

A Systems Approach to Improve Cancer Pain Management:



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Financial Disclosure

- Archimedes – Consultant
- Actogenix – Research Consultant
- BMS – Consultant

Barriers to Pain Control:

- Patient:
 - Fear of addiction, tolerance, stigma
 - Side effects
 - Interference in “goals”
- Societal:
 - Fear of addiction, tolerance, stigma
 - Regulations
 - Cost
- Medical Establishment:
 - Lack of knowledge
 - Lack of time
 - Lack of prioritization
 - **Concern about abuse**

Barriers to Pain Control: Physician Perspective

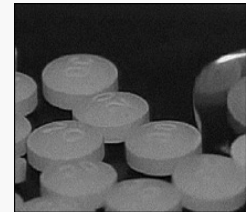
- Inadequate assessment 78%
- Inadequate pain reporting 62%
- Reluctance to take opioids 62%
- **Reluctance to prescribe opioids 61%**
- Nurses reluctant to give opioids 52%
- **Excessive regulation 36%**

Roenn, Ann Intern Med, 1993

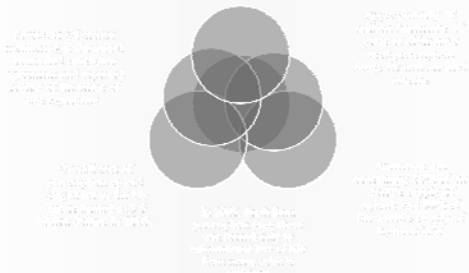
Recognizing Problems With Opioid Abuse in the Oncology Population



The Picture is Changing.....



Scope of Problem



Things We Have Learned

- Misuse of prescription drugs is a major problem in the US and we as physicians are **major** contributors to that problem
 - We lack a **systematic approach** to dispensing and monitoring opioids for acute and chronic pain
 - Known effective strategies for limiting abuse are not being implemented
- Opioid abuse is rampant even among cancer patients
 - Overmedication, Sharing, Party Host, Exchanging and Selling
- Substance abusers know how to work the system
 - **They lie (even to themselves)**
 - Physicians and medical staff have tender hearts
 - Substance abusers know just how to hit your buttons!

Identification of Risk Factors

- Ages 20 to 50
- History of substance abuse
- History of psychiatric disorders
- History of medication misuse:
 - Lost prescriptions
 - Taking medications in non-prescribed manner
 - Using large amounts of breakthrough medication
 - Calling exactly 30 days after their last prescription for more medication
 - Sharing or using medications with others
 - “Blaming” behavior

Our Procedures:

- Database search on all new patients
- Review of chart materials to assess previous opioid use
- First visit
 - sign an opioid consent form
 - Patients clearly told the policies and procedures of the clinic
 - Rx from our clinic only!
 - Use meds as prescribed only
 - Lost or missing medications must be reported to the police
- Use urine screens routinely
- Use Star Panel for writing all opioids
- Use sustained release formulations for chronic pain

Prescription Database

- Allows you to search for prescription use pattern for a given patient
- Gives the name of the pharmacy, drug name, physician name, the number of refills, how the medication was paid for
- **Beware the patient who pays for opioids with cash!**

New TennCare Regulations:

- To get a Prior Approval – need three out of four of the following
 - Signed opioid contract
 - Urine toxicology
 - Pill count
 - Opioid Database Search

The “Doctor Shopping” Law

- Stipulates that patients must inform a physician if they have received opioids within the past 30 days
- Applies to TennCare patients
- Patients caught breaking this law are to be reported to TennCare

FDA Mandate: Decrease the Abuse of Opioids

- Risk Evaluation and Mitigation Strategies (REMS)
 - Educate physicians and patients
- Risk Minimization Action Plans (RiskMaps)
 - Limitation of medication use to subsets of patients, and/or physicians and pharmacies

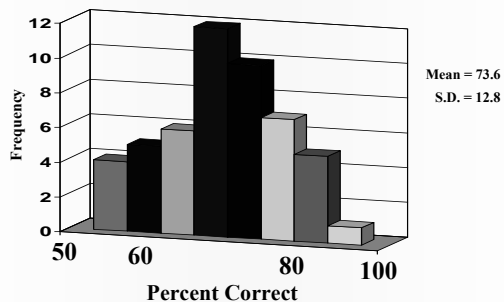
Parting Shot:

