Patients with Chronic Pain:  
*A Population at Risk*

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President-elect, American College of Physician Executives
Objectives

1. To provide background on the prevalence and burden of chronic pain as a “disease state equivalent”

2. To explore the multiple risk facing patients with chronic pain who are treated with chronic opioid therapy (COT)

3. To examine how this high-risk population can be managed with a population-based approach to improve outcomes and potentially reduce costs.
Definitions of Chronic Pain

• Pain that is more likely to be severe or very severe - rather than moderate - and is the type that flares up frequently; for many years and felt on average 6 out of 7 days a week.
  *American Pain Society*

• Chronic pain persists. Pain signals keep firing in the nervous system for weeks, months, even years.
  *NIH National Institute of Neurological Disorders and Stroke*

• Pain without apparent biological value that has persisted beyond the normal tissue healing time (usually taken to be 3 months).
  *International Association for the Study of Pain*

• Pain is complex and defies our ability to establish a clear definition... pain is a complex mélange of emotions, culture, experience, spirit and sensation.
  *American Academy of Pain Management*
A recent 4 year study concluded that chronic pain is a common, persistent problem with a relatively high incidence and low recovery rates, documenting self-reported chronic pain in 50% of patients, (46% of general population.)

15 epidemiological studies of chronic pain in the adult population concluded that chronic pain ranged from 2% to 40%, with a median prevalence of 15%

The incidence of persistent pain lasting for 6 months was 49% of the adult population, with functional disability in 13%

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1 Elliott AM, Smith BH, Hannaford PC et al. The course of chronic pain in the community: Results of a 4-year follow-up study. *Pain* 2002; 99:299-307
At over 1200 people surveyed; nearly **one in five** reported having **Chronic Pain** (19% of our population)

- Back: 25%
- Knees: 12%
- Head/migraine: 9%
- Legs: 7%
- Shoulders: 7%
- Feet: 5%
- Hands/fingers: 4%
- Stomach: 4%

ABCNews/USAToday/Stanford University Pain Poll 2005; n=1204
Sources of Pain: by Underlying Disease

**Back Pain** - leading cause of disability in Americans under 45 years old. Over 26 million Americans between the ages of 20 and 64 experience frequent back pain.

**Cancer** - over 70% of those with cancer experience pain, yet only 50% of advanced-stage cancer patients get adequate pain treatment. Less than 30% has successful treatment of their pain.

**Headache** - more than 45 million Americans get chronic, recurring headaches, while 28 million suffer from migraines (The National Headache Foundation: www.headaches.org)

**Osteoarthritis and Rheumatoid Arthritis** - pain is a major determinant of quality of life for people with osteoarthritis and rheumatoid arthritis affecting more than 20 million and 2.5 million Americans, respectively. (National Institutes of Health)

**Other Causes of Chronic Pain:**

- The National Institute of Dental and Craniofacial Research of the National Institutes of Health reports that **10.8 million US residents suffer from TMJ** at any given time (TMJ Association: www.tmj.org)

- The American College of Rheumatology estimates that between **3-6 million Americans, mostly women, are affected by fibromyalgia**, a complex condition that includes widespread pain.
### Risk Factors for the Development of Chronic Pain

<table>
<thead>
<tr>
<th>Obstacles to the Recovery from Acute Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain duration</td>
</tr>
<tr>
<td>History of substance abuse/dependence</td>
</tr>
<tr>
<td>History of prolonged recovery from</td>
</tr>
<tr>
<td>previous experiences with pain</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>History of psychological or physical</td>
</tr>
<tr>
<td>trauma</td>
</tr>
<tr>
<td>Negative or anxiety-provoking beliefs</td>
</tr>
<tr>
<td>about the meaning of pain</td>
</tr>
</tbody>
</table>

The Impact of Chronic Pain

"Chronic pain interferes with your..."

