Emergency Medical Services Delivery System

What is New?

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EMS Systems in the GCC

- Developing
- Cut & pace – "One man show" Model
- Unsynchronized – Fragmented
- My way or the highway

The Strong Magnet Against
Paradigm Shift

EMS Systems in the GCC

- ➢ **Similar Progress Pathway**
- ➢ **School of thought - Scope and Run or Stay and Play**
- ➢ **From Nothing to have it all – Action by Reaction**

↓

The Strong Magnet Against

Paradigm Shift

EMS Systems in the GCC

➢ **Cost Focus –** Development & Operation

➢ **Utilizations Measures –** Always Exclude Readiness

➢ **Emotional Derived –** "It will not happen" and not "what might happen will happen"

The Strong Magnet Against Paradigm Shift

EMS Systems in the GCC

➢ **New World Order**

➢ **Cost Containment – Efficiency**

➢ **The New Technology – Opened and Exposed the world**

➢ **Our Customer – Increasing Demand**

➢ **Editing by Auditing**

➢ **Emergency Medicine Specialty - Migration**

The Strong Magnet Against

Paradigm Shift – Gradually Fading

New Objective

Understand Similarities & Differences among EMS Systems that are Used World wide

Understand Your Emergency Medical Services (EMS) System Through an Organized Approach

Reach a Strategically Chosen Initiatives for your Future System Development or improvement

EMS Common Concept

➢ **Terminology:**

- **Emergency Medical System**
- **Ambulance Services**
- **Pre-Hospital Care**
- **Unscheduled Health Care**

↓

Readily Accessible System of Emergency Medical Care Specially Designed and Equipped to Respond & Provide Assistance to any Community Unplanned Health Related Event

Common Drive

" **People Bleed to Death in the Same Way in any Country in the World**"

(Monkey Valley EMS Summit, Cape Town, South Africa 1998)

Introduction

➤ **We Share the Challenges of the second Millennium-Growth of Non-Communicable Diseases:**

- **CVS, Stroke**
- **Injuries, MVAs**

Introduction

➤ **International Investment on Primary, Secondary and Tertiary-BUT- Emergency Medicine Fail to keep PACE:**

- **Urbanization** ⟶
- **Individual Mobility** ⟶
- **Industrialization** ⟶
- **Technology** ⟶

Produce Time Sensitive Illness & Injury

Introduction

➢ **World Wide Definition of Emergency Care**

- **Rapid & Appropriate Care of Victims of Medical & Traumatic Emergencies**
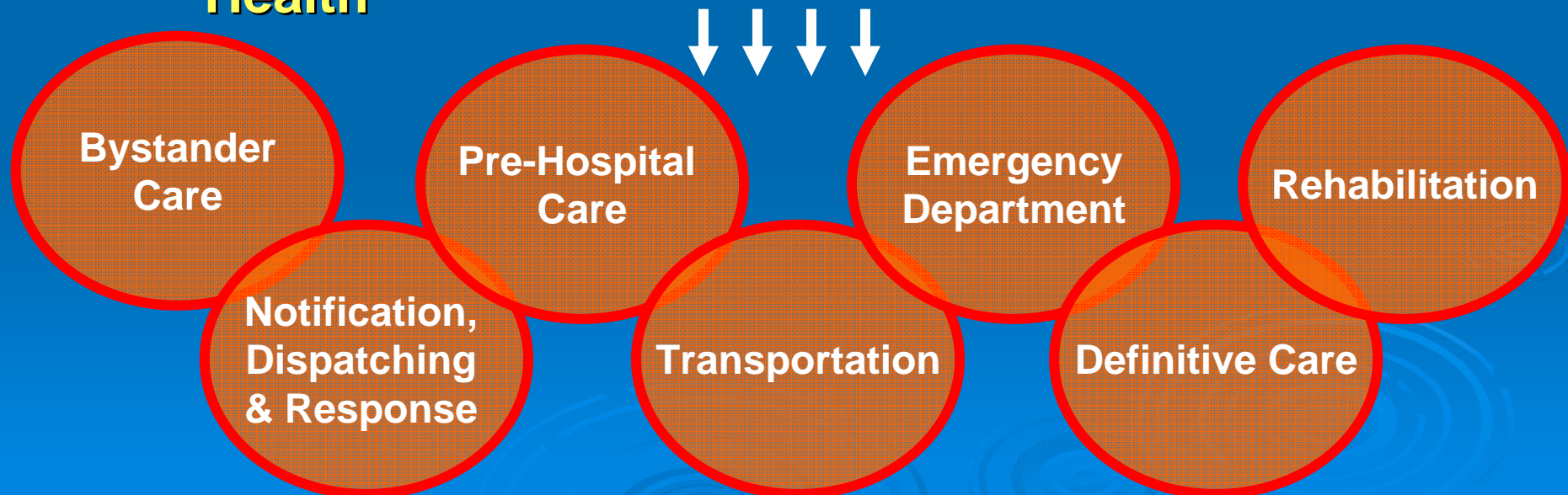
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Time Sensitive Illness & Injury

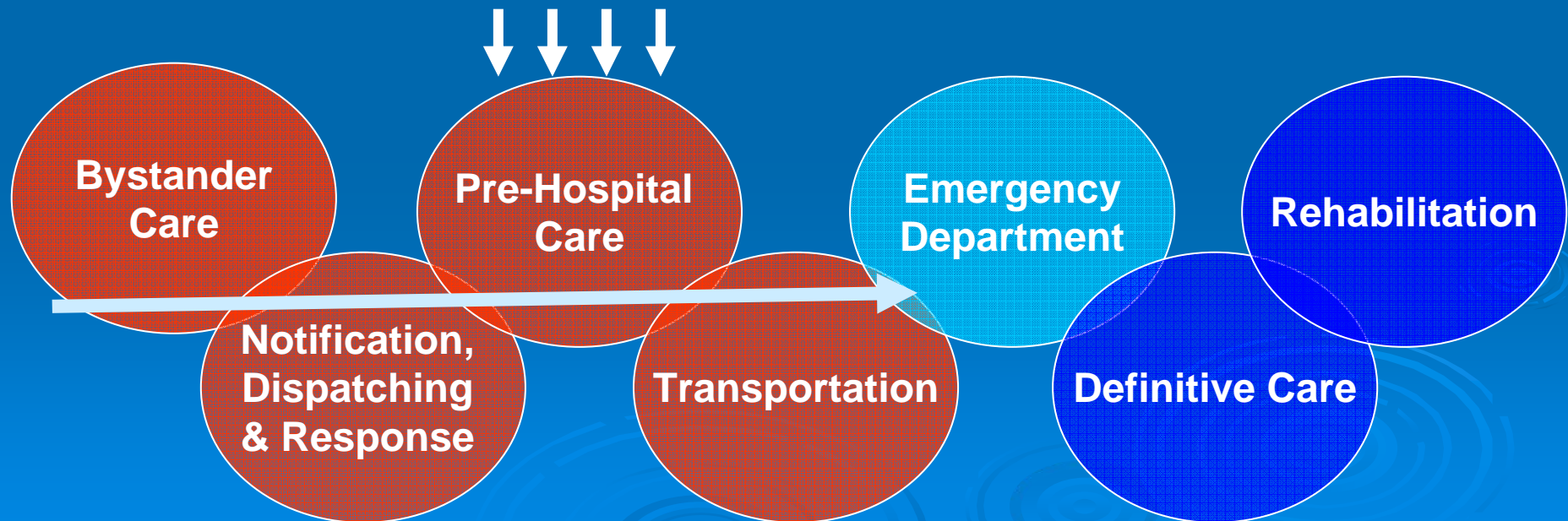# Introduction

➢ **World Wide Definition of Emergency Care**

- **Comprehensive EMS System- THAT includes all the resources necessary or needed to return the victims of Emergency Illness or Injury to Present Health**

