



Improving Efficiency & Safety of Prescriptions in the Electronic World

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Goals

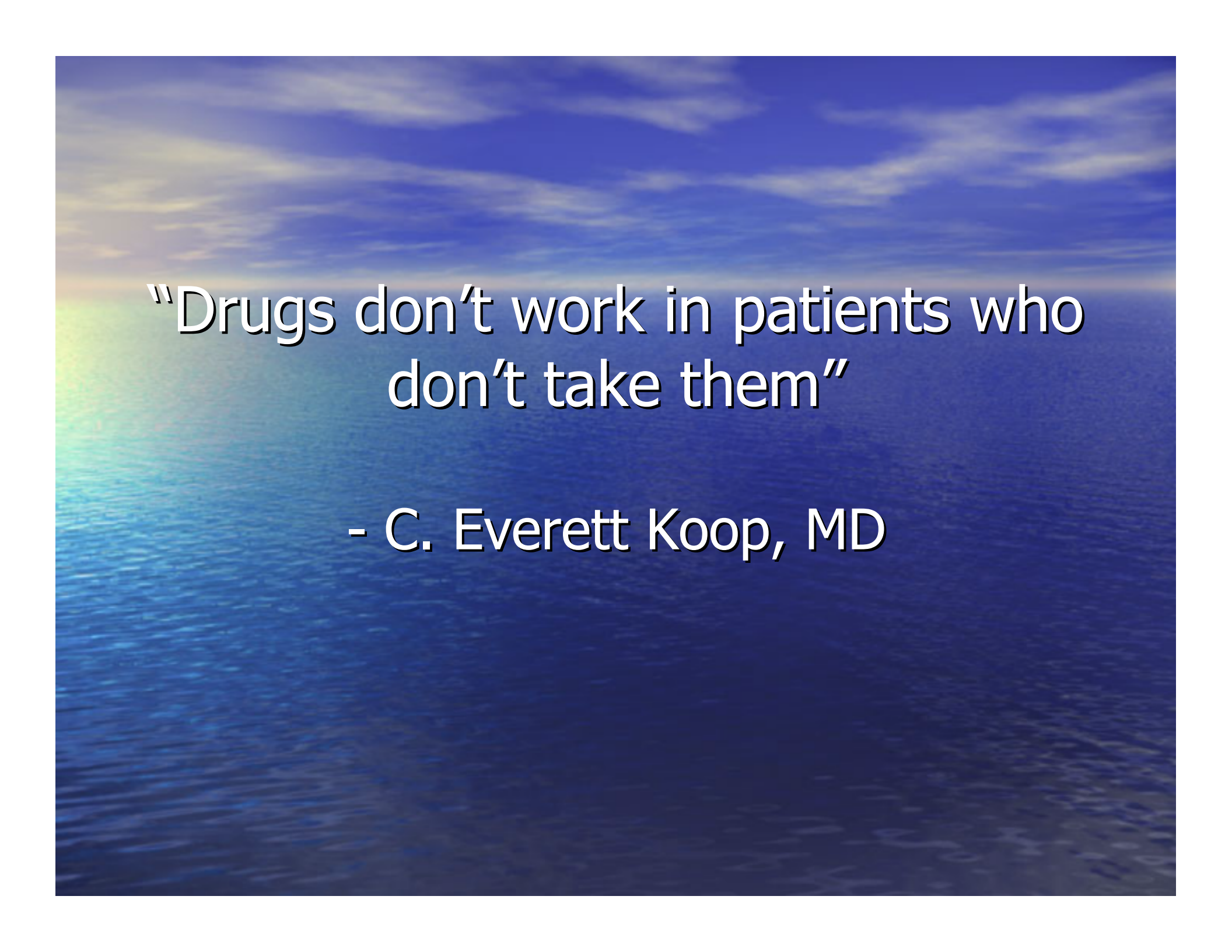
- Understand current state
- Understand levels of electronic prescribing
- Understand the cost effectiveness of eRx
- Review solution examples
- Discuss recent developments

The Current Problem

- \$100+ Billion dollar industry
- Nearly 4 Billion scripts written in 2004; <2% transmitted electronically
- 150 Million+ calls from pharmacists to physicians
- > 8,000 of Americans die/yr. due to medication errors