- Don’t set yourself up for failure: Pick meds wisely
 - Lortab is the single most abused medication in TN
 - Be thoughtful in its use!
 - Do not write for refills as a routine – Make patients call in
 - If a patient is going to be on long term opioids switch to a sustained release formulation
 - Xanax is highly addictive, use it carefully and for limited periods of time

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Provider Pain Knowledge
N= 29 Physicians and 21 Nurses Wells N, McDowell MR, Hendricks P,
Dietrich MS, Murphy B: Support Care Cancer, 2010



Skill Sets Required for Adequate Pain Control:

- Develop a framework for writing prescriptions
- Write a fixed dose regimen
- Calculate an appropriate breakthrough dose
- Convert from one opioid to another
- Dose titrate
- Understand the issues of substance abuse

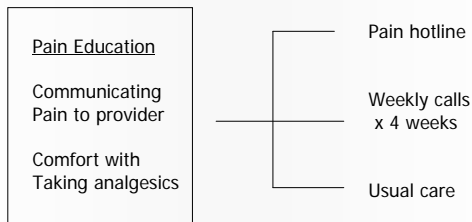
Barrier Reduction Through Physician and Staff education:

- Important Endpoints:
 - Knowledge
 - Attitudes
 - Practice patterns
 - Pain control
- Results of Intervention Trials:
 - Change knowledge and attitudes
 - No significant change in pain outcomes

Barrier Reduction Through Patient Education

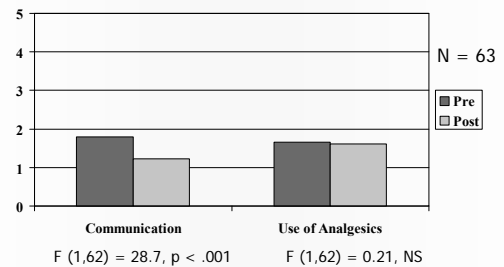
- Important Endpoints
 - Beliefs
 - Communication skills
 - Knowledge pain control
 - Pain Outcomes
- Results of Intervention Trials
 - Improve beliefs and adherence
 - Results variable for improved pain control

Patient & Family Education: Funding: ACS

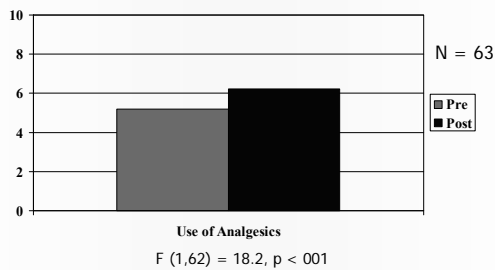


J Pain Symptom Management, 25: 344, 2003

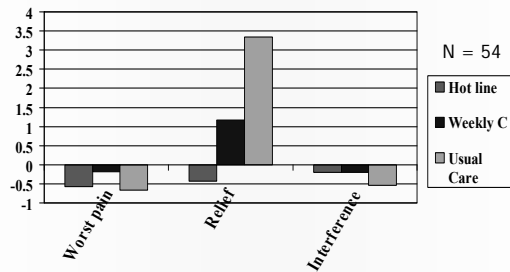
Pain Education: Patient Beliefs



Pain Education: Caregiver Beliefs



Outcomes over Time: Slope Analysis



Education:

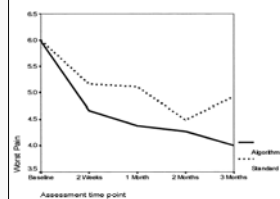
- Education:
 - An important component of a pain control program for both patients and physicians
 - Insufficient by itself
- More robust interventions are needed.
- Interventions must be easily adopted by clinicians in various settings

Guidelines and Protocols:

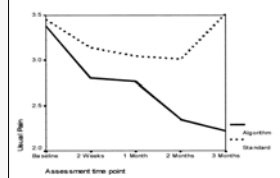
- Guidelines:
 - Centrally generated
 - Generated through consensus of experts or medical
 - Issues:
 - Do not address local constraints and barriers
 - Do not guarantee compliance
 - Evidence is often lacking
- Protocols:
 - More directive and specific
 - Commonly used in the post-operative setting for pain control
 - Issues:
 - Few protocols have been tested in the Oncology population
 - The Oncology population is heterogenous

