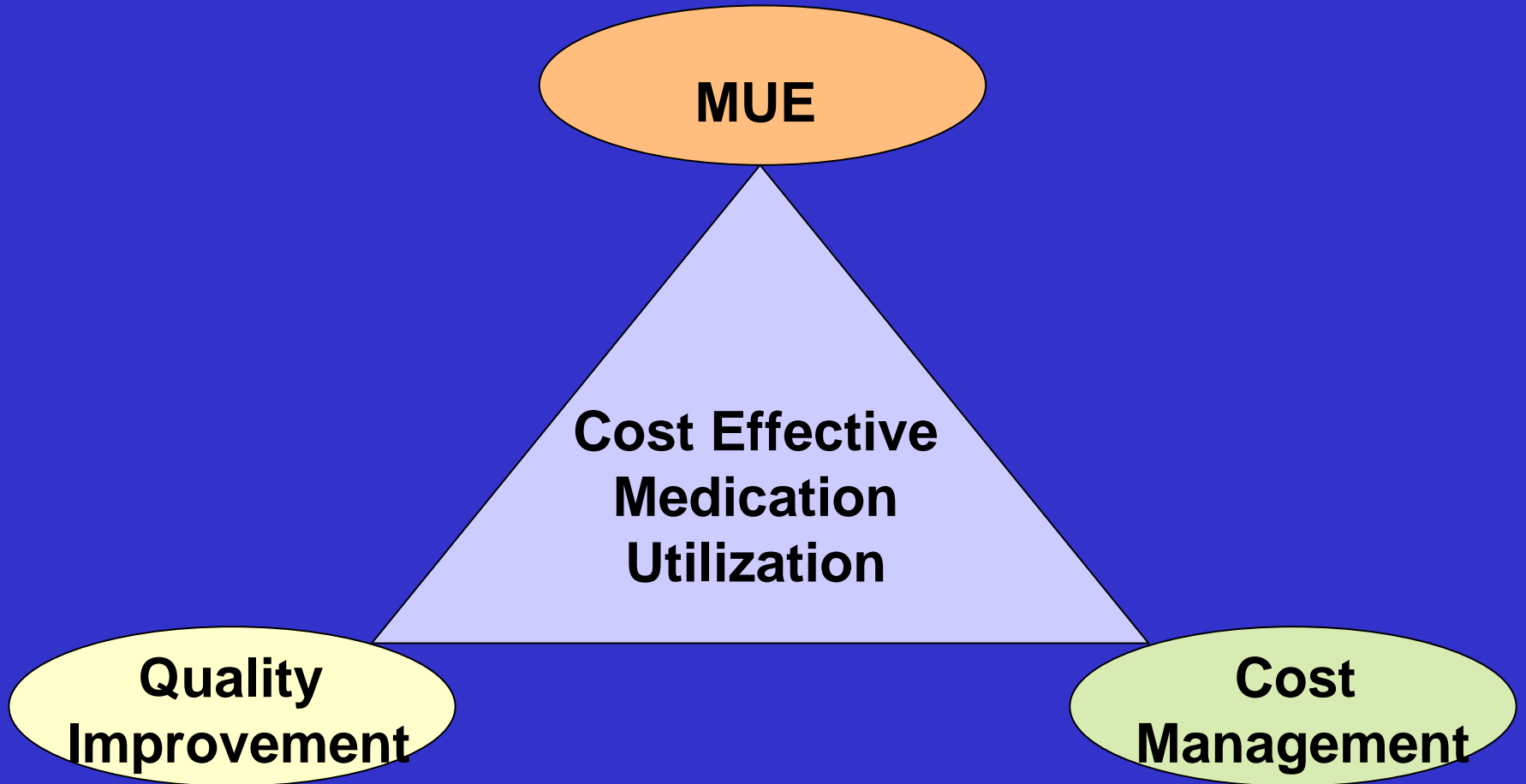


Pharmacy 483



February 14, 2006

Janet Kelly, Pharm.D.