- Ability to work/do chores
- Mood
- Day-to-day activities
- Sleep
- Enjoyment of life
- Relationships

ABCNews/USAToday/Stanford University Pain Poll 2005; n=1204
American Productivity Audit – random sampling telephone survey of 28,902 working adults

- 13% experienced a *loss in productive time* over a 2-week period due to a common pain condition

- Mean loss of 4.6 hours/week

- *Estimated cost of $61.2 billion/year*

- 76.6% of lost productive time due to reduced performance while at work, not by work absence

Goals in the Management of Chronic Pain

- Prevent symptoms, if possible
- Reduce pain severity or frequency
- Improve physical functioning
- Reduce psychological distress
- Improve overall quality of life
- Minimize treatment-related adverse effects
# Management of Chronic Pain

## Medications

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen</td>
<td>Ibuprofen</td>
<td>Anti-migraine medications</td>
<td>Opioids</td>
</tr>
<tr>
<td>Aspirin</td>
<td>COX-2 inhibitors</td>
<td>Sedatives</td>
<td>Antidepressants</td>
</tr>
</tbody>
</table>

## Non-medication treatments

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise</td>
<td>Physical Therapy</td>
<td>Counseling</td>
<td>Electrical Stimulation</td>
</tr>
<tr>
<td>Biofeedback</td>
<td>Acupuncture</td>
<td>Hypnosis</td>
<td>Chiropractic</td>
</tr>
<tr>
<td>Yoga/meditation</td>
<td>Massage</td>
<td>Herbal</td>
<td>Homeopathic</td>
</tr>
</tbody>
</table>
Treatments and Remedies

Pain Remedies: What We Try

ABC News/USA Today/Stanford University Medical Center poll

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTC drugs</td>
<td>84%</td>
</tr>
<tr>
<td>Home remedies</td>
<td>81%</td>
</tr>
<tr>
<td>Rx drugs</td>
<td>60%</td>
</tr>
<tr>
<td>Prayer</td>
<td>58%</td>
</tr>
<tr>
<td>Bed rest</td>
<td>58%</td>
</tr>
<tr>
<td>Massage</td>
<td>28%</td>
</tr>
<tr>
<td>Chiropractor</td>
<td>28%</td>
</tr>
<tr>
<td>Homeopathic/herbal medicine</td>
<td>16%</td>
</tr>
<tr>
<td>Yoga/meditation</td>
<td>14%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>12%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>6%</td>
</tr>
<tr>
<td>Acupuncture</td>
<td>5%</td>
</tr>
</tbody>
</table>

ABCNews/USAToday/Stanford University Pain Poll 2005; n=1204
World Health Organization Analgesic Ladder

Persistant or increasing pain

Non-opioid ± adjuvant
- Aspirin
- Acetaminophen
- Ibuprofen
- Indomethacin
- Choline magnesium trisalicylate
- Diflunisal
- Naproxen
- Diclofenac

Mild-to-moderate pain

Opioid ± non-opioid ± adjuvant
- Codeine
- Hydrocodone
- Oxycodone
- Tramadol

Moderate-to-severe pain

Opioid ± non-opioid ± adjuvant
- Morphine
- Hydromorphone
- Levorphanol
- Buprenorphine
- Fentanyl
- Methadone
- Standardized opium

21.6 million Americans (one in ten adults) take prescription pain medication regularly to manage chronic pain.

88% of pain sufferers take prescription pain medication (all types) at least once per day.

Most common prescription pain medications include:

- NSAIDS (28%)
- oxycodone/hydrocodone (16%)
- propoxyphene (11%)

We are Using More Potent Drugs to Treat Chronic Pain

National Ambulatory Medical Care Survey (NAMCS) compared data from 1980-81 (n=89,000) and 1999-2000 (n=45,000)

- NSAID prescriptions increased for both acute (19% vs. 33%) and chronic (25% vs. 29%) pain
- Opioid prescriptions increased for acute pain (8% vs. 11%) and doubled for chronic pain (8% vs. 16%)
  - The use of more potent opioids (hydrocodone, oxycodone, morphine) for chronic musculoskeletal pain increased from 2% to 9% of visits
  - Opioids were prescribed in 5.9 million office visits 2000 – an increase from 4.6 million visits from 1980
Percent Increase of Opioid Abuse: 1994 - 2000

- Overall Opioid Abuse: 85%
- Hydrocodone: 116%
- Methadone: 140%
- Oxycodone: 166%

## Retail Sales of Opioids (grams of medication)

<table>
<thead>
<tr>
<th>Medication</th>
<th>1997</th>
<th>2002</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>5,922,872</td>
<td>10,264,264</td>
<td>73.3</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>8,669,311</td>
<td>18,822,618</td>
<td>117.1</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>4,449,562</td>
<td>22,376,891</td>
<td>402.9</td>
</tr>
<tr>
<td>Methadone</td>
<td>518,737</td>
<td>2,649,559</td>
<td>410.8</td>
</tr>
</tbody>
</table>

Opioid Prescribing Behaviors of PCP

- Opioids were prescribed for patients aged 18-65 in 52 of every 1,000 PCP visits during the ten-year period from 1992 to 2001.