Du Pen, J Clin Oncol; 17:361
1999

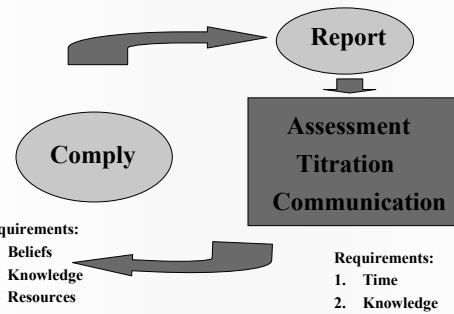
Mean Score Worst Pain



Mean Score Usual Pain



Model for Adequate Pain Control:

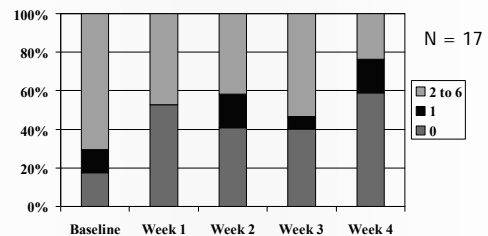


Narcotic Titration Order Schema: A Pilot Trial

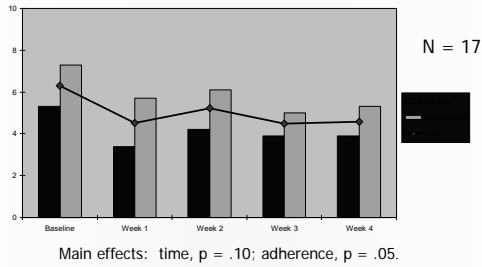
- Endpoint:
 - Severe adverse events
- Patient Selection:
 - Pain with a level of 3 or greater on opioids
- Methods:
 - Nurse managed order schema with “physician contact” parameters
 - Tools:
 - Pain diary
 - Brief Pain Index

Funding: VICC

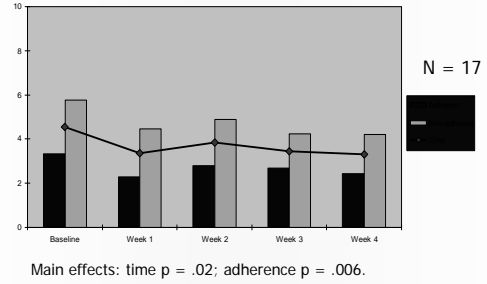
Opioid Toxicities



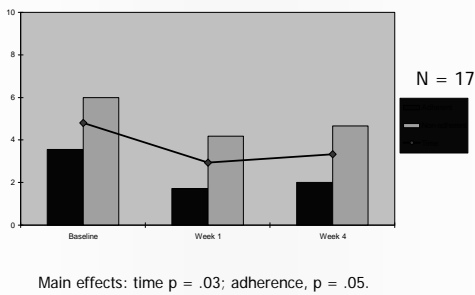
Worst Pain



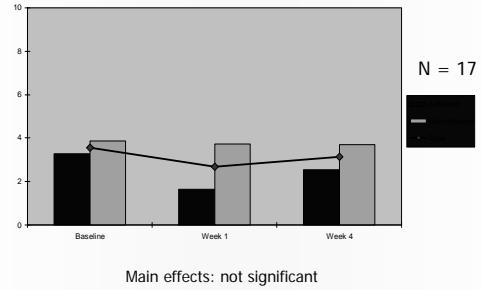
Usual Pain



Pain-Related Distress



Interference Because of Pain

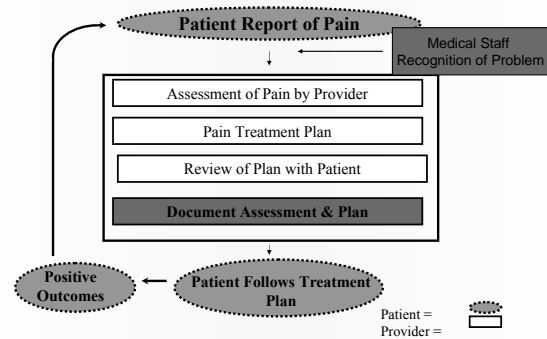


Narcotic Titration Order Schema: A Pilot Trial

- Results:
 - No severe adverse events
 - Feasible in the clinic setting
- Future Directions:
 - Phase III Trial through VICCAN (R-01)
 - Pilot Trial in Hospice Setting (R-21)
- Issues for further exploration:
 - Non-compliance: how do patients decide when to take breakthrough pain medication

