

Background:

The United States is in the midst of an epidemic of opioid drug (narcotic drug) use, misuse, and abuse. It is imperative providers recognize prescribing patterns may contribute to this epidemic. Responsible and effective efforts are needed by providers to reduce the impact of opioids on this public health concern.

Worldwide, efforts are being undertaken to improve adult pain management. To date, very little has been done to address pediatric pain management. The problem became more evident after analysis of a small group of national associates, as well as our own orthopedic practice of nine providers. Wide variability in prescribing patterns was identified. We recognize the importance of appropriate pain management for the physical and mental well-being of the patient with the potential for complications. Establishing a standardized approach will enable our staff to provide safer, consistent care to our patients and effectively manage our patient's pain control.

Aim:

The goal of this project is to reduce narcotic prescribing using standardized guidelines to appropriately manage pediatric post-operative pain medication at discharge.

Actions Taken:

After analyzing prescribing habits and patient narcotic usage per procedure, the team established a four tier guideline based on pain severity categories of minor, major, moderate and spine pain. These guidelines were developed in consultation with our Pain Center and Pharmacy. The guideline includes the expected pain severity category and weight of the patient. Procedures were assigned to pain categories based on complexity of the procedure to determine the appropriate prescription for the patient.

Guideline education, along with laminated pocket cards for easy reference, was given to all residents and providers. Our team met regularly with residents and providers seeking feedback on efficiency of these tools. Data was collected on all post-operative prescription orders. Analysis was performed to determine compliance with guidelines as well compliance at a provider and procedure level. Control charts and Pareto charts were used to interpret the data.

After completing several Plan-Do-Study-Act cycles, the hospital's Epic team created an order set to include pain prescription guidelines and discharge instructions for our orthopedic post-operative patients. The order set will ensure the appropriate ordering of pain medication by category requiring only two clicks of the mouse.

Figure 1- Pediatric Orthopedic Post-operative Home Going Pain Management Guidelines

Procedure & Description	Initial Script Recommended Medication (By weight)	# Days	Maximum Tablets per Script	Maximum Liquid per Script	Second Script Recommended Medication	Maximum Tablets per Script	Maximum Liquid per Script
Minor Closed reduction, CRP, superficial I&B, arthroscopy without implants (Endroplasty, meniscotomy)	Hydrocodone-acetaminophen (PERCOCET) tablet 2.5/325mg	3	N/A	None	None	N/A	None
	Dose: 0.1mg/kg/dose PO q6hrs PRN						
	25/325mg	3	6	N/A	None	N/A	None
	Hydrocodone-acetaminophen (NORCO) 5-325mg						
Moderate ORIF, I&B, I&O, arthroscopy with implants (ACL, labral repair)	Hydrocodone-acetaminophen (PERCOCET) tablet 2.5/325mg	3	12	N/A	None	N/A	None
	Dose: (1/2) tab PO q6hrs PRN						
	25/325mg	3	12	N/A	None	N/A	None
	Hydrocodone-acetaminophen (NORCO) 5-325mg						
Spinal Fusion (AIS / NMI)	Hydrocodone-acetaminophen (PERCOCET) tablet 2.5/325mg	10	40	N/A	N/A	N/A	N/A
	Dose: (1) tab q6hrs PRN						
	25/325mg	10	40	N/A	N/A	N/A	N/A
	Hydrocodone-acetaminophen (NORCO) 5-325mg						