- Outcomes & Cost Management UWMC
- Provide pharmacy leadership for medication related outcomes
 - Pharmacy & Therapeutics
 - Treatment guidelines/criteria for use

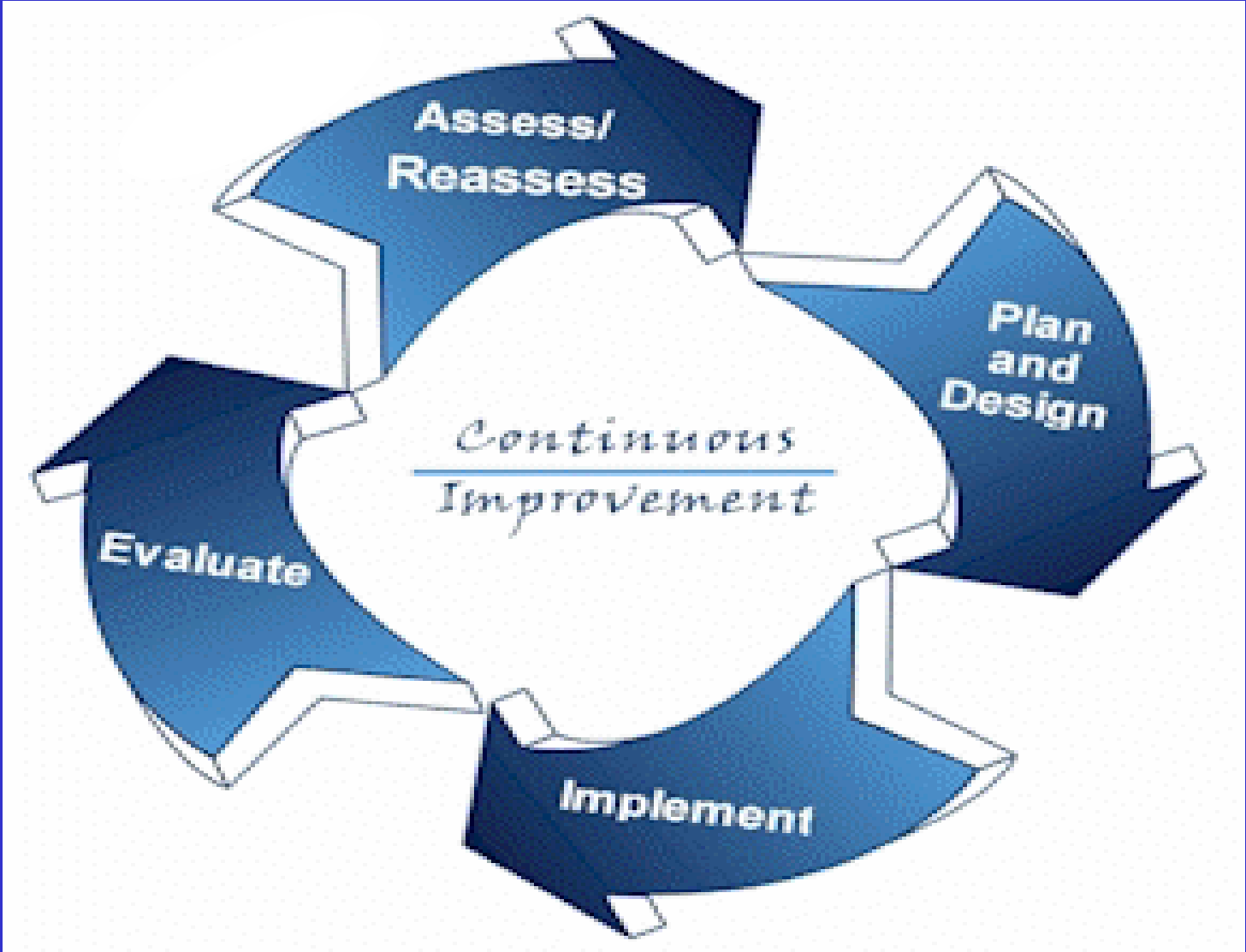
Steve Riddle

- Quality Improvement and Medication Utilization Lead
 - “Right drug for the right patient every time”
- Work with administration and clinical staff (physicians, pharmacists) to develop care processes for specific conditions and/or medications.
- Examples: ACE inhibitors in myocardial infarction and heart failure; use of most cost-effective agents in depression; treatment of chronic pain

Goals of the Presentation

- Understand the basics of continuous quality improvement (CQI) and how it is used to achieve optimal patient outcomes.
- Understand the role of Medication Utilization Evaluation (MUE) in the CQI process.
- Understand the basics of cost effectiveness evaluations.