The Current Problem

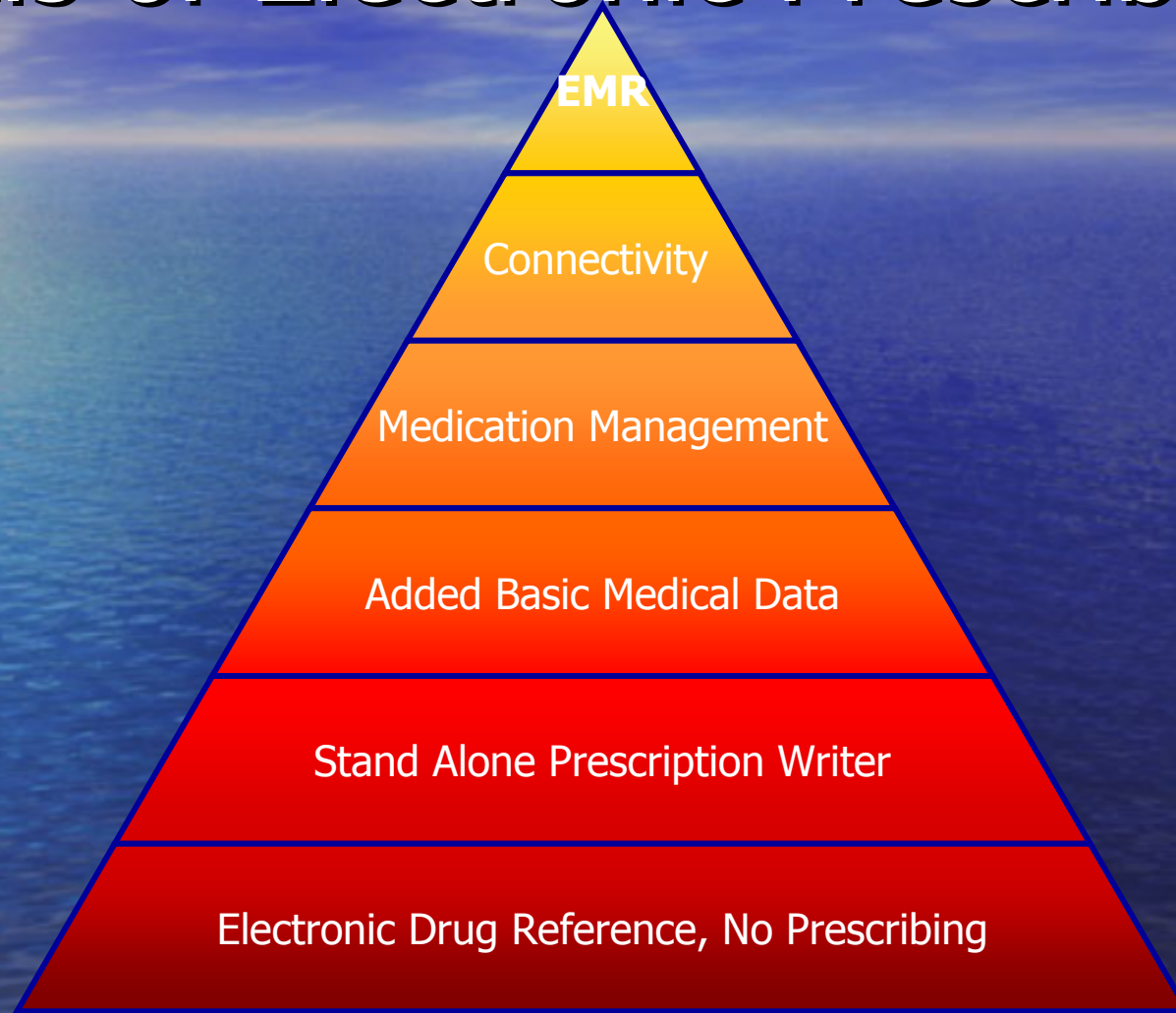
- 10% of initial prescriptions are never filled
- 30% of refillable prescriptions are never refilled
- 30% of filled prescriptions are never finished
- 50% of patients do not take medication properly