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Bystander Care

Pre-Hospital Care

Emergency Department

Rehabilitation

Notification, Dispatching & Response

Transportation

Definitive Care
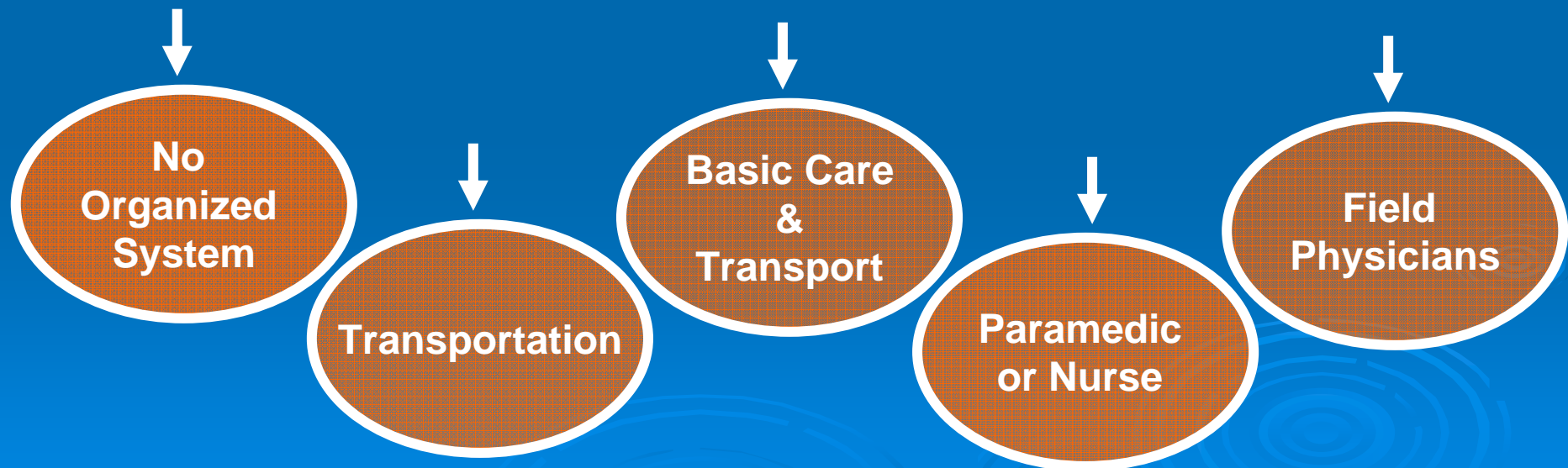
Introduction

➤ **World Wide Definition of Emergency Care**

  ● **Pre-Hospital Care is the component of the system necessary to get the patient from point of injury or illness to definitive care**

| Bystander Care | Pre-Hospital Care | Emergency Department | Rehabilitation |
| Notification, Dispatching & Response | Transportation | Definitive Care | |

Introduction

➢ **World Wide Definition of Emergency Care**

- **There is Disparity in Pre-Hospital Emergency Care Services world wide**

No Organized System

Transportation

Basic Care & Transport

Paramedic or Nurse

Field Physicians

EMS Systems

- ➢ **Developed World**
  - **Separated by Language & Paradigm**
    - **English**
      - **USA**- Paramedic Model
      - **UK**- All- Advance Life Support
      - **Australia, Newzeland**- Tiered- Paramedic/EMT

Minimal Onsite Treatment
Get Patient to Definitive Care

EMS Systems

- ➢ **Developed World**
  - **Separated by Language & Paradigm**
    - **French & German**
      - **France, Germany, Quebec Canada-** Physician Delivered EMS Model
      - **Norway-** Physician Directed System, Online Hospital based
      - **Netherlands, Other Europeans-** Nurse Delivered EMS Model

Extensive Onsite Treatment And Stabilization

ALS Yet to Develop

> **EMT with Defibrillator**
> - **Ireland**
> - **Singapore**
> - **Island**

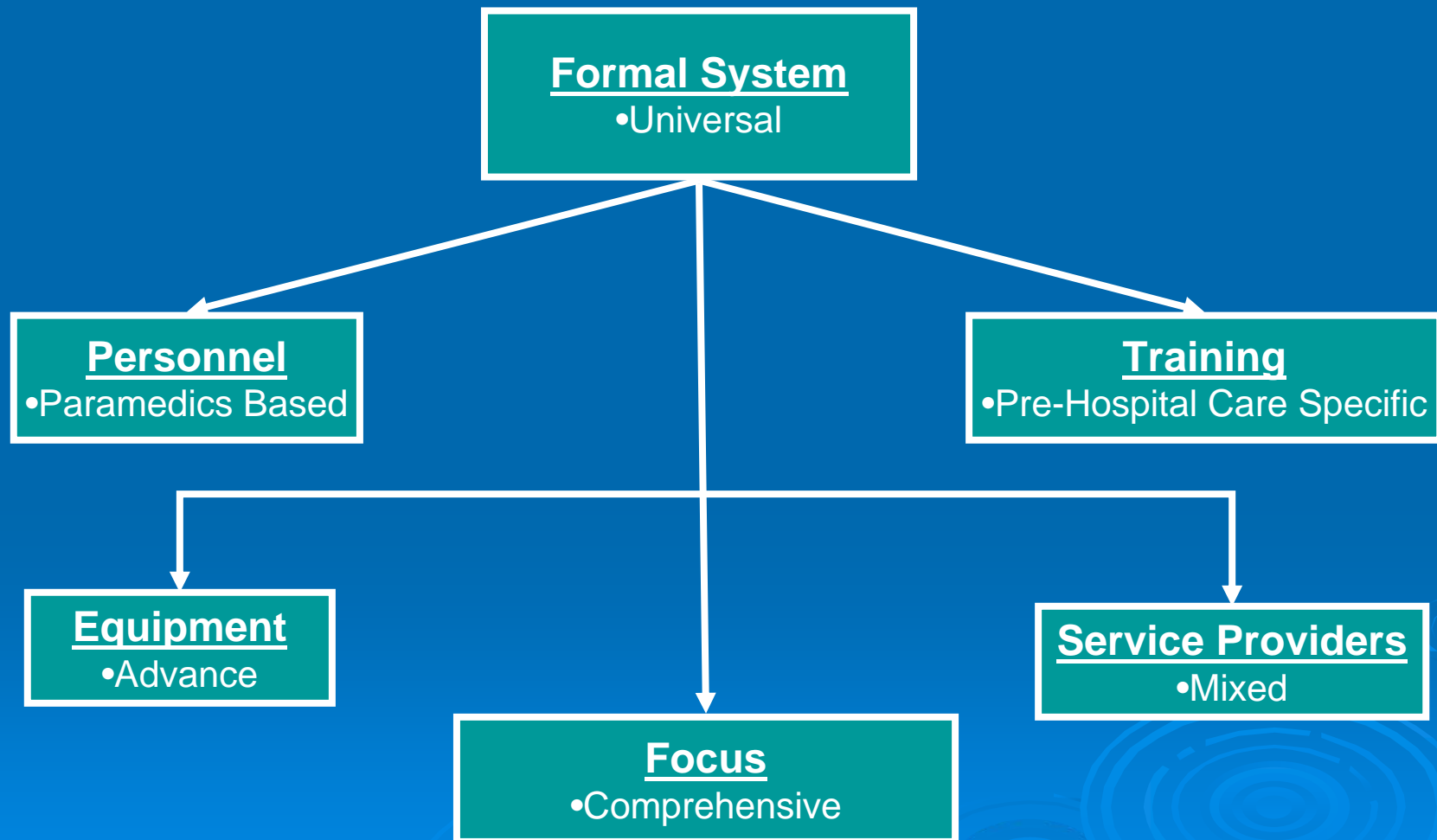**Some Developed World ALS Yet to Develop**

EMS Systems

> **Developing World**
> - **Divided By Economic**
>   - **No Systematic Pre-Hospital Care Service or None at all**

No or Minimal Onsite Treatment
Some with Just Transportation

Pre-Hospital Care System

Formal System
•Universal

Personnel
•Paramedics Based

Training
•Pre-Hospital Care Specific

Equipment
•Advance

Focus
•Comprehensive

Service Providers
•Mixed

Pre-Hospital Care System

Services in place
- Universal- Available to all at all time
- Incomplete- Available to some at some time

Formal System
- Incomplete
- Universal

Personnel
- Drivers
- First Responder
- Basic EMT
- Paramedic
- Nurse
- Physician