Continuous Quality Improvement



Key Terms

Medication Utilization Evaluation

- Retrospective/Prospective
- Is utilization of the drug appropriate?
 - compared to goals
(criteria for use and/or treatment guidelines)
- Provides necessary data for CQI process

Formulary

- **List of Drugs Which May Be Prescribed**
- **Developed by the P&T Committee based on:**
 - ✓ **Safety**
 - ✓ **Efficacy**
 - ✓ **Cost Effectiveness**

Cost Effective Therapy

- ❖ **Least expensive therapy which provides the desired outcome**
 - ✓ Medication Cost
 - ✓ Monitoring Costs (labs/ office visits/etc)
 - ✓ Adverse Effect Costs
- ❖ **Very slippery concept – difficult to quantify**
 - ✓ Convenience
 - ✓ Individual Patient Preference

Cost Effective Calculation

Lexus ES 330



Initial Cost \$35,000
26 mpg

Hyundai Sonata V6



Initial Cost \$21,000
24 mpg

Cost effectiveness evaluation must also include:

Maintenance Cost

Life Span of the Car

Cost Effective Calculation (Cont)

Lexus ES 330



Life span = 150,000 miles

Maintenance cost = \$0.3 per mile

Total Cost = \$91,538

Cost per mile = \$0.61

Hyundai Sonata V6



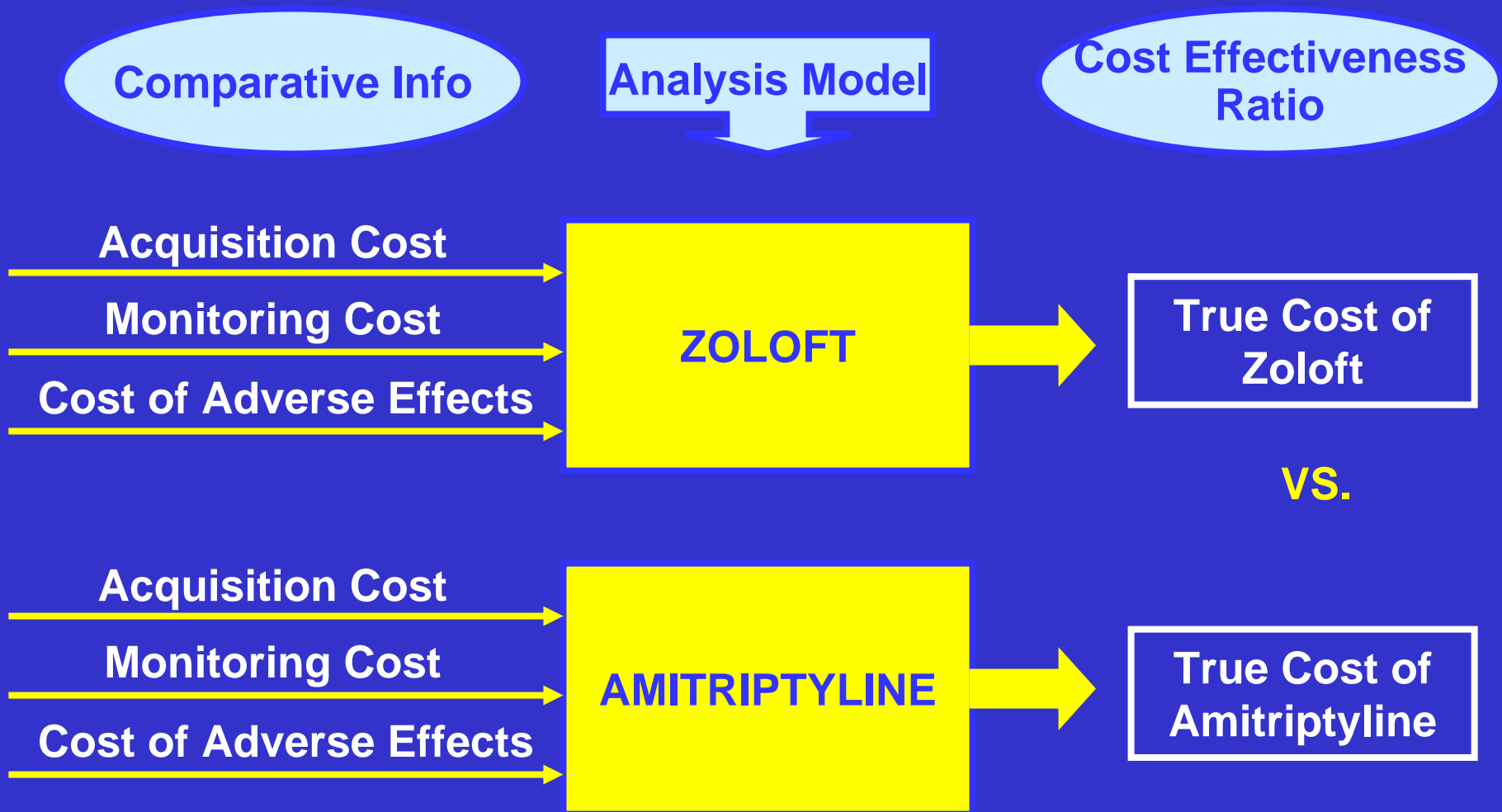
Life span = 96,000 miles

Maintenance cost = \$0.26 per mile

Total Cost = \$53,960

Cost per mile = \$0.56

Antidepressant Cost Effectiveness Comparison



Evaluation of IVIG Utilization

- What is IVIG?
 - Intravenous preparation of immune globulins (antibodies) derived from pool plasma
- What is it used to treat?
 - Only 5 FDA indications
 - Dozens of off-label indications
(many with little or no data to support use)
- Why evaluate?
 - Limited resource
 - Safety Issues
 - Cost (2 million per year)

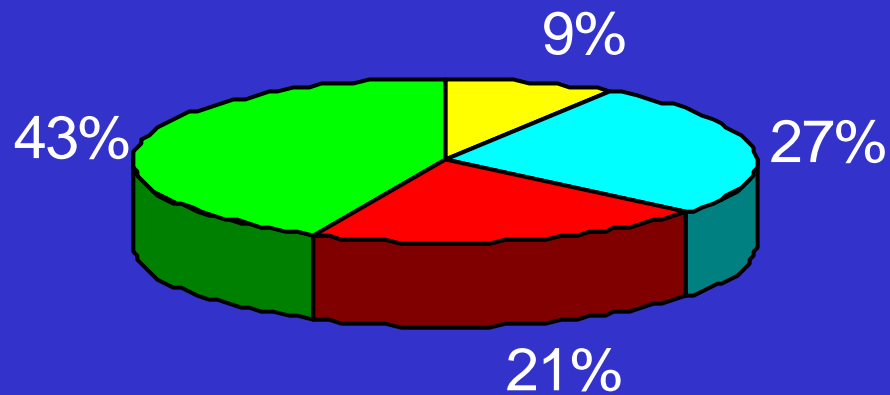
IVIG MUE Criteria

Reviewed charts for all patients that received IVIG at UWMC/HMC for a 2 month period

- Indication for IVIG
- Dose of IVIG given
- Duration of IVIG therapy
- Prescribing Service
- Adverse Effects Attributed to IVIG