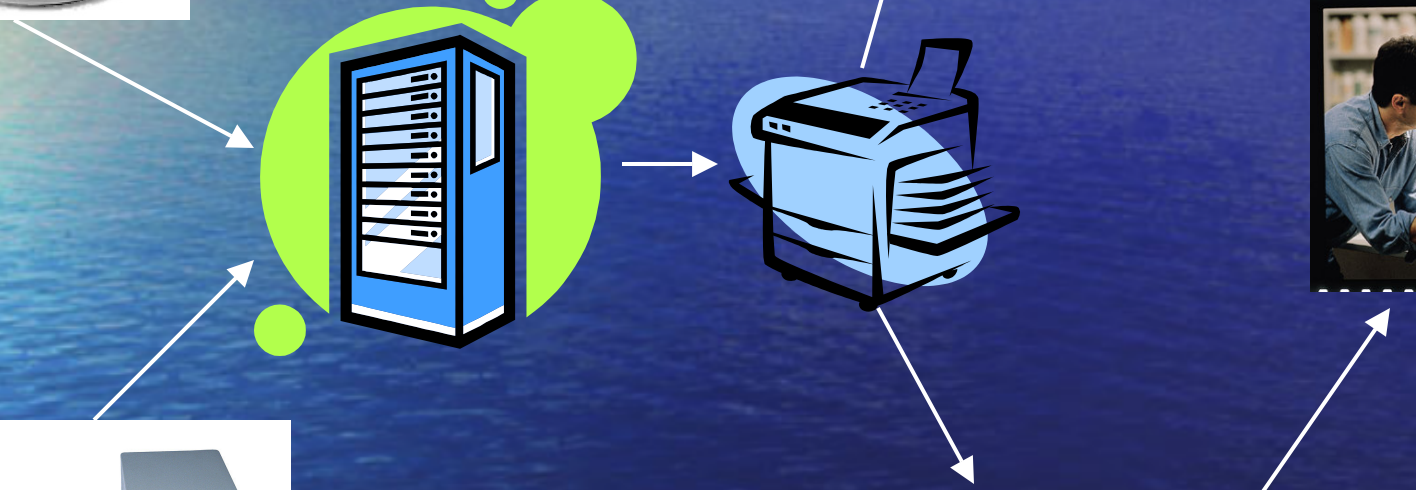
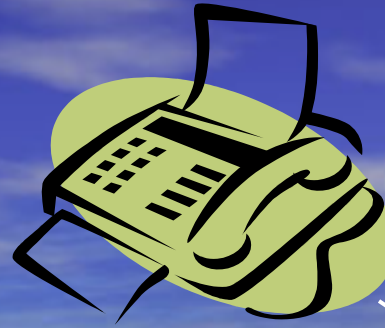
“Drugs don’t work in patients who
don’t take them”

