Disclosure:
Dr. Kimbell is an employee of Pearson, the publisher of most of the assessment instruments that will be mentioned during the presentation.
Agenda

Biopsychosocial Factors in Healthcare

Instrument Considerations

Instrument Examples

Biopsychosocial Factors in Healthcare
Health in the United States

- The U.S. population is living longer, increasing the need to address the chronic conditions of an aging population.

![Life expectancy in the US (1900-2011)](http://www.cdc.gov/nchs/data/nv/vr/64.pdf)

- Nearly half (145 million) of the U.S. population live with at least one chronic condition.

Health in the United States

- As populations age, chronic conditions increase in prevalence:
  - Diabetes
  - Hypertension
  - Congestive heart failure
  - Cardiovascular disease
- They rarely occur in isolation but often along with other chronic diseases.
- In 2009, 21% of Americans ages 45 to 64, and 45% of Americans older than age 65, had two or more coexisting conditions.
Chronic Diseases: CDC Facts

Most common, costly, and preventable chronic diseases and conditions: heart disease, stroke, cancer, type 2 diabetes, obesity

• Surprisingly common: As of 2012, (in the USA) about half of all adults—117 million people—had one or more chronic health conditions. One in four adults had two or more chronic health conditions.

• Seven of the top 10 causes of death in 2014 were chronic diseases. Two of these chronic diseases—heart disease and cancer—together accounted for nearly 46% of all deaths.


• Heart disease
• Cancer (malignant neoplasms)
• Chronic lower respiratory disease
• Accidents (unintentional injuries)
• Stroke (cerebrovascular diseases)
• Alzheimer's disease
• Diabetes
• Influenza and pneumonia
• Kidney disease (nephritis, nephrotic syndrome, and nephrosis)
• Suicide
What Percent of Primary Care Visits Are Driven By Nonorganic Factors?

- Organic Causality
- No Identifiable Organic Causality

Cummings & VandenBos, 1981
Behavioral Health in Medical Settings

Collaborate with primary care providers to assist patients experiencing:

• A need to improve health self-management skills
• A need to change unhealthy lifestyle behaviors
• Somatic symptoms of known or unknown origin
• A wide range of mental health problems including depression, anxiety, substance abuse, and psychosocial stressors
• Adjustment problems following loss of function
• Distress over a diagnosis or progression of disease
• Many other types of health issues
APA Data on Behavioral Health in the U.S.

Mental illness is associated with
• increased occurrence of chronic disease
• lower use of medical care
• reduced adherence to treatment therapies for chronic diseases
• higher risks of adverse health outcomes

• Mental disorders were one of the five most costly conditions in the U.S. in 2006, with expenditures at $57.5 billion.

Access to Treatment

• Up to 1 in 4 primary care patients suffer from depression; less than 1/3 of these are identified (AHRQ)
• Four percent of young adults reported forgoing mental health care in past year despite self-reported MH needs (AHRQ).
• People with psychotic disorders and bipolar disorder are 45% and 26% less likely, respectively, to have a primary care doctor than those without mental disorders (AHRQ).
Depression

- Major depressive disorder is the leading cause of disability in the U.S. for ages 15-44. (NIMH)
- Major depressive disorder affects approximately 14.8 million American adults, or about 6.7 percent of the U.S. population age 18 and older in a given year. (NIMH)

Anxiety

- Approximately 40 million American adults ages 18 and older, or about 18.1 percent of people in this age group in a given year, have an anxiety disorder. (NIMH)
- Anxiety disorders frequently co-occur with depressive disorders or substance abuse. (NIMH)
Mental Disorders

- Adults with any type of mental illness in the past year: 45.1 million. (SAMHSA)
- Adults with serious mental illness: 11 million. (SAMHSA)
- Nearly one-fourth of all adult stays in U.S. community hospitals involve depressive, bipolar, schizophrenia and other mental health disorders or substance use-related disorders. (AHRQ) (PDF, 615KB)

ACE studies (Adverse Childhood Experiences)

Trauma in childhood increases risk for autoimmune and other chronic diseases, additional health problems later in life and in future generations.

Effects of childhood trauma are not just psychological.

