# Broadening Clinical Engineering Horizons to Create Safer Health Systems

BIOMEDEA III, Stuttgart September 23-24, 2005 Dr. Joseph F. Dyro

#### My World

- Consultations
- Biomedical engineering & clinical engineering
- Forensic, intellectual property, teaching, author
- The "Healthcare System" is not a "System"
- Human error, obfuscation, uncertainties, delays, prevention

#### Broaden Venue

- Hospital
- Ambulatory Care
- Extended Care
- Emergency Services
- Home
- Car, Planes, and Boats

### Broaden Scope of Devices

- Ventilators, defibrillators, monitors
- Disposables
- Surgical instruments
- Minimally invasive technologies
- Implants
- Forgotten devices

#### **Expand Disciplines**

- Electronics and mechanics
- Materials
- Information technology
- Elastomers
- Adhesives
- Tape
- Human factors: Nano & clinical camoflage
- Clinical practices

#### Device Design

- Proactive in illness prevention
- Clinical practice
- Rehabilitation
- Standards
- Entrepreneurism

### Connectivity

- Discrete devices
- Interconnections
- Integrated Hospital Information System
- HIPAA, IT
- Wireless communications
- Device interactions
- Connectors

#### Patient Safety

- IFMBE CED
- ACCE Teleconferences & Workshops
- ACCE White papers; Alarms survey
- FDA liaison
- Investigation techniques
- International collaboration (Labotech lemon)
- Certification

## Solution

- **Curriculum**
- Certification
- Communications
- Camaraderie