- Most common diagnoses for which an opioid medication was prescribed included back pain, acute musculoskeletal conditions and headache.

- Key factors influencing PCP decisions to prescribe opioids were the regional location of the practice, patient ethnicity, insurance status and length of the office visit.

“Opioid Prescriptions by US Primary-Care Physicians from 1992 to 2001”
Yngvild Olsen, Gail L. Daumit and Daniel E. Ford Johns Hopkins University School of Medicine; American Pain Society April 2006.
Opioid Prescribing Behaviors of PCP

- Patients seeing PCPs in the Northeast and Midwest were less likely to receive opioids than in western states.
  - Many western states have laws permitting opioid prescribing for pain that also protect physicians from legal action for *appropriate use* of opioids.
  - Many eastern and Midwest states have triplicate prescription regulations for controlled substances.

- Medicaid or Medicare patients were more likely to receive opioids than patients covered by an HMO.

- Hispanic patients were less likely to receive opioid prescriptions than whites. This disparity was found in all geographic regions.

- Physicians who prescribe opioids spend more time negotiating with patients or looking for red flags that may impact the prescribing decision.

“Opioid Prescriptions by US Primary-Care Physicians from 1992 to 2001”
Yngvild Olsen, Gail L. Daumit and Daniel E. Ford Johns Hopkins University School of Medicine; American Pain Society April 2006.
A Clinical “Specialty” has Emerged to Treat Chronic Pain

- Approximately 8,000 – 10,000 physicians state that they are pain specialists
- There is no formal specialty board certification for pain medicine, however:
  - Fellowships and certifications do exist within anesthesia and physical medicine programs
  - Some PCPs have pain-oriented practices
- 90% of patients presenting to pain centers and receiving treatment in such facilities are on opioids*. 

Opioid Abuse, Diversion, and Supplementation

- Patients with COT are at risk for abuse, diversion, and supplementation
- Physicians are not reliably able to predict who is abusing or diverting these medications
- The costs of opioid abuse is substantial
- The risk of emergency visits, hospitalizations, and death is significant in this population (e.g., Heath Ledger)
## Possible Signs of Opioid Abuse: “Aberrant Behaviors”

<table>
<thead>
<tr>
<th>Overwhelming focus on discussing opioid issues</th>
<th>Frequent requests for early refills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escalating drug use without physician direction</td>
<td>Multiple phone calls or visits to the office for prescription problems</td>
</tr>
<tr>
<td>Patterns of lost, spilled or stolen medications</td>
<td>Supplemental sources of opioids – multiple providers, ED, or illegal</td>
</tr>
<tr>
<td>Illicit drugs found on urine screening</td>
<td></td>
</tr>
</tbody>
</table>

Physicians cannot reliably assess misuse of opioids. Physicians can assess the risk of abuse and addiction by looking for aberrant behaviors, but this is far from foolproof.

### TABLE 1. Proportions of 122 patients on chronic opioid therapy with “problems”: either positive urine toxicology testing, or one or more “behavioral issues”

<table>
<thead>
<tr>
<th>Issues</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Totals (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urine toxicology testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>10 (8)</td>
<td>26 (21)</td>
<td>36 (29)</td>
</tr>
<tr>
<td>Negative</td>
<td>17 (14)</td>
<td>69 (57)</td>
<td>86 (71)</td>
</tr>
<tr>
<td></td>
<td>27 (22)</td>
<td>95 (78)</td>
<td>122</td>
</tr>
</tbody>
</table>

A total of 53 (43%) had a “problem” so identified.

Katz N., Fanciullo G. “the Role of Urine Toxicology Testing in the Management of Chronic Opioid Therapy”
Risk Assessment Tools

- Screener and Opioid Assessment for Patients with Pain (SOAPP®)
- Screening Instrument for Substance Abuse Potential (SISAP)
- Opioid Risk Tool (ORT)
- Diagnosis, Intractability, Risk Efficacy (D.I.R.E. Score)
5.2 In patients on COT who are at high risk or who have engage in aberrant drug-related behaviors, clinicians should periodically obtain urine drug screens or other information to confirm adherence to the COT plan of care

(strong recommendation, low-quality evidence).