ACEs increase risk for major causes of death in adults including smoking, alcohol abuse, use of illicit drugs, suicide attempts, promiscuity, obesity, physical inactivity, risk for chronic illness, cancer, fractures, heart/lung/thyroid/autoimmune; ADHD and behavioral problems in kids; premature birth, greater challenges/difficulties in parenting, anxiety, depression, PTSD, self-harm, suicide, low life satisfaction, poor academic achievement, unintended pregnancy & paternity, intimate partner violence, increased number of marriages, injuries, intentional and not, criminality.

http://www.acesconnection.com/blog/ace-fact-sheet-to-give-your-doctors-patients-and-beyond-free-download
Screening and assessing for mental and behavioral health conditions among the chronically medically ill is critical.

The common association of mental and behavioral health conditions with these medical disorders suggests that clinicians, as a matter of the normal course of treatment should screen for and assess mental and behavioral health with these patients.

Secondly, once the decision has been made to treat a comorbid mental health condition, ongoing progress monitoring becomes important to gauge whether or not one is successfully treating depression.

Measures with strong psychometric data (e.g. reliability, validity, etc.) are critical to have confidence that these assessments are effectively measuring the target of interest.

Finally, efficiency of administration, scoring and interpretation all become important given the myriad of demands on health care professionals working with these patients and even demands upon patients themselves.
21st Century Medicine

- Medical diseases affect millions of lives and consume billions of dollars.
- Healthcare costs for management of chronic diseases are astronomical.
- A substantial proportion of healthcare costs are for treatment of conditions with psychosocial sources.
- Clinical behavioral medicine interventions may reduce the frequency of medical utilization once we identify patients most likely to benefit.

(Regier, 1994)

Basic Questions . . .

- What patient characteristics bring people into the healthcare setting?
- Which characteristics do they bring with them into this setting?
- Which of these can work for or against the success of medical interventions like surgery?
- How can we quickly assess these characteristics in a reliable and valid manner?
- How can we change those characteristics that are modifiable to better prepare the patient for surgery or other medical treatments?
### Psychosocial Factors and Health Maintenance Indicators

<table>
<thead>
<tr>
<th>Health Preservation and Primary Prevention of Disease</th>
<th>Patient Responses to Diagnosis and Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Risk behaviors and primary prevention</td>
<td>• Emotional response to diagnosis</td>
</tr>
<tr>
<td>• Preventative health behaviors</td>
<td>• Adjustment to chronic disease</td>
</tr>
<tr>
<td></td>
<td>• Physical course of disease</td>
</tr>
</tbody>
</table>

### Psychosocial Factors and Health Care Delivery Indicators

<table>
<thead>
<tr>
<th>Medical utilization and health care costs</th>
<th>Treatment Success and Recovery Time Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ER visits</td>
<td>• Complications after treatment (e.g., fatigue, infection)</td>
</tr>
<tr>
<td>• Repeat visits for same symptoms</td>
<td>• Failed treatments (e.g., transplants, bypass surgeries)</td>
</tr>
<tr>
<td>• # Days hospitalized</td>
<td>• Delayed return to work</td>
</tr>
</tbody>
</table>
# Psychosocial Factors and Health

<table>
<thead>
<tr>
<th>Affective and psychiatric disorders</th>
<th>Cognitive appraisals</th>
<th>Coping strategies</th>
<th>Resources</th>
<th>Life Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression Anxiety</td>
<td>Self-efficacy</td>
<td>Active behavior</td>
<td>Social</td>
<td>Stressful events</td>
</tr>
<tr>
<td></td>
<td>Optimism/ pessimism</td>
<td>Avoidance</td>
<td>Economic</td>
<td>Perceived stress level</td>
</tr>
<tr>
<td></td>
<td>Perceived control</td>
<td>Denial</td>
<td>Familial</td>
<td>Stress level</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Spiritual</td>
<td>Functional capacity</td>
</tr>
</tbody>
</table>

## Questions . . . and Answer

1. **Which psychological factors can work for or against the success of medical interventions like surgery, or medications?**

2. **How can we quickly assess these characteristics in a reliable and valid manner?**

   - **Use of multi-modal instrument(s) that integrates information from multiple domains to inform clinical judgment.**
Summary

- Chronic medical diseases and mental health diseases represent about 87% of the health budget of the USA.
- Chronic medical conditions comprise 7 of the top 10 causes of death in the USA.
- Depression is more common among both adults and youth who have chronic medical conditions.
- Prevalence for chronic disease increases with age.
- Depression among those with chronic medical conditions is associated with more hospital visits, more unscheduled doctor visits, poorer functioning and greater inactivity.
- Assessing, and possibly more importantly, progress monitoring of depression among those with chronic medical conditions becomes a critical factor in reducing depression and mitigating its negative effects.