Equipment
- Rudimentary
- Basic
- Advance

Service Providers
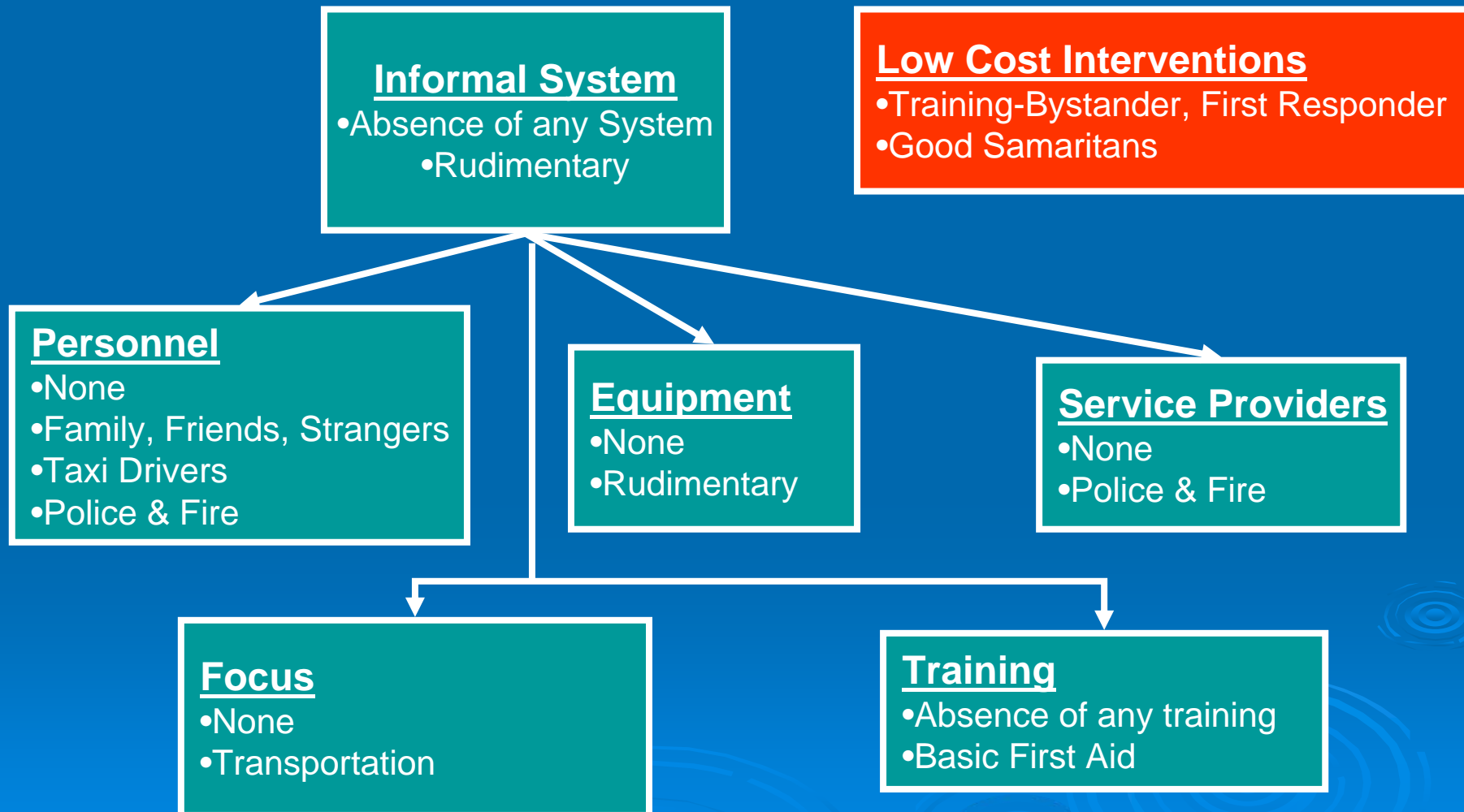- Private/NGO
- Governmental
- Hospital Based
- Mixed

Focus
- Trauma
- Acute Medical Emergencies
- Comprehensive

Training
- Absence of any training
- Non Pre-Hospital Specific
- Pre-Hospital Care Specific

Pre-Hospital Care System

Informal System
- Absence of any System
- Rudimentary

Low Cost Interventions
- Training-Bystander, First Responder
- Good Samaritans

Personnel
- None
- Family, Friends, Strangers
- Taxi Drivers
- Police & Fire

Equipment
- None
- Rudimentary

Service Providers
- None
- Police & Fire

Focus
- None
- Transportation

Training
- Absence of any training
- Basic First Aid

Level of Care Models

- ➢ All- ALS Model

- ➢ The Tiered ALS/BLS Model

- ➢ Physician Directed ALS Model
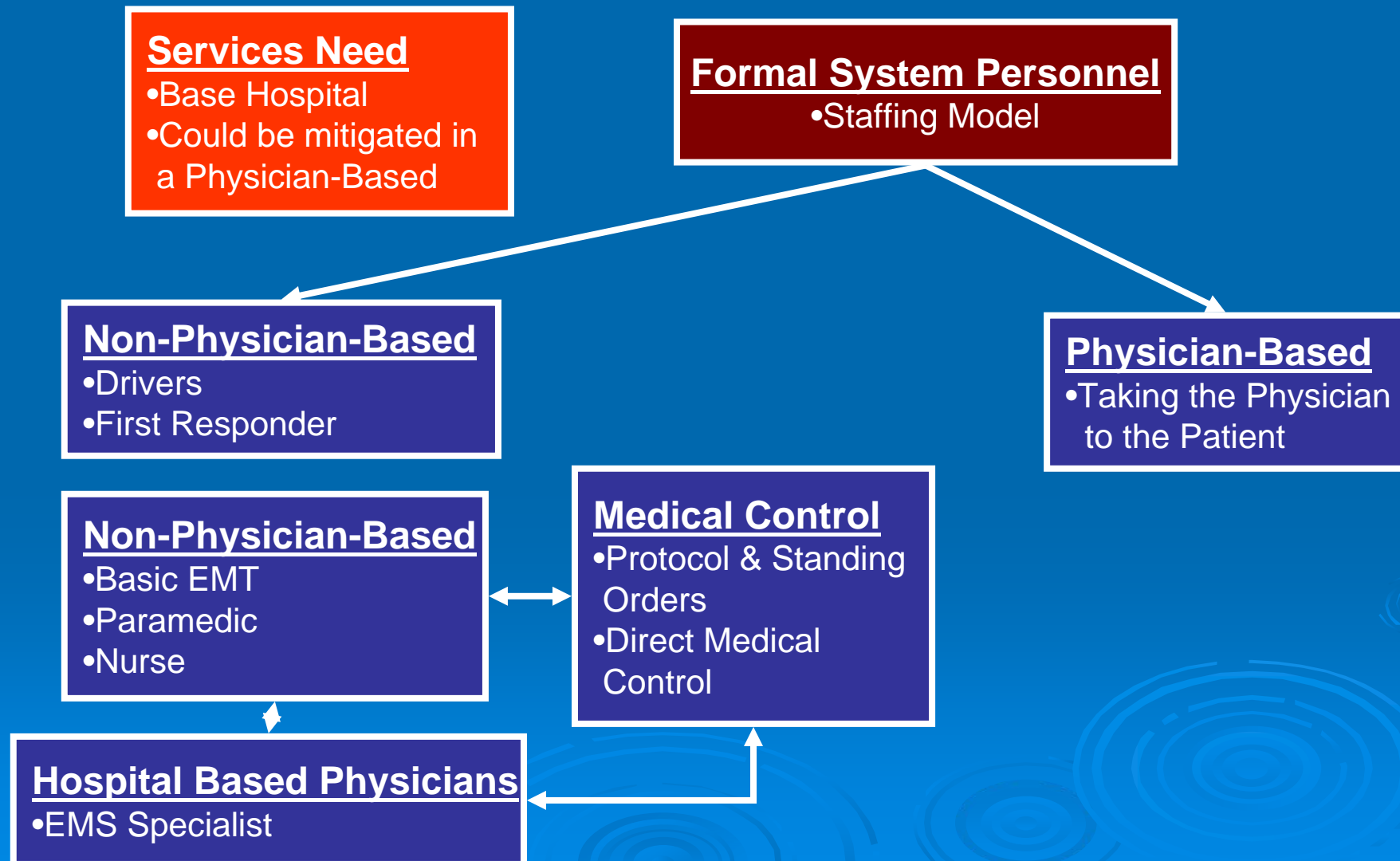
- ➢ All- BLS Model

Four Dominant Models

Approach to Demand Management

➤ **Dispatch Priority Protocol**

➤ **Criteria Based Dispatch**

Be Customer Oriented

Access to Appropriate Care

Pre-Hospital Care System

Services Need
- Base Hospital
- Could be mitigated in a Physician-Based

Formal System Personnel
- Staffing Model

Non-Physician-Based
- Drivers
- First Responder

Physician-Based
- Taking the Physician to the Patient

Non-Physician-Based
- Basic EMT
- Paramedic
- Nurse

Medical Control
- Protocol & Standing Orders
- Direct Medical Control

Hospital Based Physicians
- EMS Specialist

Pre-Hospital Care System

Requirement
- Ongoing Maintenance
- Specific Training for some equipment

Formal System Level
- Training of Personnel
- Adequacy of equipment

Rudimentary
- Drivers & First Responder
- Vehicle with Bed and O2 Tank
- First Aid Kit