- C. Everett Koop, MD

Levels of Electronic Prescribing



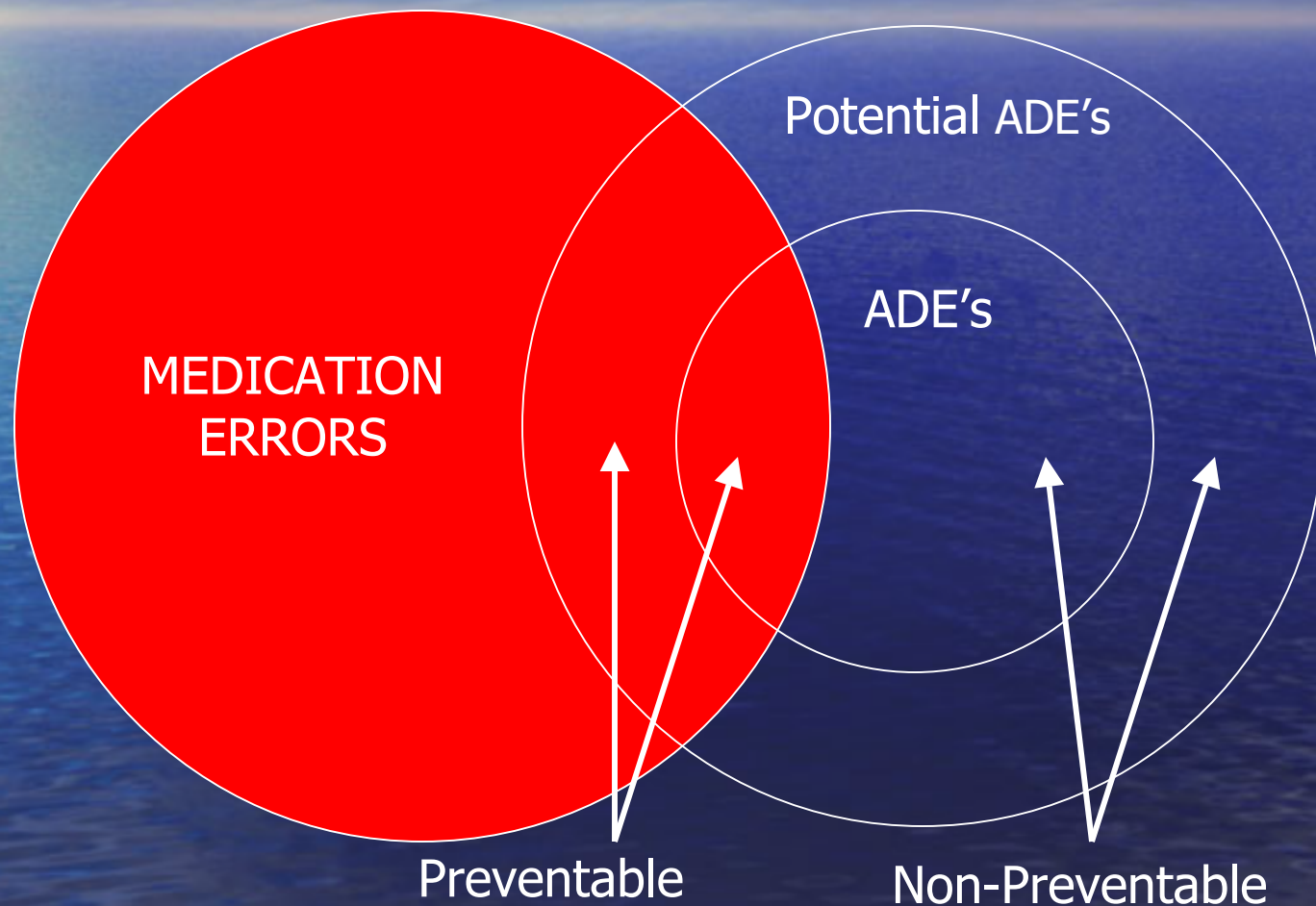
Adapted From: eHealth Initiative



A Few Types of Medication Errors

- Wrong Drug
- Drug-Drug Interaction
- Allergy
- Wrong Dose
- Wrong Formulary
- Illegible Prescription
- Unfilled by Patient
- Taken Improperly by Patient

Preventing Adverse Drug Events

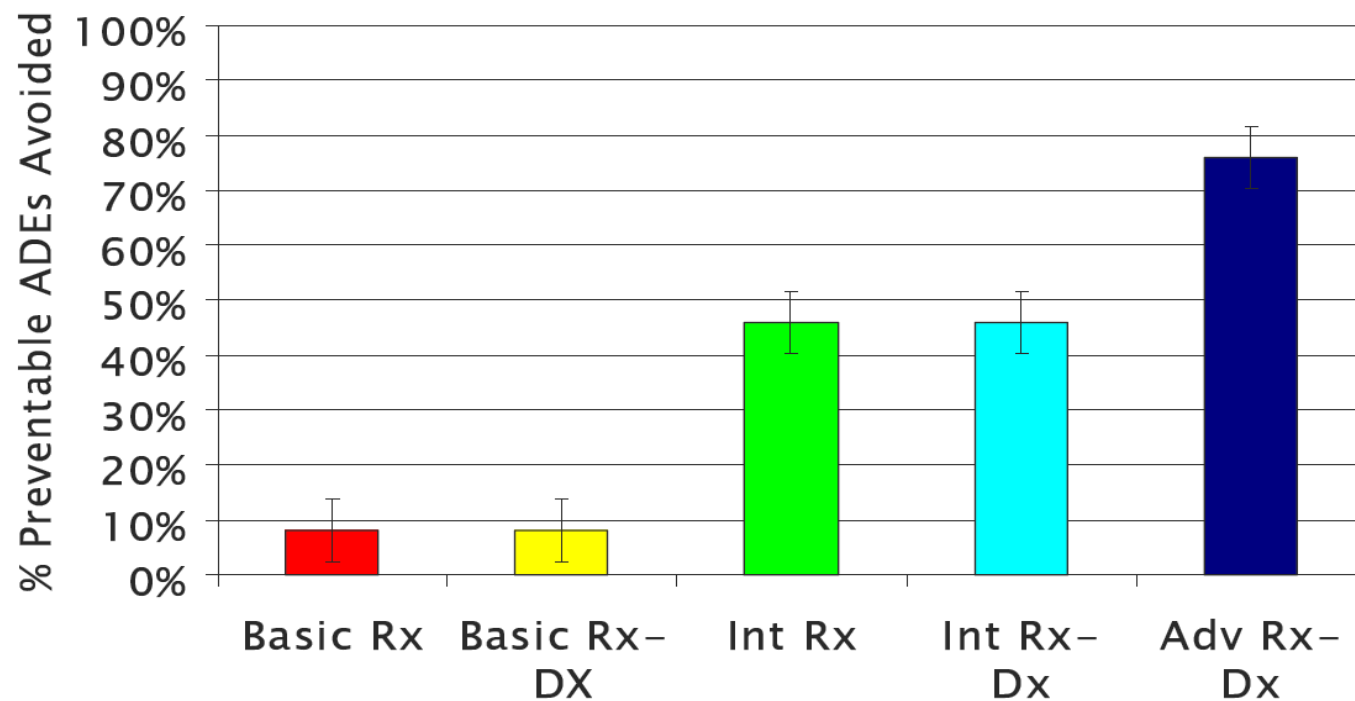


Adapted From: Kamsha (2002)

Center for Information Technology Leadership (CITL) Report

- >8.8 Million Adverse Drug Events (ADEs) occur each year in ambulatory care
- >3 Million of these are preventable
- Advanced CPOE systems would eliminate >2 million ADEs annually
 - Avoid 1.3 Million office visits
 - Avoid 190,000 hospital admission
 - Avoid 130,000 life-threatening ADEs