5.3 In patients on COT not at high risk and not known to have engaged in aberrant drug-related behaviors, clinicians should consider periodically obtaining urine drug screens or other information to confirm adherence to the COT plan of care

(weak recommendation, low-quality evidence).

The Journal of Pain, Vol 10, No 2 (February), 2009: pp 113-130
Available online at www.sciencedirect.com
Opiate Abusers Have Very High Annual Medical Costs

Study Methodology
- Database study of 2 million insured lives
- Opiate abusers classified by ICD-9 codes 304.0, 304.7, 305.5, and 965.0
- Control group of non-abusers matched for age, gender, employment status
- Cost measured in 2003 US dollars
- Regression analysis done to control for co-morbidities

Results
- Opiate abusers medical costs were $16,000 annually compared to $1,800 for non-abusers
- Even after controlling for co-morbidities, the cost of abusers was 1.8 times that of depressed patients

* Costs are in 2003 dollars. The differences between all mean annual costs of opioid abusers and nonabusers are statistically significantly different at the 1% level (P<0.01) except for “Other Costs” for which the “Other Place of Service” component is significantly different at the 5% level (P<0.05).

† “Other Costs” include: “Other Place of Service” and “Emergency Room” costs.

Journal of Managed Care Pharmacy, 2005;11(6): 469-79, 2002
Almost 40% of chronic pain sufferers are not currently going to a doctor for relief of their pain. **BUT**

32% of severe or very severe chronic pain sufferers go to an emergency room for their pain in a one-year period.

Almost one-half of all chronic pain sufferers who have ever gone to a doctor for relief of pain found it necessary to change doctors in their search for relief; **almost one-fourth changed doctors at least 3 times.**

Our Experience 1/1/06 thru 9/1/08

Ameritox (n = 801,147 Specimens)

- Specimens in compliance: 25%
- Specimens with Illicits found: 11%
- Specimens with Unprescribed drug found: 29%
- Specimens with Prescribed drug not found: 39%
- Specimens with result above expected range: 27%
- Specimens with result below expected range: 15%

 potential diversion vs. non-adherence
Where Pain Relievers Were Obtained, Users Aged 12 or Older

- From a friend or relative for free: 60%
- From one doctor: 17%
- Bought from a friend or relative: 8%
- Bought from drug dealer/stranger: 4%
- Took from friend/relative without asking: 4%
- From more than one doctor: 2%
- Bought on the internet: 1%
- Other/unknown: 4%

2006 National Survey on Drug Use and Health (NSDUH) Report, SAMHSA
Common Concerns About Prescribing Opioids for Chronic Pain

- Cognitive/Psychomotor effects
- Incomplete resolution of pain
- Potential changes in pain modulation
- Cost of sustained-released opioids and additional monitoring
- Fear of attracting addicts to the practice
- Legal/regulatory concerns

Common Concerns About Prescribing Opioids for Chronic Pain

- Physical dependency and episodic withdrawal
- Tolerance to analgesic effects
- Additional prescription requirements – forms, refills
- Pain reinforcement
- Misunderstanding of addiction, tolerance, physical dependence and pseudo-addiction
- Diversion, abuse and misuse by patients

### Test Performed

<table>
<thead>
<tr>
<th>Test Performed</th>
<th>Lab Result (ng/mL)</th>
<th>Assay Cutoff (ng/mL)</th>
<th>Normalized Value</th>
<th>Expected Range</th>
<th>Range Comparison</th>
<th>Medication Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPIATES</strong></td>
<td></td>
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<tr>
<td>Opiates</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Codeine (MS)</td>
<td>Negative</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
<tr>
<td>Morphine (MS)</td>
<td>Negative</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
<tr>
<td>Hydrocodone (MS)</td>
<td>Negative</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
<tr>
<td>Hydromorphone (MS)</td>
<td>Negative</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
<tr>
<td>Oxycodeine/Oxymorphone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxycodone/Oxymorphone (IA)</td>
<td>Positive</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>See MS Results</td>
</tr>
<tr>
<td>Oxycodone (MS)</td>
<td>Negative</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
<tr>
<td>Oxymorphone (MS)</td>
<td>Negative</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
<tr>
<td>Oxymorphine</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>RESULTS EXPLANATION</td>
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</table>

The Oxycodone screening result is presumptive only. The presence of oxycodone and/or oxymorphone is unconfirmed by MS and therefore should be treated as a negative result.