Basic Level
- Basic EMT Training
- Basic ambulance
- Backboard
- Cervical Collar
- Splint & Bandages
- Oxygen & AED

Advance Level
- Trained Physician
- Paramedics
- Well equipped ambulances
- Advance Trauma & Cardiac life Support
- Resuscitation Drugs
- Cardiac Monitor
- Defibrillator & External Pacer
- Ventilator

Pre-Hospital Care System

Services in place
- Access Number
- Call-Taking System
- Dispatch System
- Response care
- Transportation

Formal System
- Incomplete
- Universal

Personnel
- Drivers
- First Responder
- Basic EMT
- Paramedic
- Nurse
- Physician

Equipment
- Rudimentary
- Basic
- Advance

Service Providers
- Private/NGO
- Governmental
- Hospital Based
- Mixed

Focus
- Trauma
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Pre-Hospital Care System

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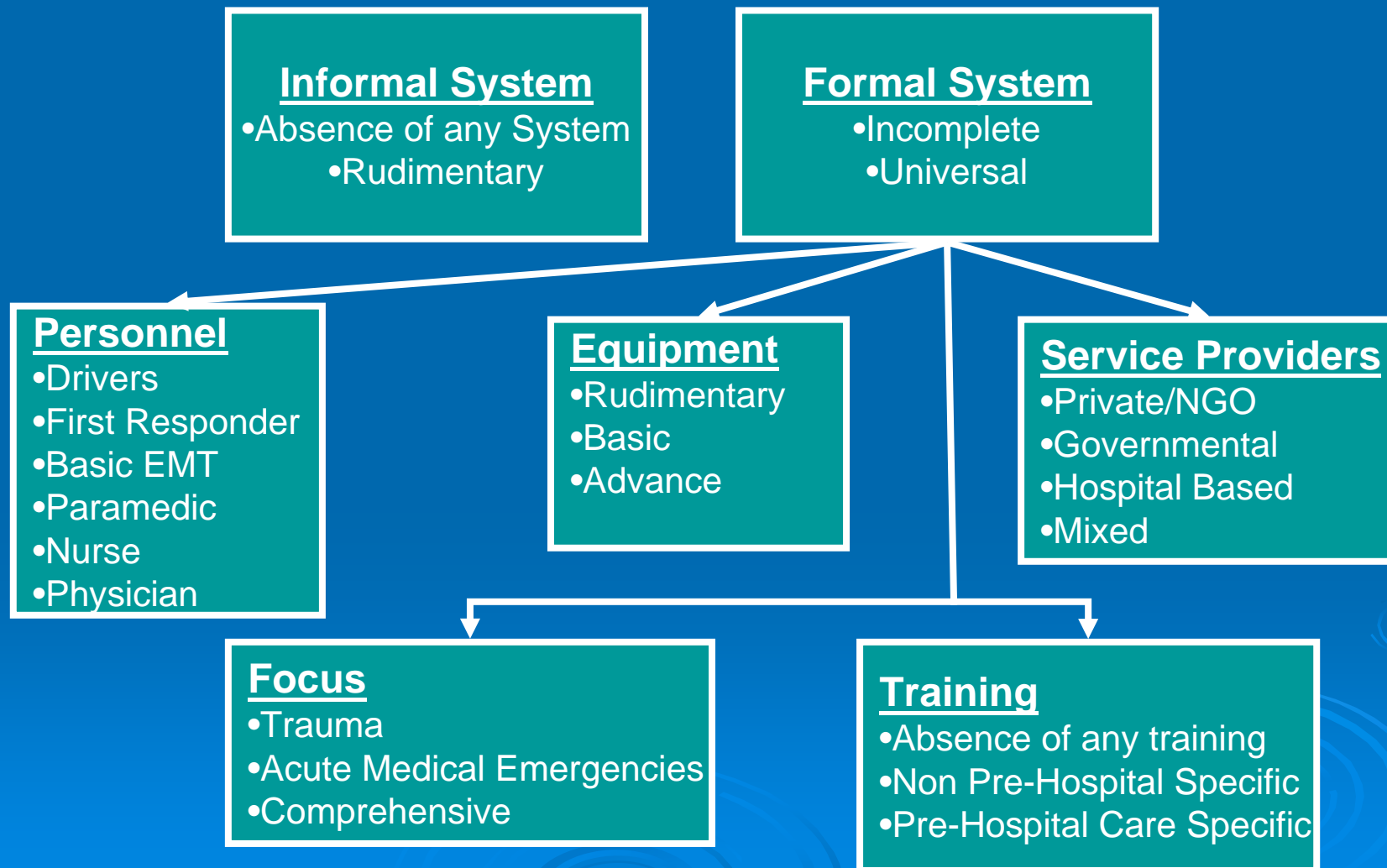
Introduction

> **World Wide Definition of Emergency Care**

- **To meet your country unique health care & EMS Need- Pre-hospital Care must exist within the country's following infrastructure**
  - **Socio-Cultural**
  - **Demographic**
  - **Geographic**
  - **Political & The Primary Health Care**