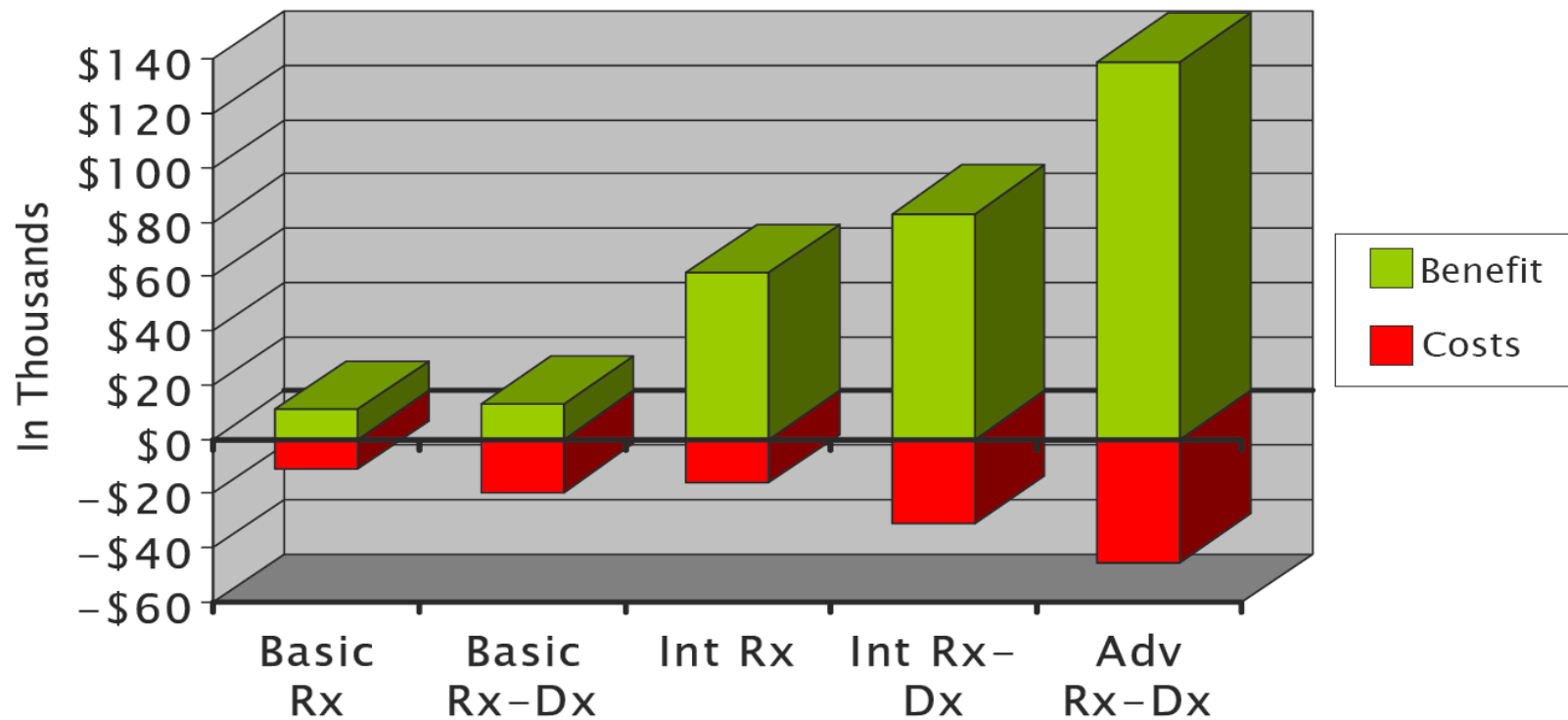
Clinical Benefits: How Effective Is ACPOE?