### SYNTHETIC OPIOIDS

<table>
<thead>
<tr>
<th>Test Performed</th>
<th>Lab Result (ng/mL)</th>
<th>Assay Cutoff (ng/mL)</th>
<th>Normalized Value</th>
<th>Expected Range</th>
<th>Range Comparison</th>
<th>Medication Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone</td>
<td>Negative</td>
<td>130</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDDP (IA)</td>
<td>Negative</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propoxyphene</td>
<td>Negative</td>
<td>180</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### SEDATIVES/HYPNOTICS

<table>
<thead>
<tr>
<th>Test Performed</th>
<th>Lab Result (ng/mL)</th>
<th>Assay Cutoff (ng/mL)</th>
<th>Normalized Value</th>
<th>Expected Range</th>
<th>Range Comparison</th>
<th>Medication Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzodiazepines (IA)</td>
<td>216.31</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>See MS Results</td>
</tr>
<tr>
<td>Nordiazepam (MS)</td>
<td>Negative</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
<tr>
<td>Oxazepam (MS)</td>
<td>233</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>INCONSISTENT</td>
</tr>
<tr>
<td>Lorazepam (MS)</td>
<td>Negative</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
<tr>
<td>Alprazolam (MS)</td>
<td>Negative</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
<tr>
<td>Alphahydroxyalprazolam (MS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Consistent</td>
</tr>
</tbody>
</table>

The presence of Oxazepam has been confirmed. This is evidence of taking an unsupervised Benzodiazepine medication. Possible sources included (but are not limited to) Valium, Librium, Tranxene metabolism; Serax; Restoril metabolism. Detection time for this drug is 2-4 days.

### RESULTS EXPLANATION

- **Opiates are very high - out of expected range**
- **Presence of oxazepam is confirmed**
No illicit drugs found (neg. amphetamine at bottom of page 1)

Patient is only prescribed Lorcet

• The very high level of the normalized opiates - outside of the RxGuardian expected range should increase the index of suspicion of abuse or supplementation.

• The presence of a non-prescribed sedative (oxazepam) also increases the level of concern about “non-compliance” with the prescribed opiate.
Key Components

1. Population identification
   - Patients on COT using pharmacy data
   - No standard definition: working definition = 4 months of opioid Rx out of any 6 month period

2. Risk assessment and patient stratification
   - Risk assessment screeners and urine drug monitoring

3. Comprehensive needs assessment and care planning

4. Coordination of care

5. Measurement of outcomes
Key Components (cont.)

- Proactive health promotion programs to increase awareness of the health risks of COT

- Patient-centric health management goals and education:
  - primary prevention, behavior modification programs, support for concordance between patient and provider

Informed consent and “Pain Management Agreements”

- Single prescriber and pharmacy
- Physician managed drug regimen
- No use of non-prescribed or illicit drugs
- Random prescription monitoring test via urine drug testing
Key Components (cont.)

- Routine reporting and feedback
- Evaluation of clinical, humanistic, and economic outcomes on an ongoing basis with the goal of improving overall population health

Monitoring patients and measuring outcomes:

- **Current Opioid Misuse Measure (COMM™)**
- **Pain Assessment and Documentation Tool (PADT™)**
- **Pain Medication Monitoring Programs (by some states)**
Chronic Opioid Therapy Outcome Measures

- Pain relief or pain management
- Functional improvement
- Improvement of psychological status
- Improvement in work status
- Evidence of addiction (lack of)

Payor Initiatives and Options
TO GENERATE SAVINGS USING PRESCRIPTION DRUG MONITORING DATA

1. **EDUCATE** pain clinicians about the value of “monitoring” chronic pain patients (using guidelines/protocols) via
   - Mail/Newsletters
   - Web
   - Provider Services Representatives (calling on pain clinicians)
   - CME session for pain clinicians (and high volume PCPs)
   - Pain Management Workgroups (create guidelines)

2. **PROFILE** physicians and share benchmarks on use of illicits, non-compliance, possible diversion – share the data with doctors

3. **INCORPORATE URINE DRUG TESTING into CARE PLANS** developed by case and disease management programs/nurses

4. **CREATE A PREFFERED NETWORK** of pain clinicians based on
   - Training and experience
   - Use of urine drug testing
   - Results of profile data on illicits and inappropriate use
   - Cost of pain patients managed by the practice