PLAN

DESIGN

MANAGE
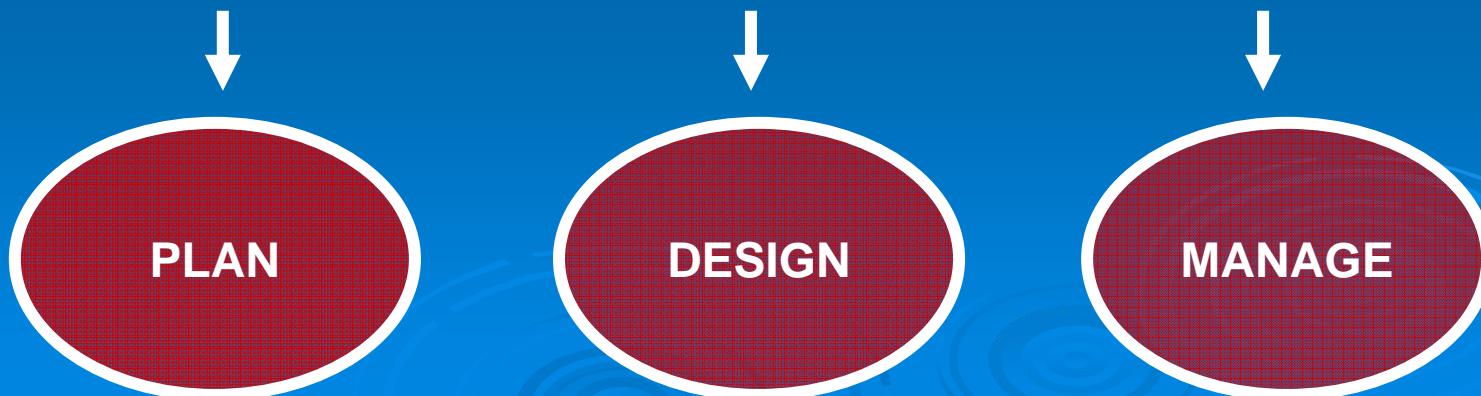
EMS System Component

Legislation

Standard of Care

Laws, Roles & Regulations   Policies & Procedures

Job Description   Authorized Body

Funding Resources

Manpower   Training   Communication   Transportation

Facilities

Critical Care Units   Public Safety Agencies

Consumer Participation   Accessibility

Transfer of Patients

Standard Medical Record Keeping

Public information   Evaluation

Disaster Linkage   Mutual aid agreement

EMS System Focus
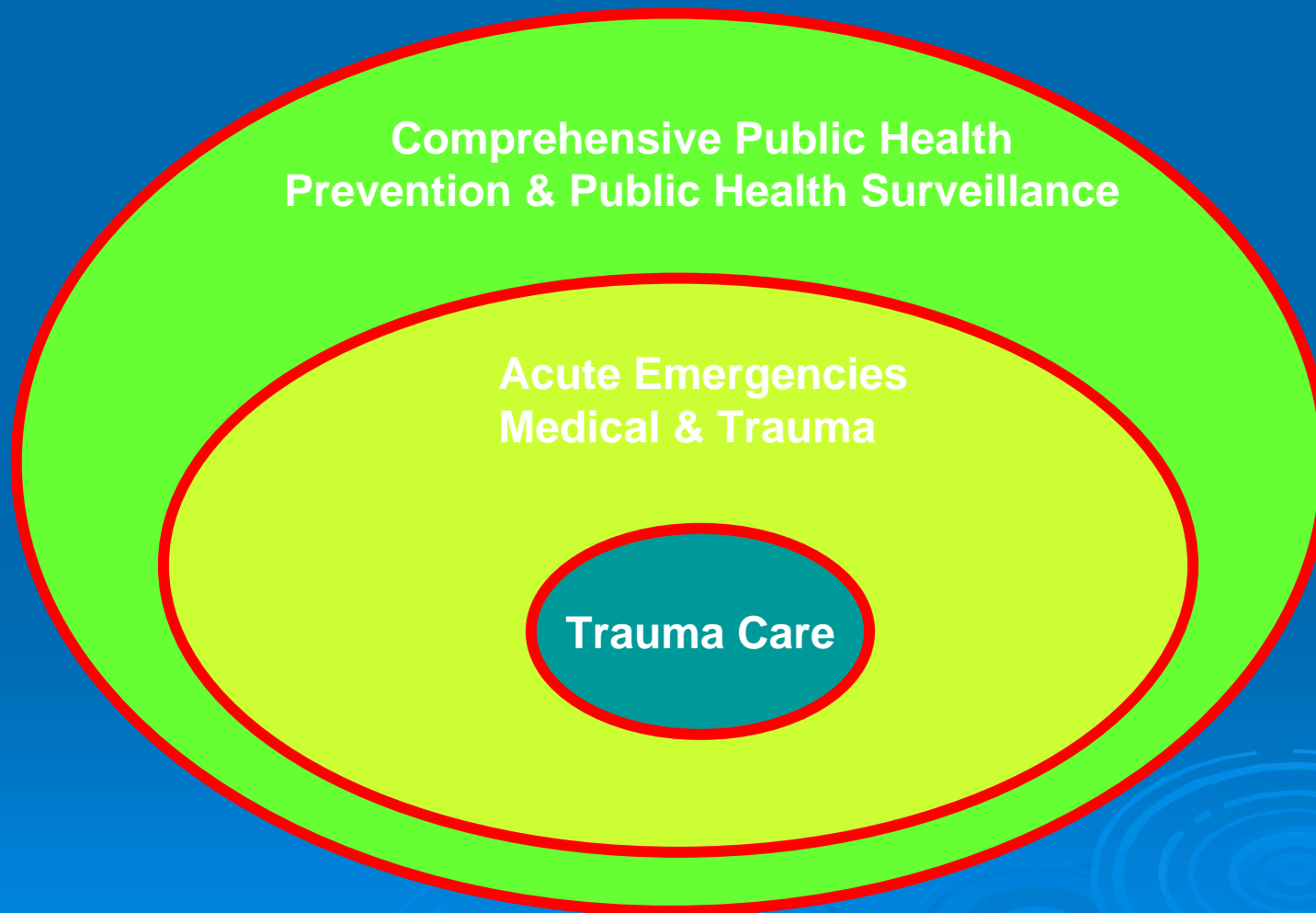
Comprehensive Public Health
Prevention & Public Health Surveillance

Acute Emergencies
Medical & Trauma

Trauma Care

Pre-Hospital Care System

➢ **World Wide System Approach for Emergency Care and EMS System Developments:**

- **Need Assessment- Shifted Epidemiology**

- **Understand the current level of infrastructure**

  - **Prevention, Public health education, and Existing Primary Care**

- **Adequate & Timely Health information surveillance**

Pre-Hospital Care System

➢ **World Wide Drivers** for **Emergency Care** and **EMS System** Developments:

- **Need FOR Integrated & Coordinated Pre-Hospital Emergency Medical System**

| Notification | → | Dispatch Appropriate Resources | → | Provide Rapid & Appropriate Care | → | Transport Patient to Definitive Care |
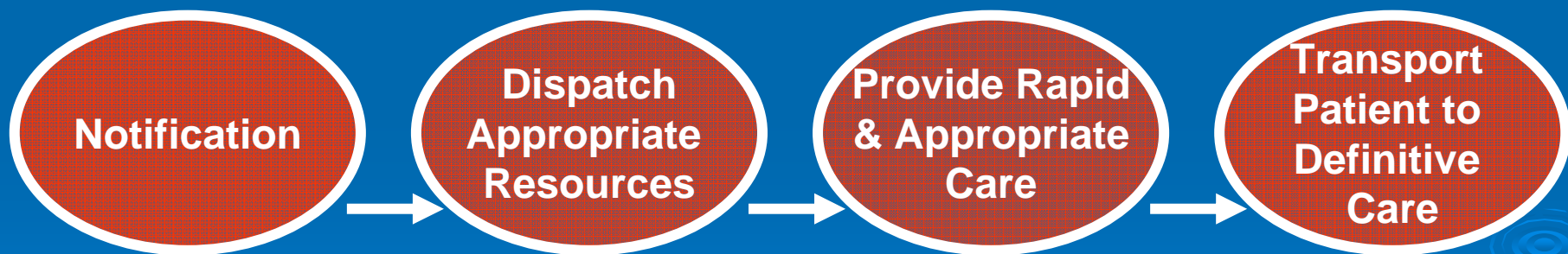
- **Geared with resources needed for System development and Maintenance**
- **Available 24/7 & Done in Timely Fashion**

Pre-Hospital Care System

➤ **World Wide Drivers for Emergency Care and EMS System Developments:**

New World Order- WTO Agreements

Increased Morbidity & its Financial Impact

Citizens Expectation & Demand

Media

**Tourism & Business Development**
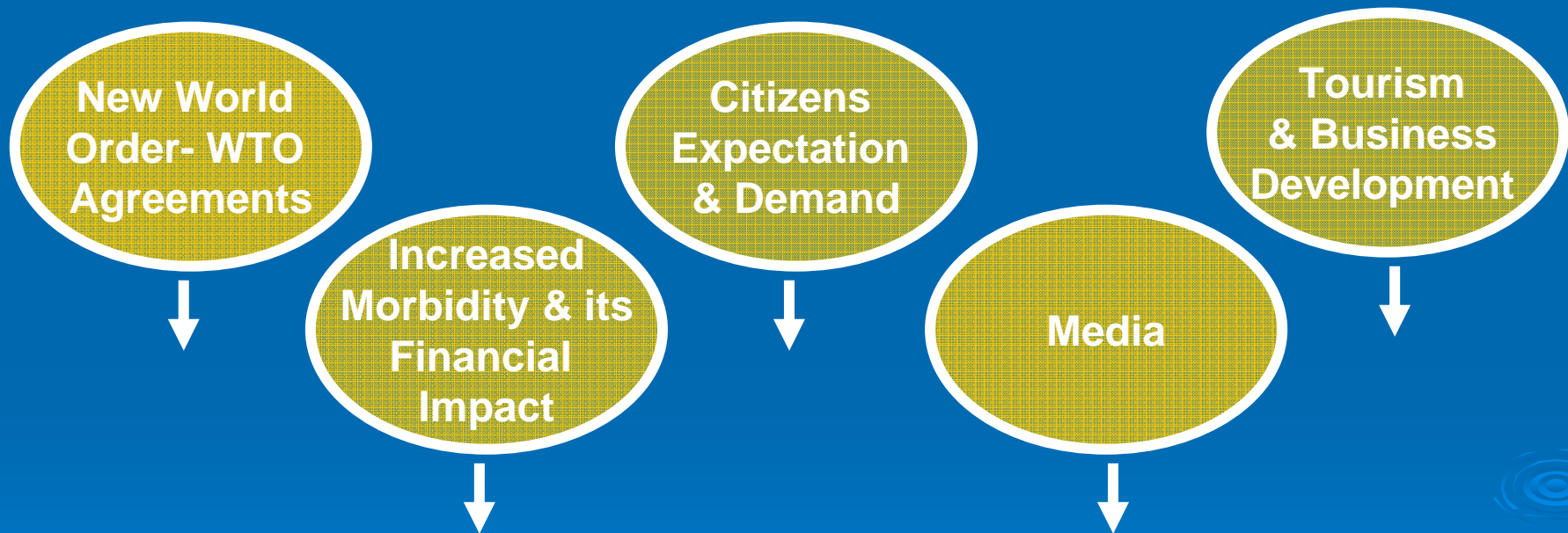
- **Invest in the development of a comprehensive system**
- **Decrease Morbidity Associated with time sensitive illness and injury**