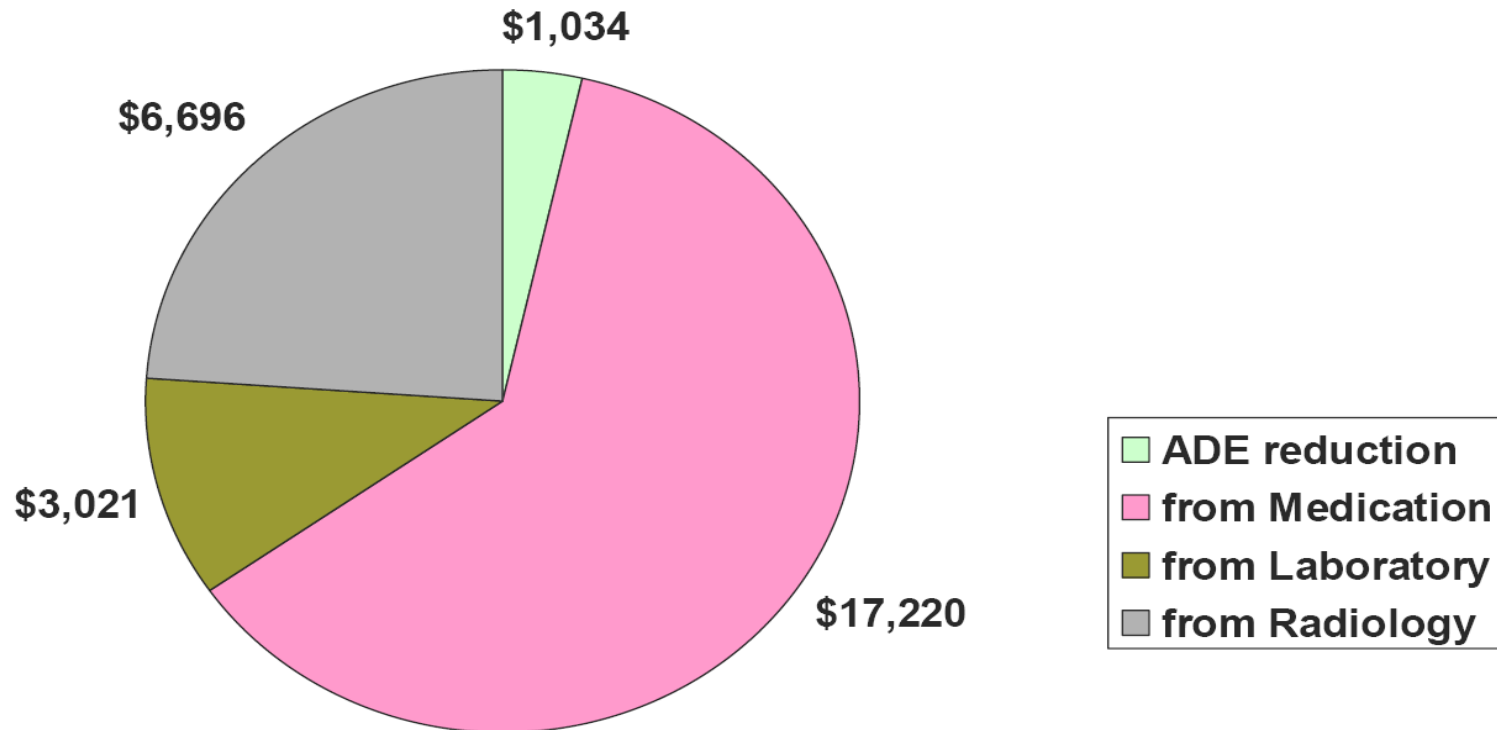
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5 Yr Net Cost-Benefit for 25 Providers



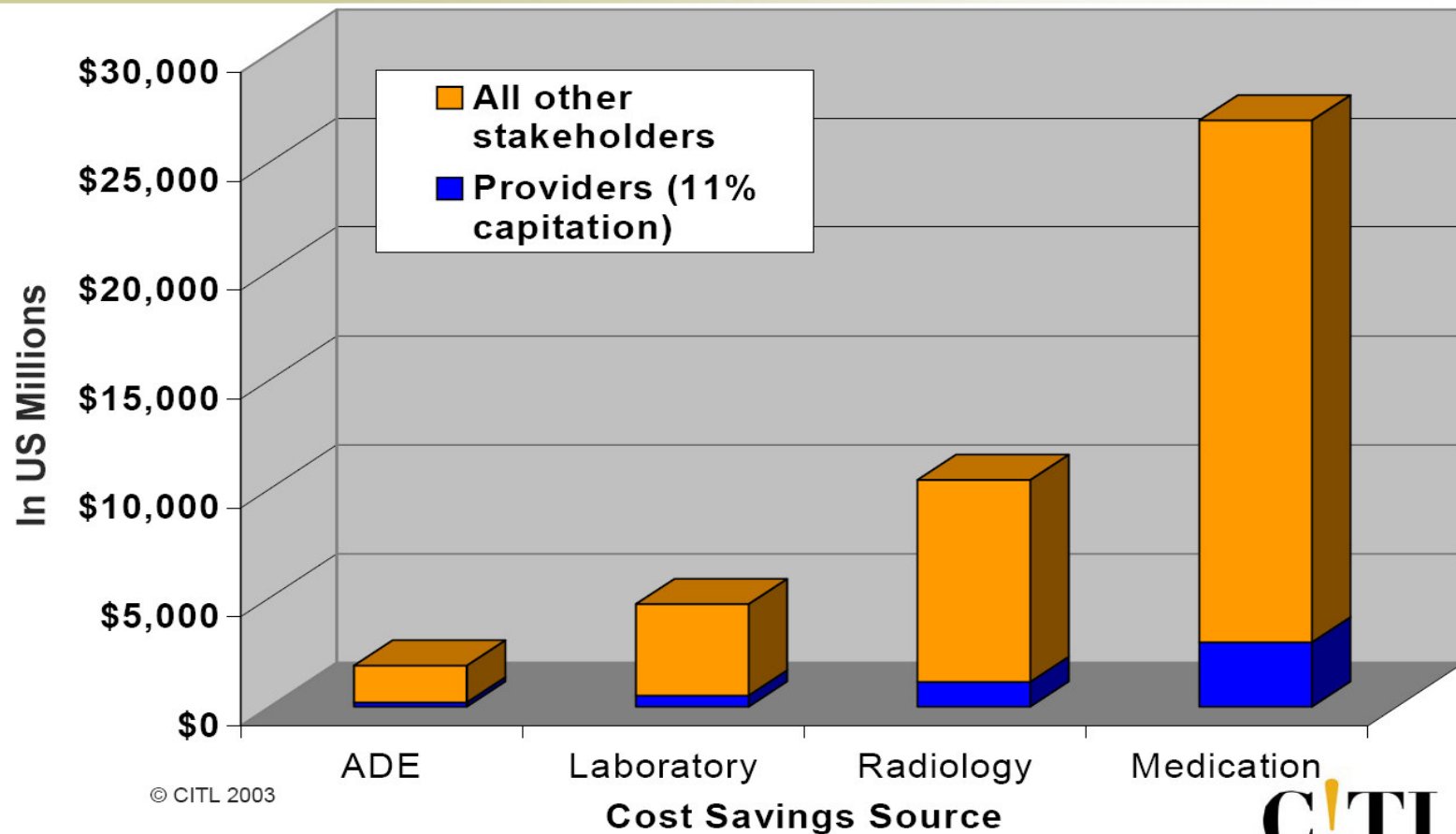
Per “Average” Provider Annual Cost Saving Projections