Instrument Considerations
Instrument Considerations

• Administration Time
• Language(s)
• Administration options: Digital vs. Non-digital
• Scoring options
• Reporting options
• Progress Monitoring

Instrument Considerations cont.

• Psychometric Data/Norms
• Public Domain vs. Private
• Self-report vs. other-report
• Child vs. adult self-report
• Rating-scale vs. performance based
The Science of Psychometrics

• Scientific surveys apply the science of psychometrics to the assessment of the feelings of populations, and predict behavior.

• Standardized psychological tests apply the science of psychometrics to the assessment of the feelings of individuals, and predict behavior.

What Predicts Behavioral Failure?

Medical tests predict medical aspects of outcome

Psychological tests predict behavioral aspects of outcome

Psychological tests can outperform medical tests at predicting poor response to back surgery to reduce pain, (Carragee, et al, 2005; 2004)
Test Selection

Psychiatric Tests

Pain/Health Psych Tests

(Adapted from Bruns, 2017)

Test Selection in Behavioral Health

<table>
<thead>
<tr>
<th>Psychiatric Tests</th>
<th>Overlap</th>
<th>Pain/Health Psych Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thought disorder</td>
<td>Validity</td>
<td>Pain disorder</td>
</tr>
<tr>
<td>Mood disorder</td>
<td>Depression</td>
<td>Physical functioning</td>
</tr>
<tr>
<td>Personality Disorder</td>
<td>Anxiety</td>
<td>Reaction to medical condition</td>
</tr>
<tr>
<td>Alcoholism</td>
<td>Addiction</td>
<td>Dependence on Rx Pain Medication</td>
</tr>
<tr>
<td>Hypochondriasis, Somatization</td>
<td></td>
<td>Organic &amp; stress-related symptom clusters</td>
</tr>
<tr>
<td>Marital discord</td>
<td></td>
<td>Conflict with Physicians</td>
</tr>
</tbody>
</table>

(Adapted from Bruns, 2017)
Test Selection in Behavioral Health

<table>
<thead>
<tr>
<th>Psychiatric Tests</th>
<th>Pain/Health Psych Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items written to assess psychiatric patients</td>
<td>Items written to assess medical patients</td>
</tr>
<tr>
<td>Increased risk of false positives with medical patients</td>
<td>More limited assessment of psychiatric conditions</td>
</tr>
<tr>
<td>DSM Depression</td>
<td>Depressed about your health? Depression symptoms due to being sick or side effects?</td>
</tr>
<tr>
<td>DSM Phobias</td>
<td>Assessment of fears associated with objective risk of death</td>
</tr>
<tr>
<td>DSM Somatization</td>
<td>Clusters of physical symptoms associated with illness/distress</td>
</tr>
<tr>
<td>Personality Disorder</td>
<td>Poor coping with pain or illness</td>
</tr>
<tr>
<td>Alcoholism/Drug abuse</td>
<td>Dependence on Rx Pain Medication For Medical Condition</td>
</tr>
</tbody>
</table>

(Adapted from Bruns, 2017)

Health Psychology Tests Also Differ

MBMD

BHI 2

(Adapted from Bruns, 2017)
### MBMD vs BHI 2

<table>
<thead>
<tr>
<th>MBMD</th>
<th>BHI 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millon’s personality theory</td>
<td>“Vortex” biopsychosocial theory</td>
</tr>
<tr>
<td>How does a non-psychiatric patient cope with medical illness?</td>
<td>Assess risk factors for a poor response to surgical and other treatments for pain/injury?</td>
</tr>
<tr>
<td>Unique feature: 11 coping styles used by non-psychiatric patients</td>
<td>Unique feature: 14 Pain ratings 11 Pain measures</td>
</tr>
<tr>
<td>Greater emphasis on patient strengths and coping style</td>
<td>Greater emphasis on risk factors and vulnerabilities (e.g. psychological trauma)</td>
</tr>
</tbody>
</table>

Adapted from Bruns, 2017

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**Rule of thumb:**

Select your tests based on what you want to know
Brief Cognitive Status Exam (BCSE)

Assesses seven cognitive domains:

- Orientation,
- Time,
- Mental Control,
- Planning and Visual-Perceptual Processing,
- Incidental Recall,
- Inhibitory Control,
- Verbal Production.
BCSE

Administration Time: 15-20 minutes
Ages: 17+
Languages: English
Scoring: Manual
Administration options: paper and pencil

BECK SCALES

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Ages</th>
<th>Admin Time</th>
<th>Language</th>
<th>Admin. Method</th>
<th>Scoring</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beck Depression Inventory – II (BDI-II)</td>
<td>13-80</td>
<td>5 mins.</td>
<td>English &amp; Spanish</td>
<td>Manual &amp; Q-global</td>
<td>Manual &amp; Q-global</td>
<td>Interpretive, Progress</td>
</tr>
<tr>
<td>Beck Anxiety Inventory (BAI)</td>
<td>17-80</td>
<td>5-10</td>
<td>English &amp; Spanish</td>
<td>Manual &amp; Q-global</td>
<td>Manual &amp; Q-global</td>
<td>Interpretive, Progress</td>
</tr>
<tr>
<td>Beck Scale for Suicide Ideation® (BSS®)</td>
<td>17+</td>
<td>5-10</td>
<td>English &amp; Spanish</td>
<td>Manual &amp; Q-global</td>
<td>Manual &amp; Q-global</td>
<td>Interpretive, Progress</td>
</tr>
</tbody>
</table>
Battery for Health Improvement 2 (BHI™ 2)

- Evaluate a patient's readiness for medical and behavioral interventions
- Meet evidence based medical treatment guidelines outlined for good clinical practice
- Measure the relationship and impact of physical, environmental, and psychological factors on the patient's treatment
- Support evaluations involving injuries, worker's compensation, and psychological factors
- Evaluate treatment effectiveness and monitor clinical outcomes
- Facilitate communication within a multidisciplinary treatment team or between physicians and psychologists

Battery for Health Improvement 2 (BHI™ 2)

**Administration Time:** approx. 30 minutes

**Ages:** 18-65

**Languages:** English & Spanish

**Scoring:** Q-global, Q-Local

**Administration options:** paper and pencil & Q-global

**Report options:** Profile
- Basic Interpretive
- Enhanced Interpretive
- Progress
- Medical Intervention Risk Report (MIRR)
Brief Battery for Health Improvement 2 (BBHI™ 2)

A measurement of physical symptoms and psychological status, assessing:

- Depression
- Anxiety
- Somatic Complaints
- Pain complaints
- Functional Complaints
- Defensiveness

Administration Time: 7-10 minutes
Ages: 18-65
Languages: English
Scoring: Q-global™ Scoring & Reporting, Q™ Local Software, Mail-in Scoring Service, Fax-in Service, or PAD
Administration options: paper and pencil
Report options: Standard, Extended, Progress
Pain Patient Profile - (P-3\textsuperscript{®})

- Quickly evaluate for depression, somatization, and anxiety in pain patients.
- Identify psychological roadblocks to patient recovery.
- Can help provide an objective link between physician’s observation and possible need for further psychological assessment.
- Test report comes with summary of results to share with patient.

Administration Time: 12-15 minutes
Ages: 17-76
Languages: English
Scoring: Manual & Q-global
Administration options: paper and pencil & Q-global
Report options: Interpretive & Progress reports
Millon® Behavioral Medicine Diagnostic (MBMD®)
A Psychosocial Assessment for Medical Patients

• Identify patients who may have significant psychiatric problems and recommend specific interventions
• Pinpoint personal and social assets that may facilitate adjustment to physical limitations or lifestyle changes
• Determine whether patients need more communication and support in order to comply with prescribed medical regimens
• Structure post-treatment plans and self-care responsibilities in the context of the patient's social network

Millon® Behavioral Medicine Diagnostic (MBMD®)

Administration Time: 20-25 minutes
Ages: 18-85
Languages: English & Spanish
Scoring: Manual & Q-global
Administration options: paper and pencil & Q-global
Report options: General Medical, Bariatric Surgery & Pain Patient Interpretive (all with Healthcare Provider Summary) & Profile
Minnesota Multiphasic Personality Inventory-2-Restructured Form® (MMPI-2-RF®)

- Assess major symptoms of psychopathology, personality characteristics, and behavioral proclivities.
- Evaluate participants in substance abuse programs and select appropriate treatment approaches.
- Assess medical patients and design effective treatment strategies, including chronic pain management.
- Support college and career counseling recommendations.
- Provide valuable insight for marriage and family counseling.
- Support classification, treatment, and management decisions in criminal justice and correctional settings.
- Give strong empirical foundation for expert testimony in forensic evaluations.
- Identify high-risk candidates in public safety screening and selection settings.