Am J Hosp Pall Care: 21: 272, 2004

Critical Steps for Adequate Pain Outcome



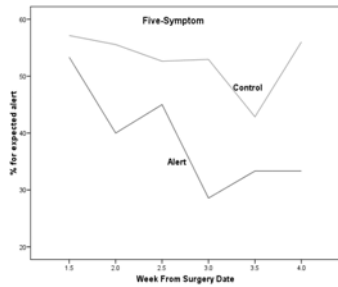
Controlling the Flow of Data:

- Information is critical for good symptom control
 - Need to be able to identify a problem quickly
 - Need to be able to document interventions
 - Need to know if interventions are improving the symptom severity
 - Need to know if there are toxicities from interventions
- Moved from paper to electron medical records
 - EMRs are largely used as repositories of data
- EMRs may be powerful tools that allow collection and display of data in such a way as to improve outcomes

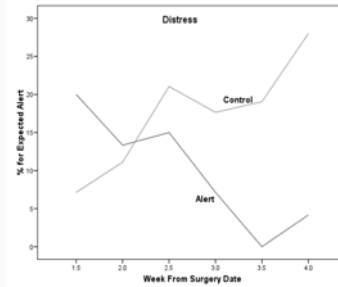
ASCO 2008 Abstract # 9536: A Computerized Telephone Monitoring System

- Goal:
 - To determine if a computer-telephone monitoring system (interactive voice response system, IVR) can enhance timely provider-patient communication
 - To determine whether provider-patient communication reduced post-operative symptom burden
- Design:
 - Randomized clinical trial
 - Intervention vs. no intervention
 - Clinic staff alerted by e-mail when symptom severity exceeded a specified threshold

Percent Expected Alerts for 5 Symptoms in 1st Month Post-Thoracotomy



Percent Expected Alerts For Distress 1 Month Post-Thoracotomy

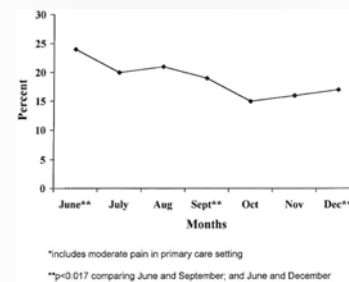


Systems Approaches to Barrier Reduction

- Each patient-healthcare provider dyad works within a system
- Systems issues effect symptom outcomes
- Systems issues that adversely effect outcome must be identified and solutions must be implemented
- Cleeland: Rapid Cycle Improvement Model to improve pain management with the VA Health System

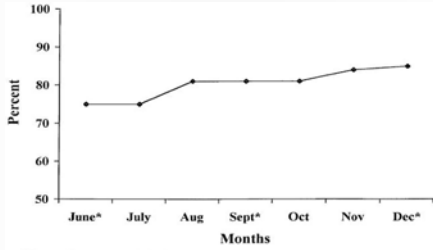
Cleeland, Clinical J of Pain, 19: 298, 2003