Results

Indications for IVIG



■ FDA labeled

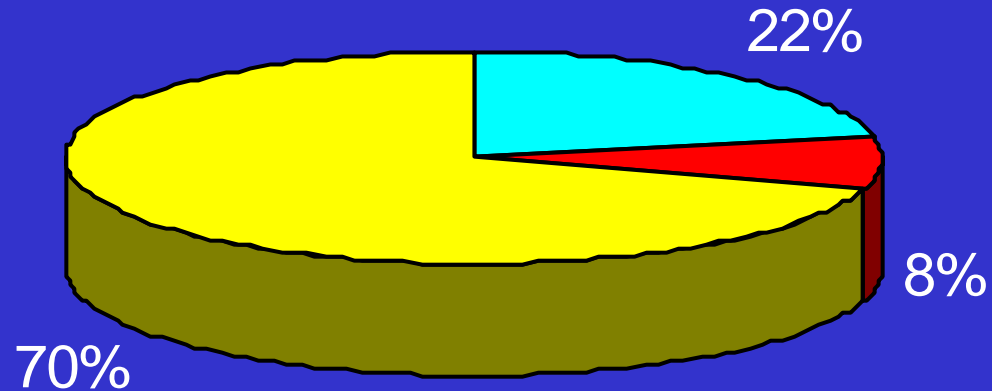
■ Off label with support

■ Off label without support

■ Unable to Determine

Results

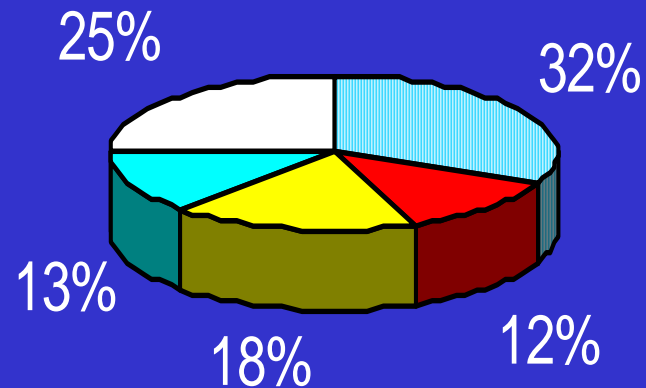
Dosing Regimen of IVIG



■ Appropriate ■ Inappropriate ■ Unclear

IVIIG Prescribing Service

% of Total IVIG Cost

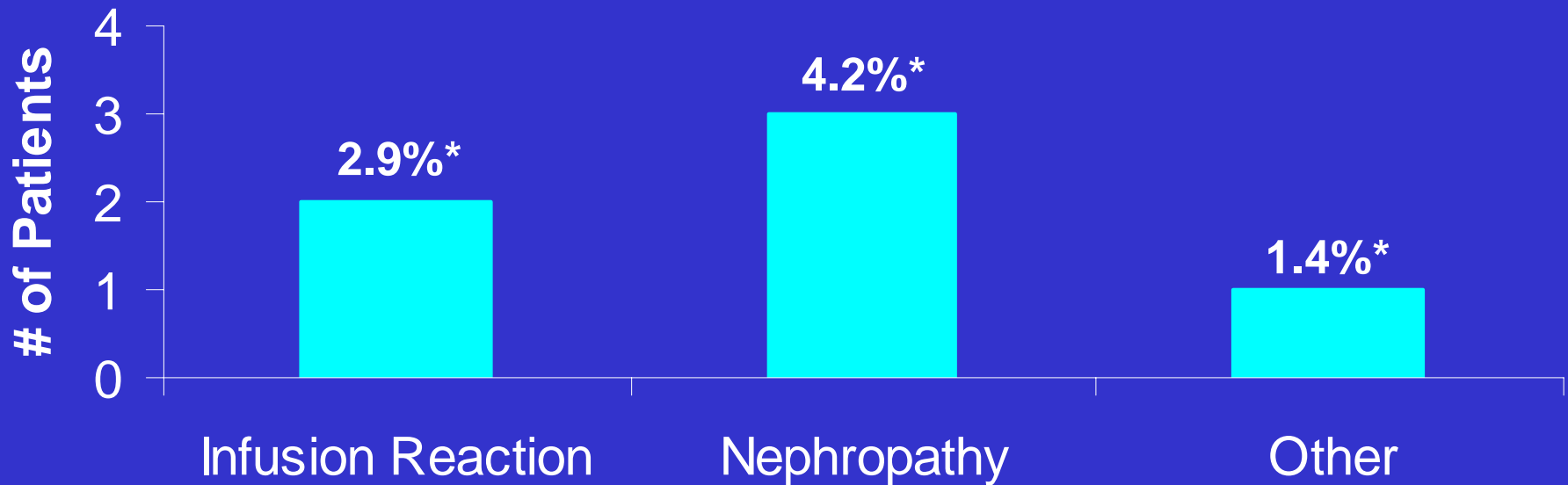


■ HemOnc ■ Transp ■ Medicine ■ Neuro ■ Burns

Results

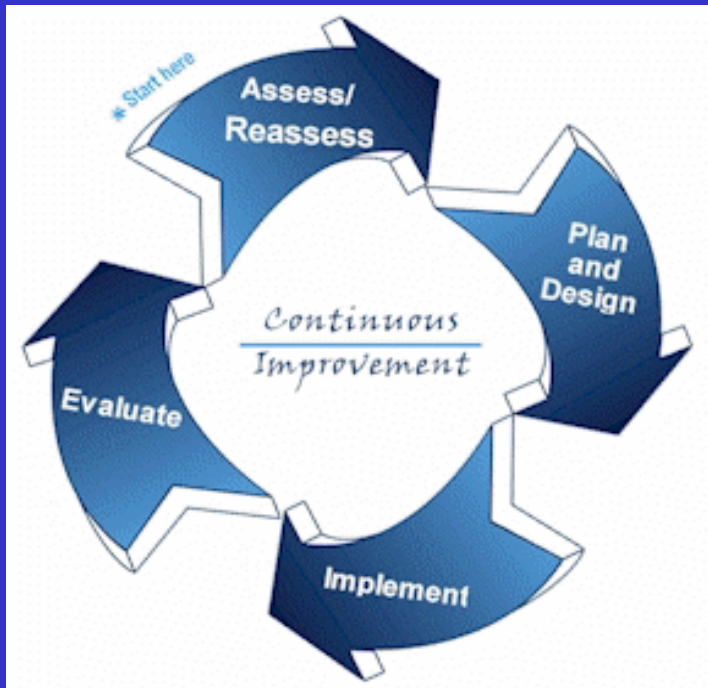
Adverse Effects

of Patients having an ADR



* % of all patients treated with IVIG during the study period (n=70)

Assess the Results



We have a problem!

Plan & Design

Multidisciplinary Task Force



Goals

- Need to know what IVIG is being prescribed for
 - in 43 % of patients it was unclear
 - Who are the primary prescribers?
- Provide education for prescribers regarding:
 - Appropriate indications
 - Appropriate dosing
 - Product selection

Plan for Accomplishing Goals

- Addition of a sucrose free IVIG product to formulary
 - Sucrose is associated with nephropathy
 - Guidelines for who should receive
- Development of an IVIG order form
 - Check boxes for indications
 - Dosing recommendations
 - Product selection
 - Administration/Monitoring
 - Premedications

IVIG Order Form

I. Select Diagnosis/Indication for IVIG

- FDA Indications (with dosing recommendations)
- Off Label Indications (with dosing recommendations)

II. Select IVIG Product

- Standard Product
- Sucrose Free Product

III. Indicate Dose & Frequency

Give _____grams of IVIG (Select Product Above)
every _____(specify frequency) for a total of
doses _____(specify # of doses to be given).