Pre-Hospital Care System

➤ **World Wide System Approach for Emergency Care and EMS System Developments:**

- **Balance resources with public education, available Access, training, and equipment to maximize quality towards a Comprehensive System**
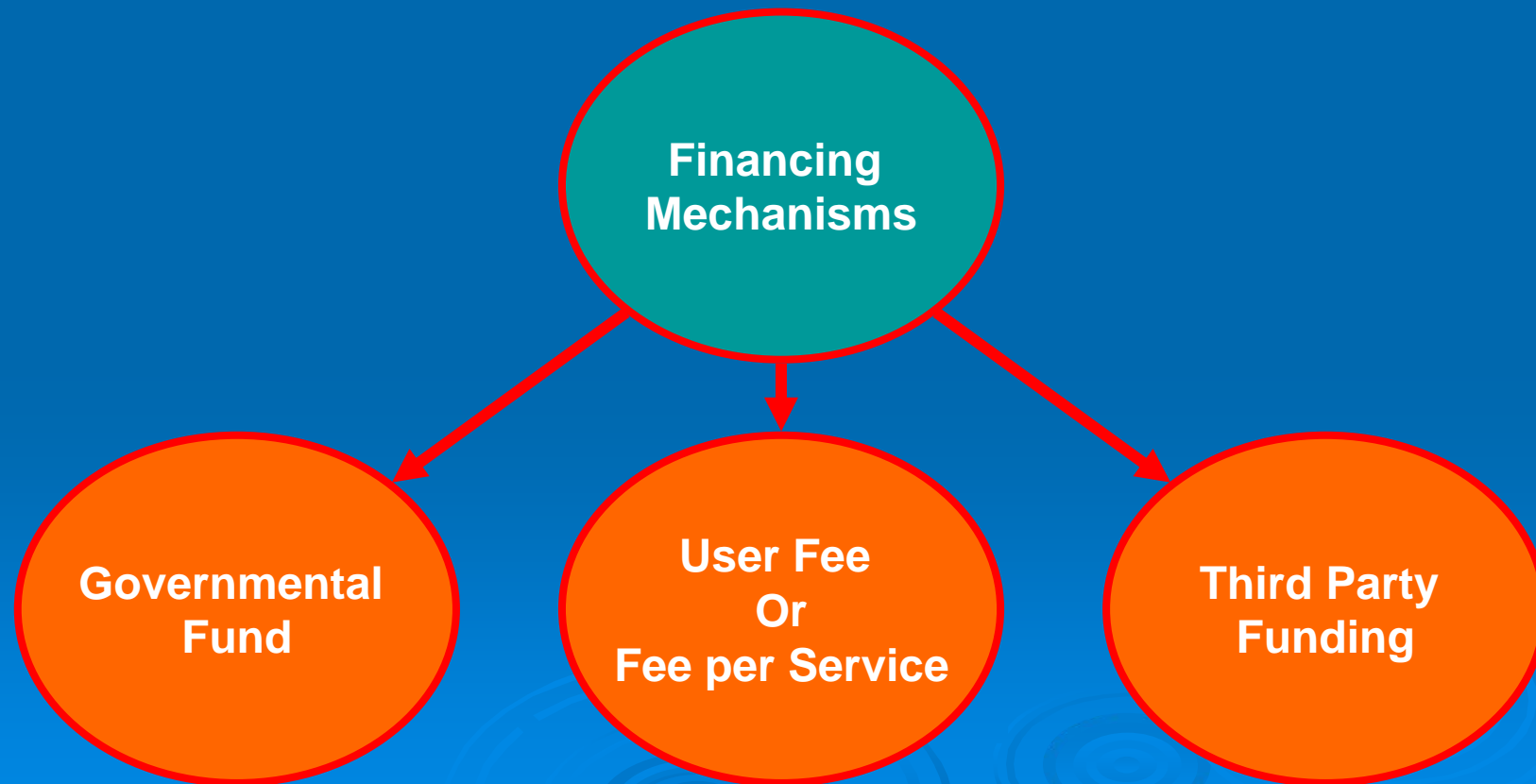
- **Failure to develop a comprehensive system**

Fragmented & suboptimal Care

Considerable Waist of Resources
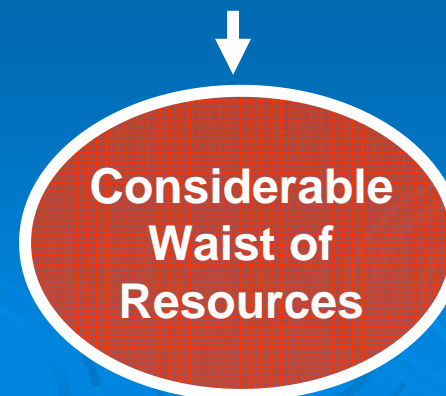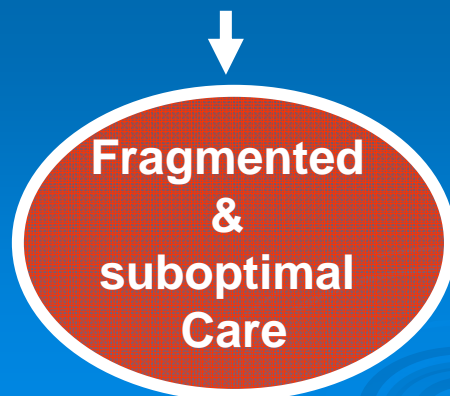
Pre-Hospital Care System

➢ **Factors Contribute to EMS System Developments:**

- **Finance- Only available for Prevention and Primary care.**

- **Geography- Population Size - Urban vs. Rural and hard to reach communities- Far from Definitive Care**

- **Hospital Based Emergency Care**
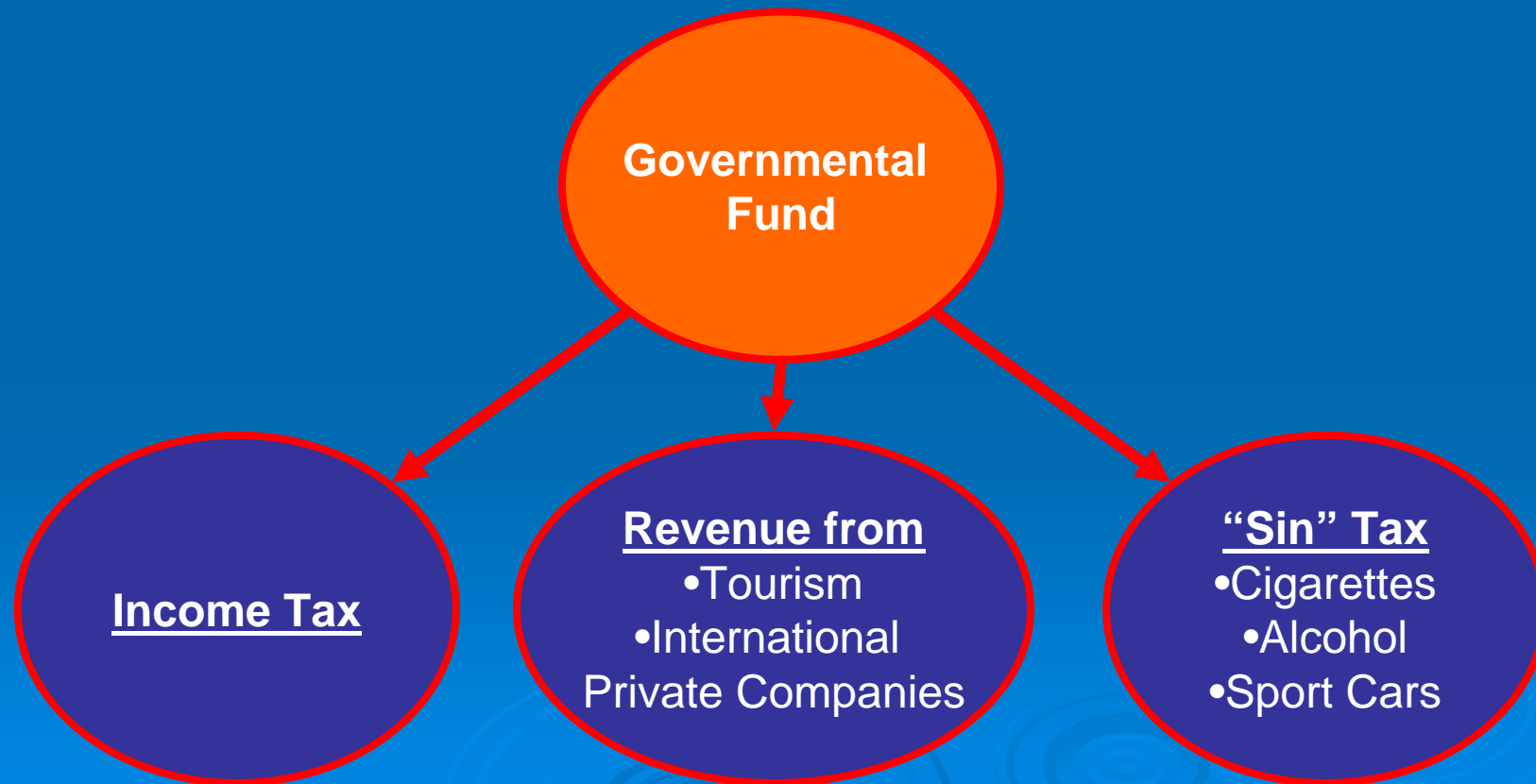
- **Legislation- lack of political interest**