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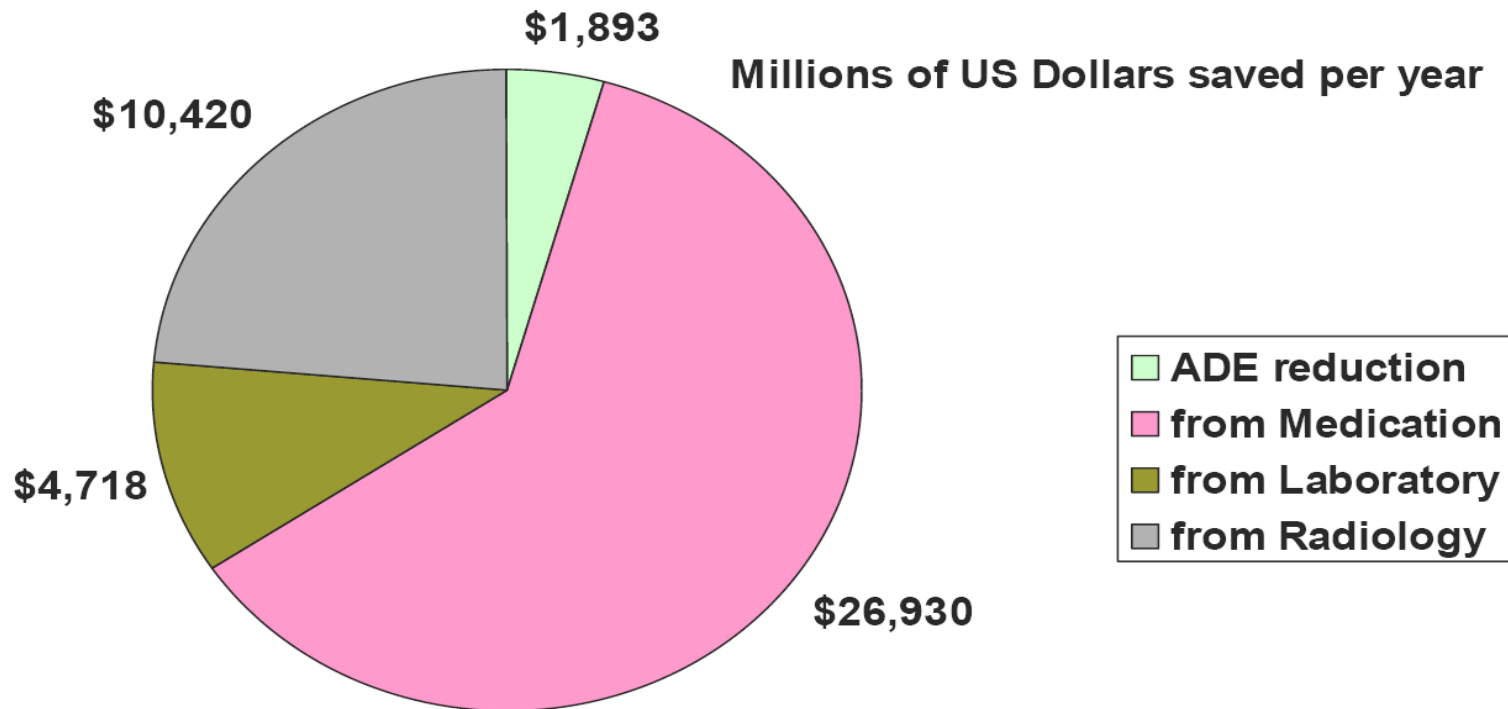
National Cost Savings to Providers and Other Healthcare Stakeholders