- Reports include Clinical Interpretive, Spine Candidate and Stimulator Candidate Interpretive Reports

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Ages</th>
<th>Admin Time</th>
<th>Language</th>
<th>Admin. Method</th>
<th>Scoring</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMPI-2</td>
<td>18+</td>
<td>60-90 min</td>
<td>English, Spanish, French for Canada</td>
<td>Online, Computer, CD or Paper and pencil</td>
<td>Q-global®, Hand Scoring</td>
<td>Extended Score Reports, Adult Clinical Interpretive Reports, Forensic Settings Reports, Personnel Interp. and Adjustment Ratings Reports</td>
</tr>
<tr>
<td>MMPI-2-RF</td>
<td>18+</td>
<td>35-50 min</td>
<td>English, Spanish, French for Canada</td>
<td>Online, computer, CD, or paper and pencil.</td>
<td>Q-global®, Hand Scoring</td>
<td>Score, Interpretive and Spine Report</td>
</tr>
</tbody>
</table>
Quality of Life Inventory (QOLI®)

- Assess positive mental health, well being and happiness
- Yields overall score based on areas that make up Quality of Life
- Identifies real-life issues that can help clinicians develop relevant treatment plans and predict future health problems.
- Provides positive mental health picture that can help increase likelihood of successful treatment outcomes.
- Can help managed care providers objectively demonstrate that their services have improved a patient's quality of life.

<table>
<thead>
<tr>
<th>Health</th>
<th>Play</th>
<th>Friends</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem</td>
<td>Learning</td>
<td>Children</td>
<td>Overall well being</td>
</tr>
<tr>
<td>Goals and Values</td>
<td>Creativity</td>
<td>Relatives</td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td>Helping</td>
<td>Home</td>
<td></td>
</tr>
<tr>
<td>Work</td>
<td>Love</td>
<td>Neighborhood</td>
<td></td>
</tr>
</tbody>
</table>

Quality of Life Inventory (QOLI®)

Administration Time: Approximately 5 minutes
Ages: 17+
Languages: English
Administration options: paper and pencil & Q-global
Scoring: Manual & Q-global
Report options: Profile & Progress
Symptom Checklist-90-Revised (SCL-90-R®)

- Helps clinician screen for broad range of psychological problems and symptoms of psychopathology
- Also used for progress or outcomes monitoring

- **Symptom Scales**: SOM – Somatization, O-C - Obsessive-Compulsive, I-S - Interpersonal Sensitivity, DEP – Depression, ANX – Anxiety, HOS – Hostility, PHOB - Phobic Anxiety, PAR - Paranoid Ideation, PSY – Psychoticism

- **Norms**: Adult psychiatric outpatient, Adult nonpatients, Adult psychiatric inpatient, Adolescent nonpatients.

Symptom Checklist-90-Revised (SCL-90-R®)

- **Administration Time**: 12-15 minutes
- **Ages**: 13+
- **Languages**: English & Spanish
- **Scoring**: Manual & Q-global
- **Administration options**: paper and pencil & Q-global
- **Report options**: Profile, Interpretive & Progress
Brief Symptom Inventory (BSI®)

Administration Time: 8-10 minutes
Ages: 13+
Languages: English & Spanish
Scoring: Manual & Q-global
Administration options: paper and pencil & Q-global
Report options: Profile, Interpretive & Progress

Childhood Trauma Questionnaire: A Retrospective Self-Report (CTQ)

Used to identify adolescent and adult clients with histories of trauma.

Scales:
- Physical abuse
- Sexual abuse
- Emotional abuse
- Physical neglect
- Emotional neglect
- Minimization/Denial
Childhood Trauma Questionnaire: A Retrospective Self-Report (CTQ)

Administration Time: 5 minutes
Ages: 12+
Languages: English
Administration options: paper and pencil
Scoring: Manual

Summary

Remember considerations for selecting instruments:

- Time to Administer,
- Administration, scoring, reporting options
- Broad vs. Narrow-focus
- Psychometric data
- Appropriate norms for population
- Progress monitoring options?

…and select tools based on what you want to know!