

SPECTRUM HEALTH

ED CPOE Experience

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Objectives

- Review how CPOE has impacted patient safety in the ED
- Review the basic safety benefits CPOE of CPOE
- Review the safety concerns associated with CPOE

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Why Do CPOE?

- More than one million serious medication errors occur every year in U.S. hospitals
- Medication errors alone contribute to 7,000 deaths annually
- Financial costs. One ADE adds more than \$2,000 on average to the costs of hospitalization. This translates to over \$7.5 billion per year nationwide in hospital costs alone.

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Why Do CPOE?

- Standardize process (check list of items to remember for each condition)
- Real time rules and alerts at ordering, signal drug interaction, allergy or dose errors
- Eliminate delays to downstream departments with real time order processing
- Enable bar code medication administration
- Dose calculators and other electronic tools to assist in accurate dosing
- Order sentences eliminate sound alike drug errors
- Clearer communication between physicians, nurses and pharmacists

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Before CPOE

Paper orders and order sets


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After CPOE

Home Folder with department specific order sets/Powerplans

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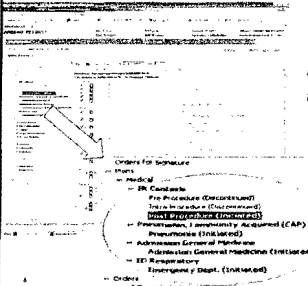
Before CPOE



Order hieroglyphics?

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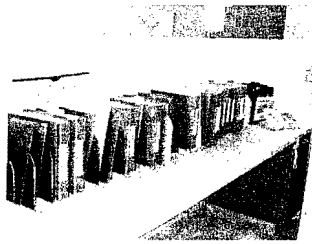
After CPOE



Orders easily legible and found electronically

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Before CPOE



Hand Written orders sit in paper chart to be transcribed into Cerner

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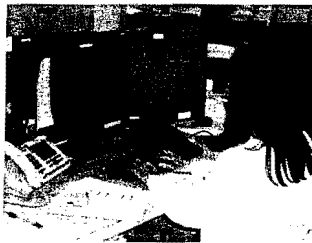
After CPOE



Physician can order electronically from anywhere they can access Cerner

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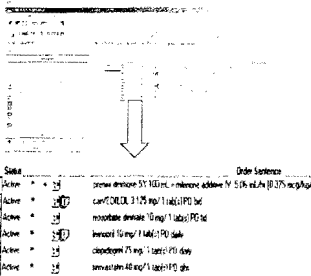
Before CPOE



Pharmacist Transcribing handwritten, often illegible, medication orders

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After CPOE

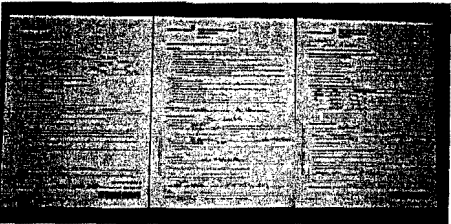


Pharmacist reviews electronic orders in Pharmnet

Order	Order Location	Start	Stop	Qty
1	...	02/15/10 15:55		0.01
2	...	02/15/10 15:55		0.01
3	...	02/15/10 15:55		0.01
4	...	02/15/10 15:55		0.01
5	...	02/15/10 15:55		0.01

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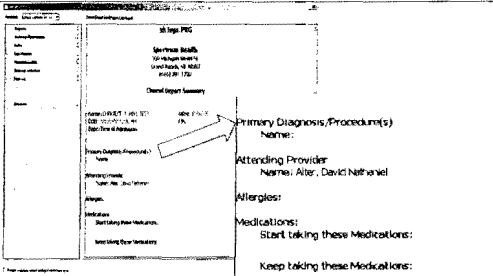
Before CPOE



Hand Written Discharge Instructions

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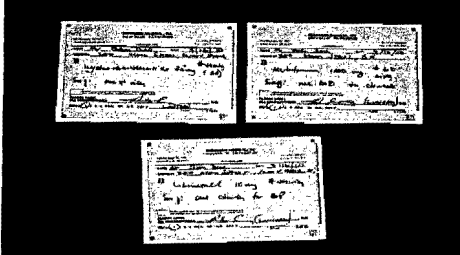
After CPOE



Printed Electronic Discharge Instructions

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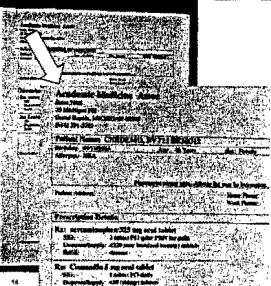
Before CPOE



Hand Written Prescriptions

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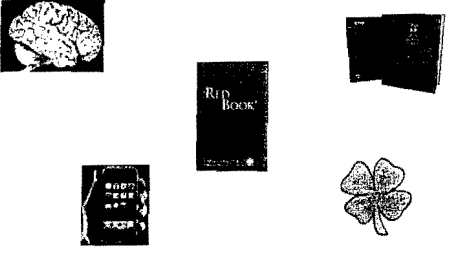
After CPOE



Printed (legible) prescription or prescription sent electronically to pharmacy (e-prescribe)

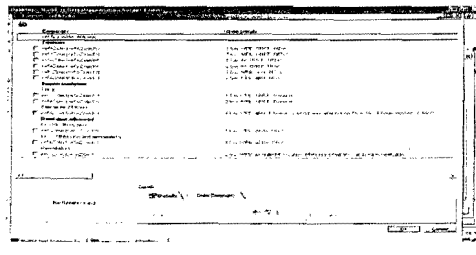
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Previous clinical references



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Cefazolin adults



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Difficulties experienced in ED

- Culture change by providers
- Decreased direct communication
- Software limitations
- Education, there is a steep learning curve
- Real time and order processing very quick
- Real-time evaluation with ability to update quickly
 - Clinical updates
 - Safety issues
 - Efficiency upgrades

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CPOE Safety Recommendations


- Robust education before, during and after "Go Live" events
- Extensive IT support staff with real time response
- Hardware and software able to support CPOE
- Monitor before and after "go live" to research effectiveness
- Continuous review and updating of system to accommodate provider concerns and new clinical evidence
- Most importantly, monitor and correct unanticipated safety errors

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Spectrum ED Experience

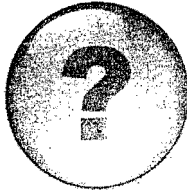
Over 200 physicians, extenders and nurses entering orders. Despite steep learning curve and frequent obstacles along the way, very few providers would elect to "go back".



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Spectrum ED Experience



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