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National Cost Saving projections -- \$44 billion



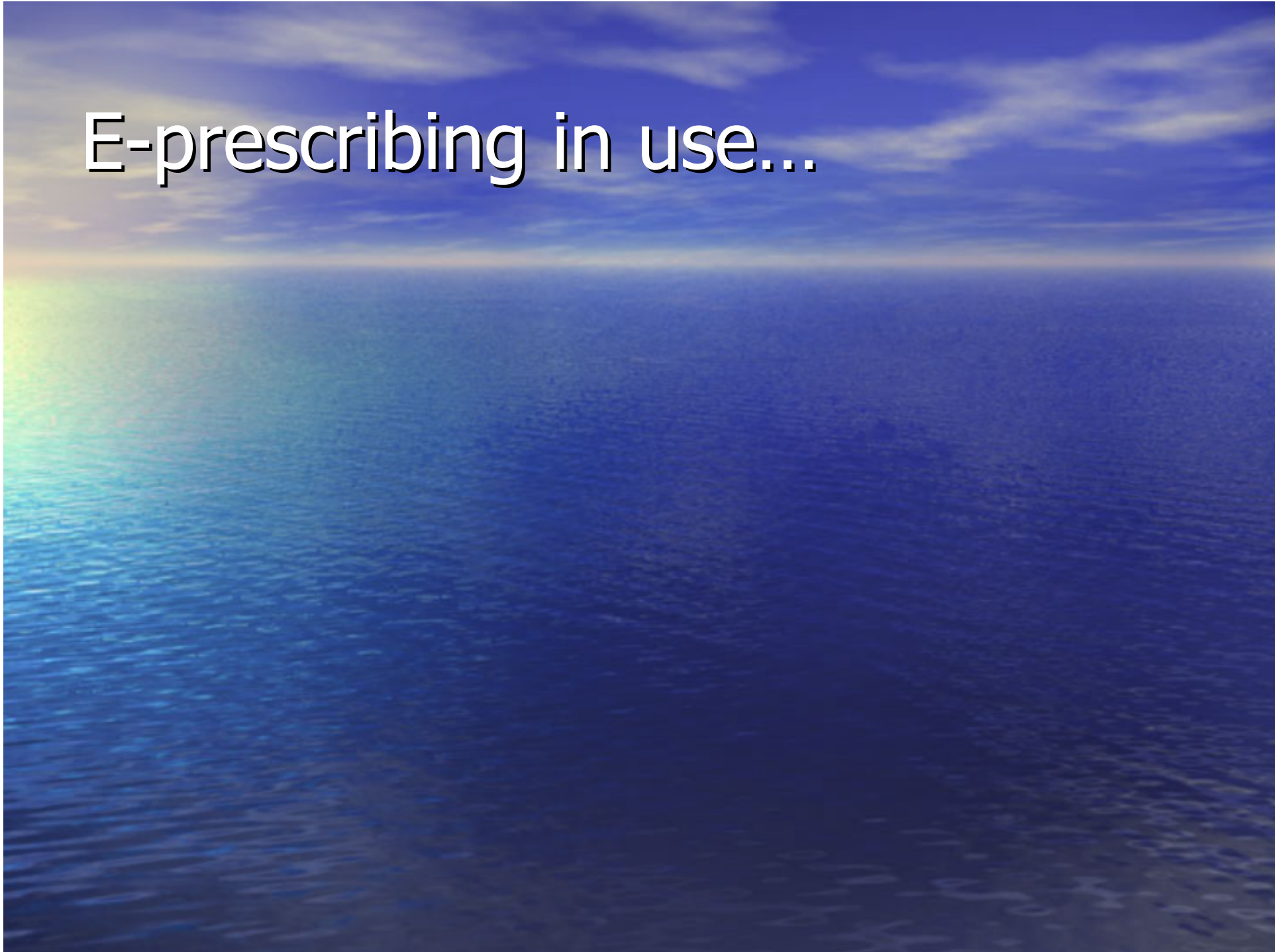
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Clinical Decision Support

- Allergy reminders / warnings
- Protocols or pathways
- Recommended substitutions for conditions or formularies
- Dose recommendations for disease processes (Ex: renal failure)

E-prescribing in use...



Recent Developments

- March 2005 JAMA article – “Role of Computerized Physician Order Entry in Facilitating Medical Errors”
- CMS Proposed Rule: Medicare Program; E- Prescribing and the Prescription Drug Program

Conclusions



Questions?



References

- www.ehealthinitiative.org
- www.ismp.org
- www.citl.org

