to do this – and it will take time for the shift to occur.
  - Students need to prepare for this new model.
  - Mid-career practitioners should consider expanding their skills.
  - Senior people with successful mental health practices will not have to make a change although most clients will be self-pay.
This presentation is available at
www.apa.org/sbjohnson

also see American Psychologist
2013, 68, 311-321