Patients with Moderate/Severe Pain



N ≥25 each time point; 35 facilities reporting

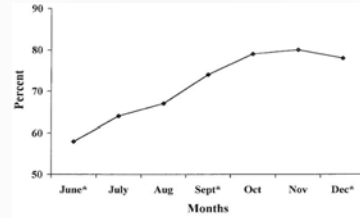
Patients with Assessment



*Comparisons not statistically significant

N ≥ 300 each time point; 20 facilities reporting

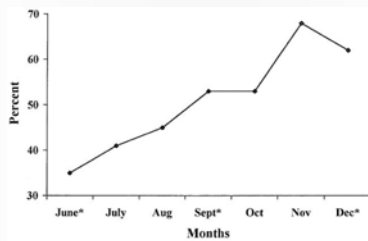
Patients Plan of Care



*p<.017 comparing June and September, and June and December

N ≥ 525 each time point; 35 facilities reporting

Patients with appropriate education



*p<.017 comparing June and September, and June and December

N ≥ 600 each time point; 40 facilities reporting

Dashboards: Enhanced Data Collation and Display



- Displays selected data
- Allows easy identification of critical issues

StarTracker Disease Management Dashboard

Dr. ABC - Diabetes patients Results are updated once daily before 6 a.m.
Level of View: Full Cohort (n=197 patients) Generate summary statistics

| MR | NAME | AGE | BP | A1C | LDL | Stat | ACEI | PPAR | FLU/VAC | SMOKE | FOOT | EYE |
|----------|-----------------|-------|--------|-----|-----|------|------|------|---------|-------|------|----------|
| 00000000 | Diabetes#1 Name | 60 YO | 140/80 | 5.8 | 180 | NO | YES | YES | YES | YES | YES | YES |
| 00000000 | Diabetes#1 Name | 60 YO | 130/80 | 5.1 | 27 | NO | YES | YES | NO | NO | YES | NO |
| 00000000 | Diabetes#1 Name | 62 YO | 120/80 | 6.1 | 75 | 3 | YES | YES | NO | NO | YES | <1 year |
| 00000000 | Diabetes#1 Name | 65 YO | 100/60 | 5.8 | 100 | 3 | YES | YES | NO | NO | YES | <1 year |
| 00000000 | Diabetes#1 Name | 77 YO | 100/80 | 6.2 | 47 | 20 | YES | YES | YES | NO | YES | <1 year |
| 00000000 | Diabetes#1 Name | 55 YO | 110/60 | 5.8 | 36 | NO | NO | YES | NO | NO | NO | <1 year |
| 00000000 | Diabetes#1 Name | 56 YO | 120/74 | 7.4 | 93 | 20 | YES | NO | YES | NO | YES | <1 year |
| 00000000 | Diabetes#1 Name | 54 YO | 120/80 | 6.1 | 117 | 4 | YES | YES | NO | NO | YES | <1 year |
| 00000000 | Diabetes#1 Name | 70 YO | 100/60 | 6.0 | 95 | 100 | NO | NO | NO | YES | NO | <2 years |
| 00000000 | Diabetes#1 Name | 54 YO | 100/60 | 7.6 | 68 | NO | NO | YES | YES | NO | YES | <2 years |
| 00000000 | Diabetes#1 Name | 55 YO | 100/65 | 7.4 | 66 | NO | NO | YES | NO | NO | NO | <1 year |
| 00000000 | Diabetes#1 Name | 71 YO | 100/80 | 6.2 | 77 | 14 | YES | YES | NO | NO | YES | <1 year |
| 00000000 | Diabetes#1 Name | 55 YO | 110/67 | 6.5 | 45 | 4 | NO | NO | NO | NO | NO | <1 year |
| 00000000 | Diabetes#1 Name | 61 YO | 100/80 | 7.6 | 55 | 4 | YES | NO | NO | NO | NO | <1 year |

- Diabetes patients Level of View: Full Cohort (n=197 patients)
Compare to All Diabetes Center Patients (Takes approximately one minute)

Summary Results

BP
Mean BP < 130/80 ==> 59 (29.95 %)
Follow BP between 130/80 and 150/90 ==> 77 (39.69 %)
Bad BP == 150/90 ==> 61 (30.96 %)

A1C
Mean A1c < 7.0 ==> 67 (49.24 %)
Follow A1c between 7.0 and 9.0 ==> 66 (33.50 %)
Bad A1c == 9.0 ==> 34 (17.26 %)
Mean = 7.27

LDL
Mean LDL < 100 ==> 94 (47.72 %)
Follow LDL between 100 and 130 ==> 38 (19.29 %)

Conclusions:

- Pain control is complex:
 - There are numerous key stakeholders
 - Adequate pain control involves the active participation of all stakeholders
- Systems need to be developed and tested that allow optimal integration and coordination between stakeholders
- Information systems and technology may hold the key to this complex problem.