EMS System Challenges
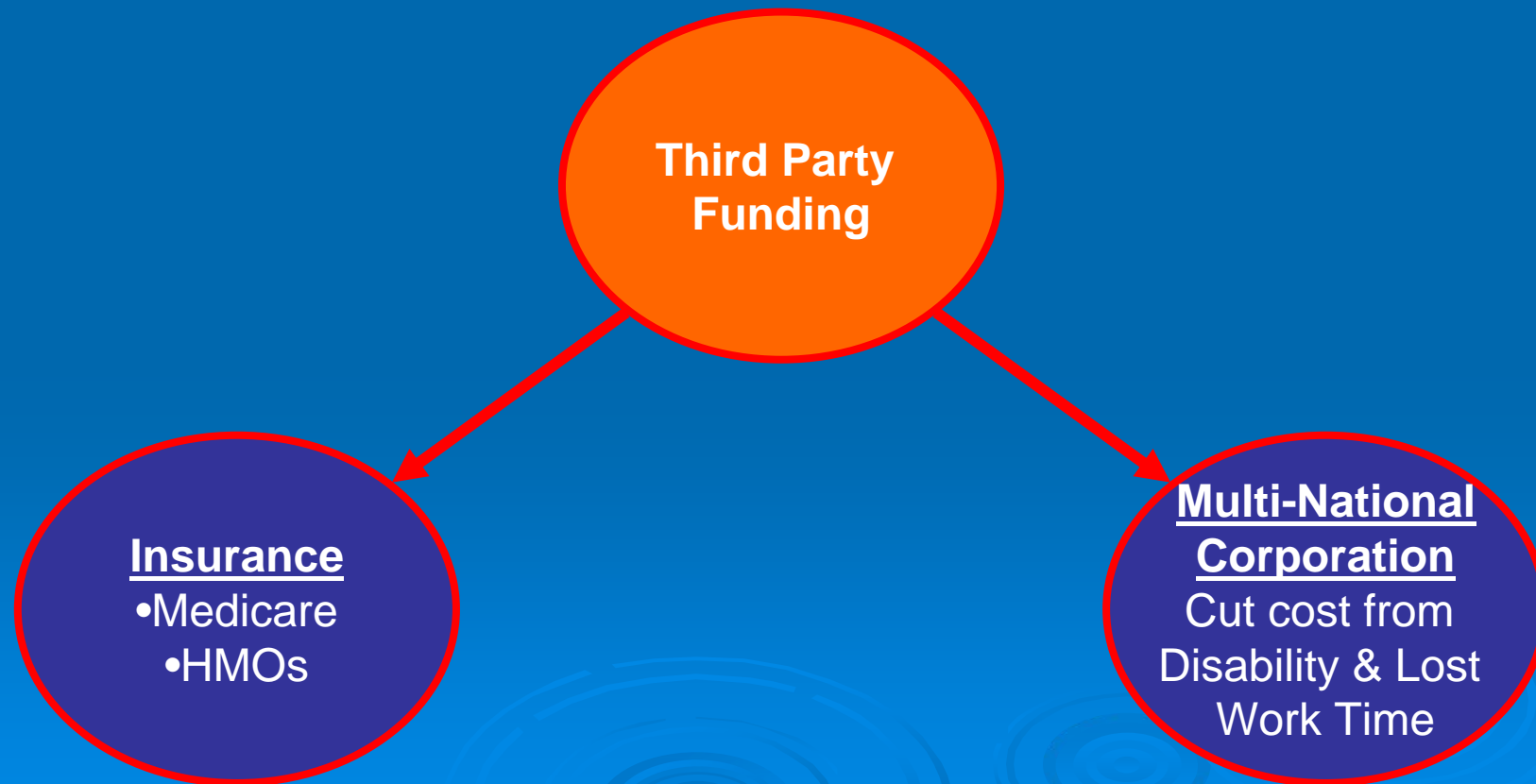
> **Financing**-Rising Health Care Expenditure

Financing Mechanisms

Governmental Fund

User Fee Or Fee per Service

Third Party Funding

EMS System Challenges

> **Financing**-Rising Health Care Expenditure

Governmental Fund

Income Tax

Revenue from
- Tourism
- International Private Companies

"Sin" Tax
- Cigarettes
- Alcohol
- Sport Cars

EMS System Challenges

> **Financing**-Rising Health Care Expenditure

Third Party Funding

Insurance
•Medicare
•HMOs

Multi-National Corporation
Cut cost from Disability & Lost Work Time

EMS System Challenges

> **Quality Assurance**- Outcome Data Necessary to Justify Resources

Good CQI Program
Quality Indicators

Quality Assurance System

Protocol Adherence And evaluation

Medical Control & Medical Director
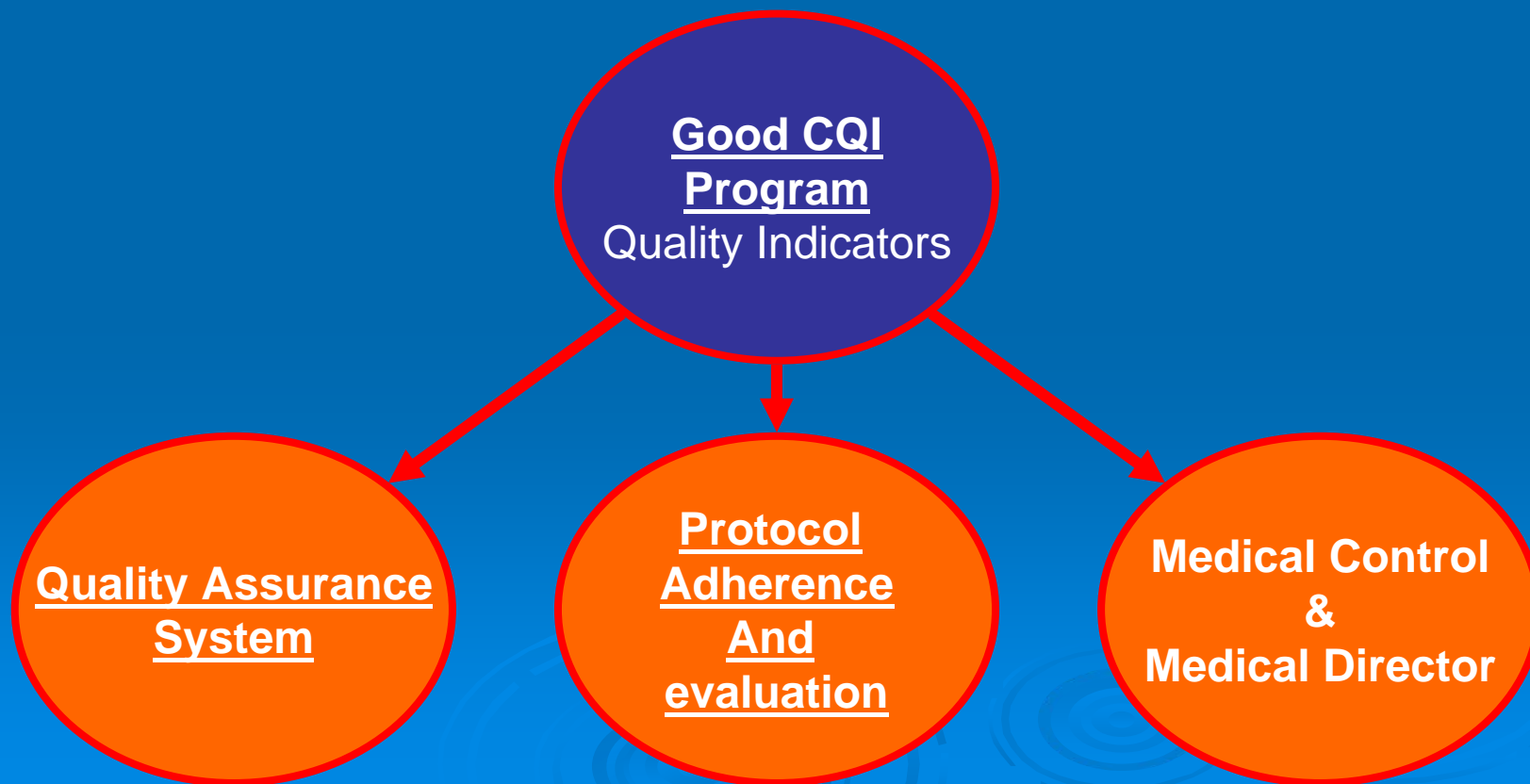
EMS System Challenges