Implementation of IVIG Order Form

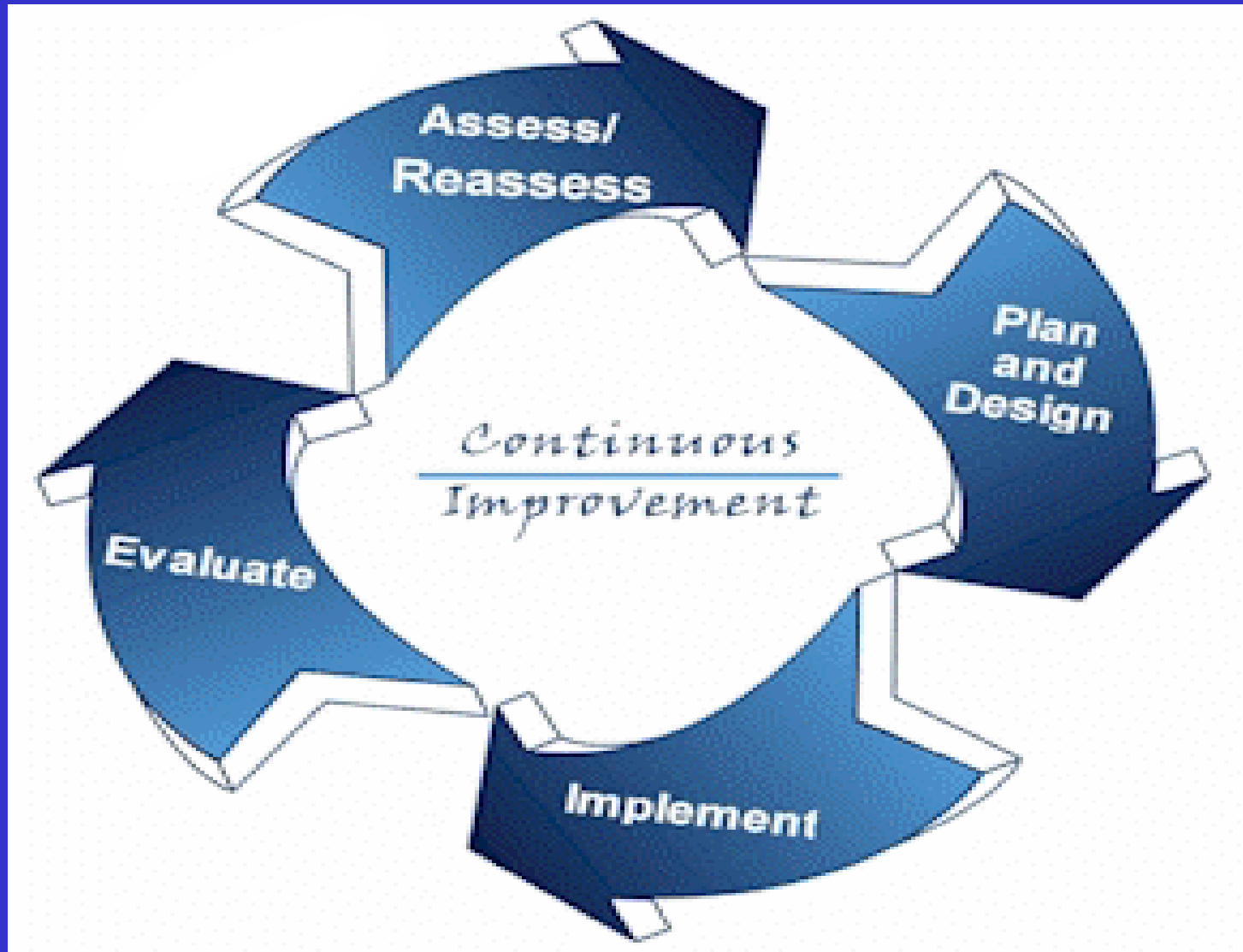
- Approval of P&T Committee
- Forms Committee Approval
- Printing & Distributing
- Education
 - Pharmacist Education
 - Physician Education
 - Nursing Education

Re-evaluate

Prospective MUE using order forms

- Tabulate results in 3-6 months
 - Did the form improve utilization of IVIG?
- Look at incidence of ADR
 - Did adding sucrose free product decrease incidence of nephropathy?
 - Was it cost effective?

Repeat the Cycle



Formulary and Financial Impact Evaluation

Weighted Evaluation of:

- ✓ Safety
- ✓ Efficacy
- ✓ Financial Impact

Advantage

NO Advantage

Add
to formulary

Do NOT Add
to formulary

Pregabalin (Lyrica[®])

- ◆ Structural analog of GABA
 - GABA is an inhibitory neurotransmitter
 - Similar to Gabapentin (Neurontin[®])
- ◆ Indications
 - Partial Seizures
 - Neuropathic Pain
- ◆ Therapeutic Advantage?
 - Safety
 - Efficacy

Steps in an Financial Impact Evaluation

1. Determination of Total Cost
2. Determination of Reimbursement
3. Calculation of Potential Revenue

**Financial Impact
Evaluation**



**Cost
Effectiveness**

Financial Impact Evaluation

Pregabalin vs. Gabapentin

Determination of Costs:

Drug Acquisition

**Monitoring, ADRS,
& Convenience**

Drug Administration Cost
Clinic vs. Self Administered

Financial Impact Evaluation

Pregabalin vs. Gabapentin

Determination of Reimbursement:

HOSPITAL

- DRG or Capped Reimbursement

AMBULATORY

- Insurance Mix (DSHS/Medicaid, Medicare, Private, Indigent)
- Insurer Formularies
- Patient Responsibility (co-pays)

Financial Impact Evaluation

Pregabalin vs. Gabapentin

Calculation of Profit Margin:

Reimbursement

-

Total Cost

=

Profit Margin

Appropriate Utilization

- ◆ **Clinical Criteria for Use**
- ◆ **Minimizing Economic Impact**
 - Anticipated Usage

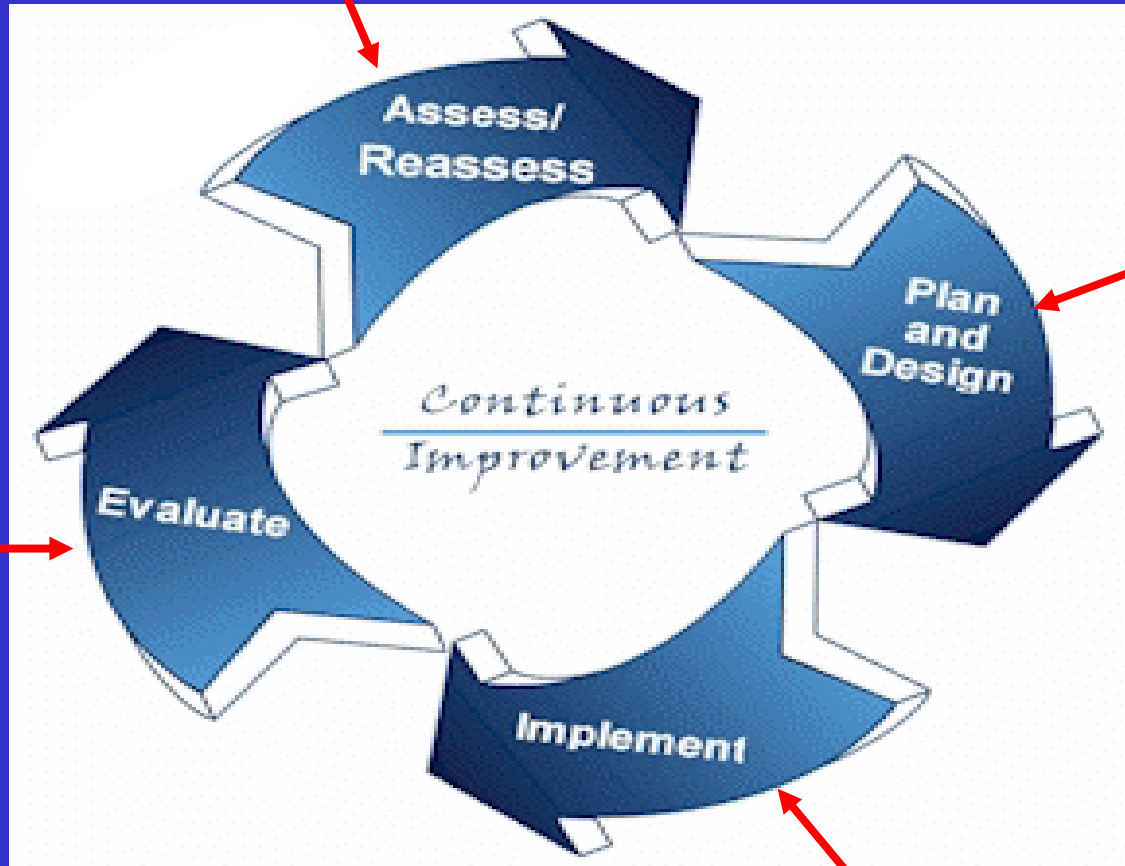
Education

**Treatment
Guidelines**

VS.

**Use
Restrictions**

1. Clinical Evaluation
2. Anticipated Usage/Economic Impact



3. P & T
evaluation
– add or
not add to
formulary

5. MUE
Economic Impact

4. Education
Guidelines vs. Restriction

Questions?