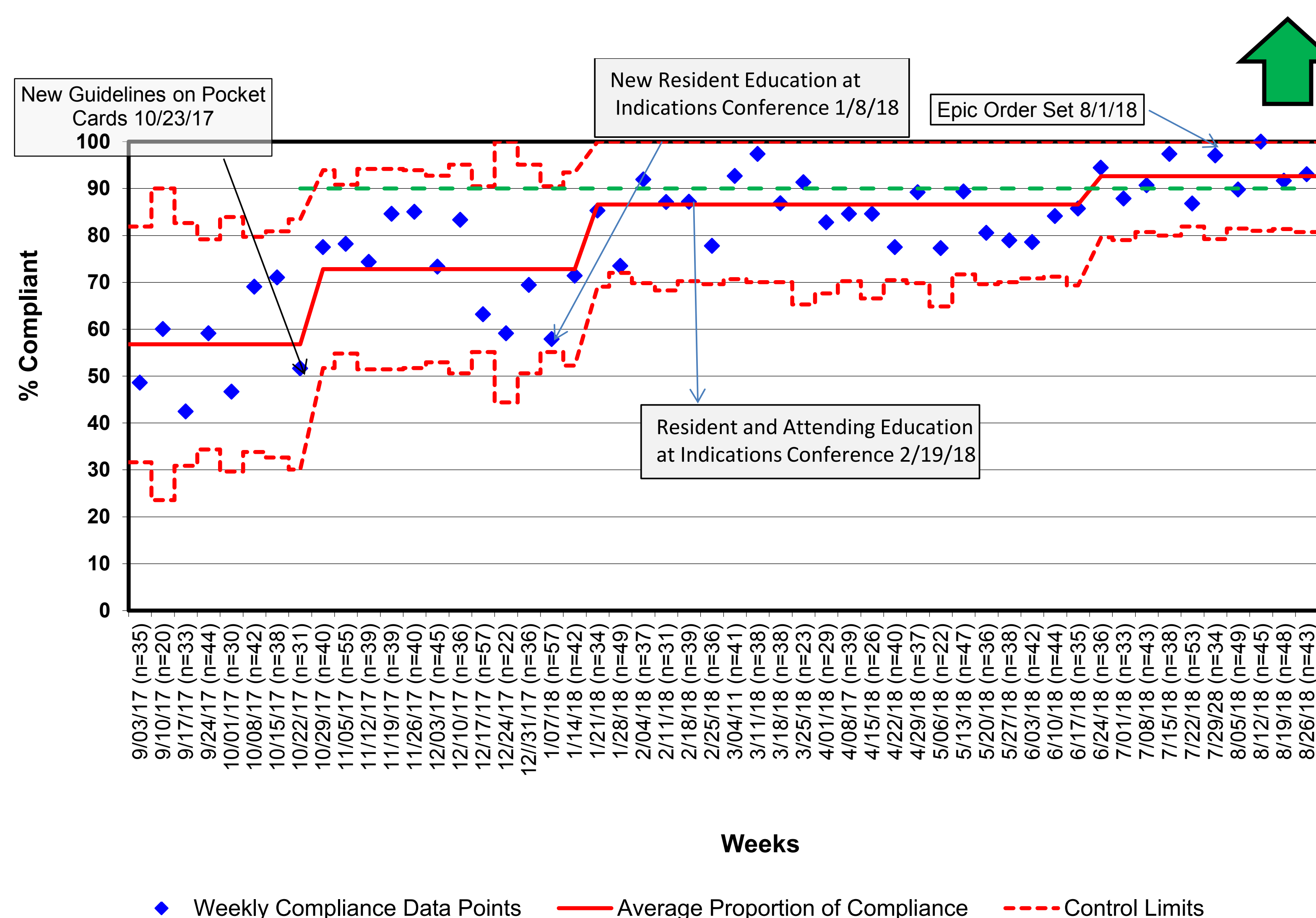
Figure 2- EMR Order Set

May resume sports activities in: May resume sports in *** days.
 May resume work activities in: May resume work activities in *** days.
 Other restrictions (specify):
 Homegoing Diet Click for more
 Wound Care Click for more
 Discharge Instructions/Follow-Up Click for more
 Ohio State Law: Child Safety Seat Instructions
 Routine. It is the Ohio State Law that every child under 8 years old must ride in an appropriate child safety seat unless the child is 4 feet 9 inches or taller. Every child from 8-15 years old who is not secured in a child safety seat must be secured in the vehicle's seat belt. Akron Children's Hospital advises that all motor vehicle passengers be restrained. Clinic Performed
 Ortho Post-OP Pain Medications Click for more
 Discharge Referrals Click for more
 Labs & Imaging Click for more
 Labs/Imaging Click for more
 Additional Instructions
 Patient Instructions
 Patient Instructions
 Solid Organ Injury Instructions
 Discharge Instructions/Follow-Up Click for more
 Ohio State Law: Child Safety Seat Instructions
 Routine. It is the Ohio State Law that every child under 8 years old must ride in an appropriate child safety seat unless the child is 4 feet 9 inches or taller. Every child from 8-15 years old who is not secured in a child safety seat must be secured in the vehicle's seat belt. Akron Children's Hospital advises that all motor vehicle passengers be restrained. Clinic Performed
 Ortho Post-OP Pain Medications

- If prescribing more than a 5 day supply, must document in the medical record why you are making an exception
- If prescribing more than 30 Morphine Equivalent Doses, must document in the medical record why you are making an exception

Results:

Figure 3- Percentage of Compliance with Appropriate Guidelines



Summary:

Pediatric orthopedic post-operative prescription guidelines are now a standard part of orientation for new residents and providers. Within our Orthopedic Department, we have achieved 90 percent compliance utilizing the post-operative pain prescribing guidelines at discharge. We have reduced the amount of narcotics prescribed by approximately 50 percent. This reduction is based on our most current month's data of 107 procedures. Prescribing using our old standards of 30 narcotic tablets per prescription, we would have prescribed approximately 3,210 narcotic tablets. Utilizing our current standards, we prescribed approximately 1,600 narcotic tablets, a 50 percent reduction while maintaining appropriate pain control. We are currently spreading these interventions to other surgical departments in our organization.

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