5. **INCORPORATE** urine drug testing tests into **PRIOR AUTHORIZATION** processes for high cost diagnostic procedures and surgery
Chronic Pain Program ROI Methodology

1. **Quantify Opportunity**
   - Number of Opiate Patients:
   - Measure Total Costs

2. **Assess Benefits Structure Disease & Care Management Philosophy**
   - Total Costs and Sensitivity Analysis of impact of Opiate Abuse (White article)

3. **Initiate Interventions**

4. **Measure Cost Per Patient**
   - Consider Control Groups vs. Pre-Post Cost Analysis
A Care Management Model for COT

Example: Partnership Schematic

- Claim flagged using Ameritox pharma claims triggers
- Adjuster/NCM notified
- Requisition sent to physician, sample collected and sent to specialty lab
- Nurse Case Manager/pharma management process
- Physician

Prescription Drug Monitoring Testing
Panel tested, confirmed, results sent to physicians and Carrier, support services provided to improve outcomes

- Test result
- Low level
- Other Rx found
- No Rx
- High level
- Illicit found

Payor actions
- Consider non-approval of procedures and tests until compliance is optimized
- Identification of doctor shopping or abuse – notify managing physician
- Potential diversion – deny further scripts and procedures – notify clinician
- Potential substance abuse issue – case manager referral for substance abuse

Physician action
- Discuss causes, possibly increase dosage
- Conversation regarding other treatments
- Conversation regarding necessity of treatment
- Conversation on risk of overdose
- Conversation on behavior

Reduced Medical Costs
Conclusions

1. Chronic Pain is common and has all the characteristics of a “chronic disease.”

2. A “sub-population” at significant risk are patients on chronic opioid therapy:
   - Increase risk of drug diversion, abuse, supplementation, death
   - They have significantly higher medical costs
   - Their physicians bear substantial risk when caring for them ….

3. We can improve quality, reduce the risk of bad outcomes, and likely reduce medical costs in this population by using a population health model.
Cost of Drug Abuse

Estimated social cost of Drug Abuse (in billions of dollars)

Medicaid Patients and Substance Abuse

- **Substance Abuse Policy Research Program** – examined records of 150,000 Medicaid patients in six states

- Reviewed claims for benefits of behavioral health diagnoses; comparing those with and without substance abuse disorders
  
  - 29% were diagnosed with substance abuse
  
  - $104 million *additional costs* for medical care
  
  - $105.5 million *additional costs* for behavioral health care

- As the patients with substance abuse disorders got older, the medical care costs increased at a far higher rate than behavioral health costs.
<table>
<thead>
<tr>
<th>Reason for Use</th>
<th>Percentage</th>
<th>Reason for Use</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to get from parents medicine cabinet</td>
<td>62%</td>
<td>They are not illegal drugs</td>
<td>51%</td>
</tr>
<tr>
<td>Are available everywhere</td>
<td>52%</td>
<td>Safer to use than illegal drugs</td>
<td>40%</td>
</tr>
<tr>
<td>Easy to get through other people’s prescriptions</td>
<td>50%</td>
<td>Less shame attached to using</td>
<td>33%</td>
</tr>
<tr>
<td>Teens can claim to have a prescription if caught</td>
<td>49%</td>
<td>Fewer side effects than street drugs</td>
<td>32%</td>
</tr>
<tr>
<td>They are cheap</td>
<td>43%</td>
<td>Can be used as study aids</td>
<td>25%</td>
</tr>
<tr>
<td>Easy to purchase over the internet</td>
<td>32%</td>
<td>Parents don’t care as much if you get caught</td>
<td>21%</td>
</tr>
</tbody>
</table>
Partnership Attitude Tracking Study

- Nearly one in five (19 percent or 4.5 million) teens has tried prescription medication to get high.

- Two in five teens (40 percent or 9.4 million) agree that prescription medicines are “much safer” to use than illegal drugs.

- Nearly one-third of teens (31 percent or 7.3 million) believe there’s “nothing wrong” with using prescription medicines without a prescription “once in a while.”

- Teens believe a key driver for abusing prescription pain relievers is their widespread availability and easy access.
# Psychosocial Risk Factors

## Predictors of Negative Outcomes in the Treatment of Chronic Pain

- Job dissatisfaction
- Reduced activity
- Negative beliefs
- Sustained attitude of hostility, anger and alienation
- Reliance on maladaptive coping strategies