> ## Research-
> - **Essential for Continued Improvement of Pre-Hospital Patient Care**
> - **Linked with CQI to measure the system performance**

Cohesive Data Collection System
Pre-Hospital
&
Hospital

Document

Monitor

Efficiency

Cost Effectiveness

Quality of Care
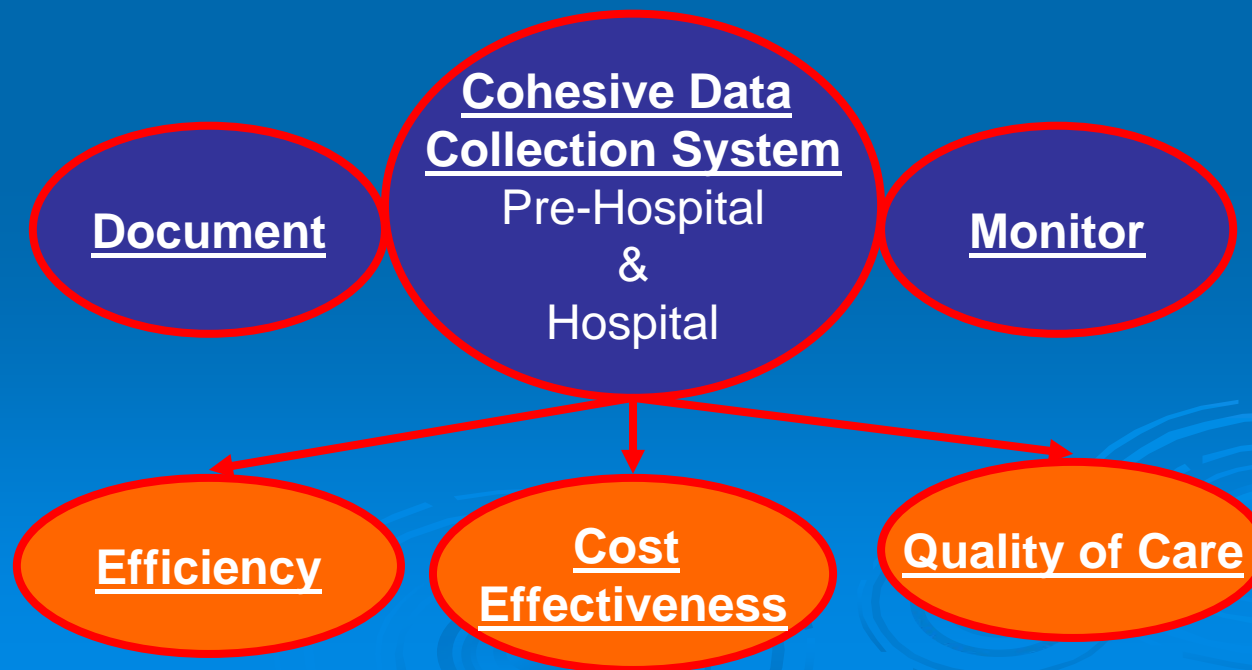
Steps into Our Future System Changes

➢ **Understanding the Diversity in EMS System is a challenge " No Best System "**

➢ **Defining the system, Formal or Informal is a good Starting point " What Serve You The Best" & " Evidence Based "**

➢ **Understanding the access within the system-Additional Insight**

➢ **Understanding System Level (Personnel, Training, Equipment, Communication & Service provider level)-Sophistication of the System**

Steps into Our Future System Changes

➢ **Understanding the Focus of the system can help to gauge its development & role of Community**

➢ **Enhances Communication regarding the existing system**

➢ **Provide opportunity to understand where improvement & intervention might be effective**

New EMS Strategy

> **Shift From Managing Tangible Asset to Knowledge Based Strategy that Created and Deployed Organization Intangible Assets.**

- **Financial**
- **Customers**
- **Processes**
- **Learning & Growth**

PLAN

DESIGN

MANAGE
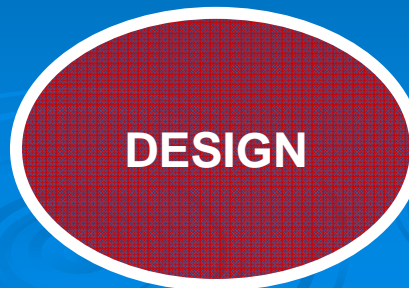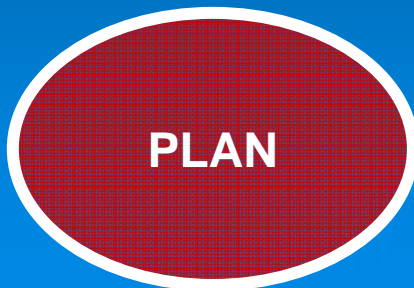
New EMS Enable Principles

- ➢ Mobilize Change Through Political & Executive Leadership "Convergence to New System"

- ➢ Translate The Strategy into Operational Terms "Framework for Organizing Strategic Objectives"

- ➢ Align The Organization to The Strategy

- ➢ Make Strategy Everyone's Everyday Job "Communicate, Align to personal Objectives and Link Compensation to Scorecards"

- ➢ Make Strategy a Continual Process

PLAN

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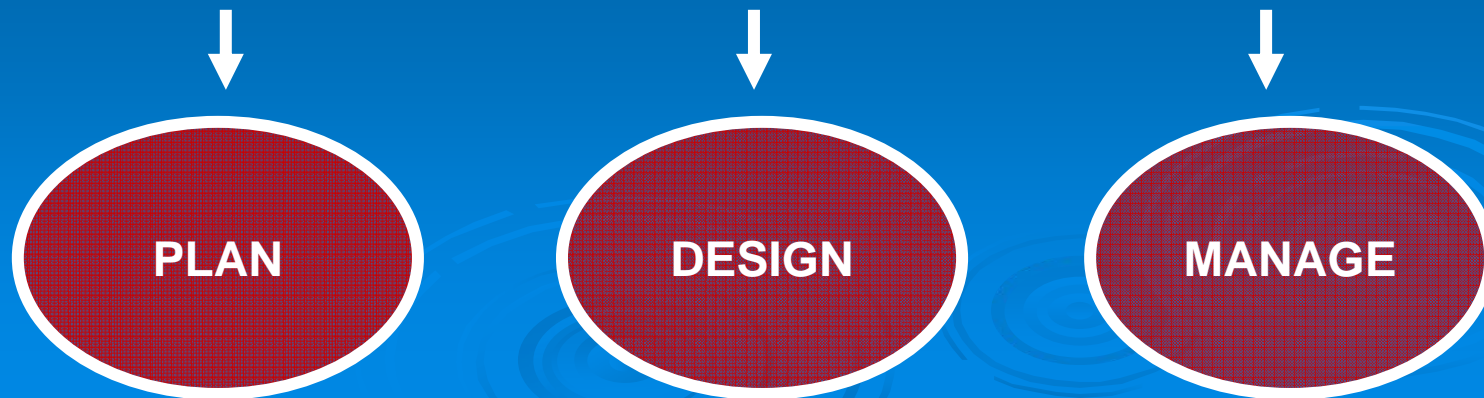
Summary

➢ **Let Us Agree on The Concept of EMS**

➢ **Unify our Terminology & Definitions of Emergency Care & EMS**

➢ **Understand the New Forces that Propelled EMS Forward "Is EMS Destined to go the Way of the Dinosaurs or resemble Chameleons"**

➢ **Understand the Disparity among EMS Systems World Wide. The best system is the one that is feasible and serves you best based on your available parameters.**

Summary

➢ **Build your EMS system component and focus**

➢ **Make your System exist within the country existing infrastructure, socio-cultural, Demographic, Geographic, and Political.**

➢ **Be more closely allied with Health Care System & Public Safety**

➢ **Identify a reliable funding process and Shift the Funding to address both Readiness and Transport operation and maintenance.**

Summary

➤ **Define your scorecards.**

➤ **Monitor your System Efficiency and Quality**

➤ **Seek Out New Services**

➤ **Initiate rather than wait for change "Flying"**

➤ **Enhances Communication regarding the existing system & Provide opportunity to understand where improvement & intervention might be effective**

Questions?

➤ **"In any time of Transition, there is an opportunity for those who are welling to accept, embrace and lead the change process"**

➤ **"While some individual career and EMS system may be extinct like Dinosaurs, MOST are like Chameleons will adapt change"**