Paramedicine Models of Care: past, present and future

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Introduction

- Drivers of Innovation and Reform
- Models of Care
  - Past
  - Present
  - Future (emerging)
- Implications for Policy and Practice

Drivers of Innovation and Reform

Improving clinical outcomes (successful)

- Cardiac arrest
- Stroke interventions and pathways
- Trauma systems

Rising demand (challenge)

- Ageing populations and rising instances of chronic disease
- Rising expectations / frequent users

Dealing with a stressed and underfunded Health System (shared)

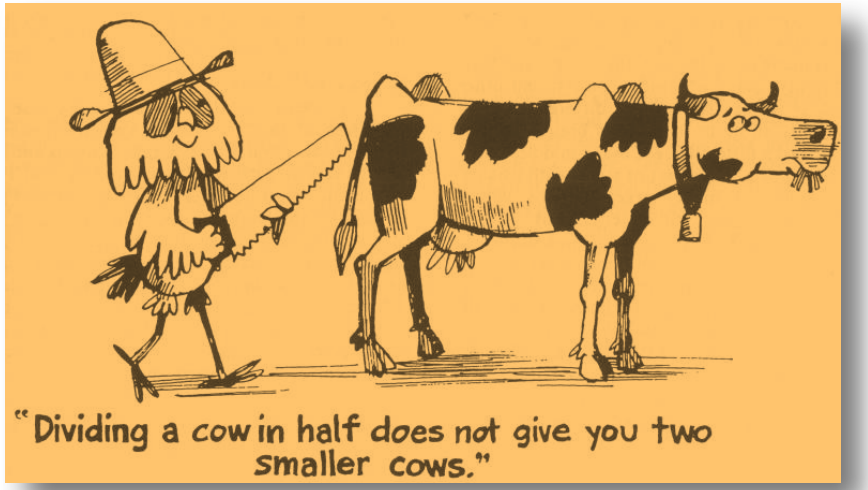
- Emergency Department pressures
- Less primary care access

Changing Values of Society and Profession (next frontier)

- Paramedic Services challenged by cultural change

Models

- ‘a descriptive picture of practice which adequately represents the real thing’ (Pearson & Vaughan 1986)
  - abstract versions of reality as seen from specific vantage points
  - consist of elements, activities and relationships (Patching 1990)
- Can be used as tools to compare reality through analysis



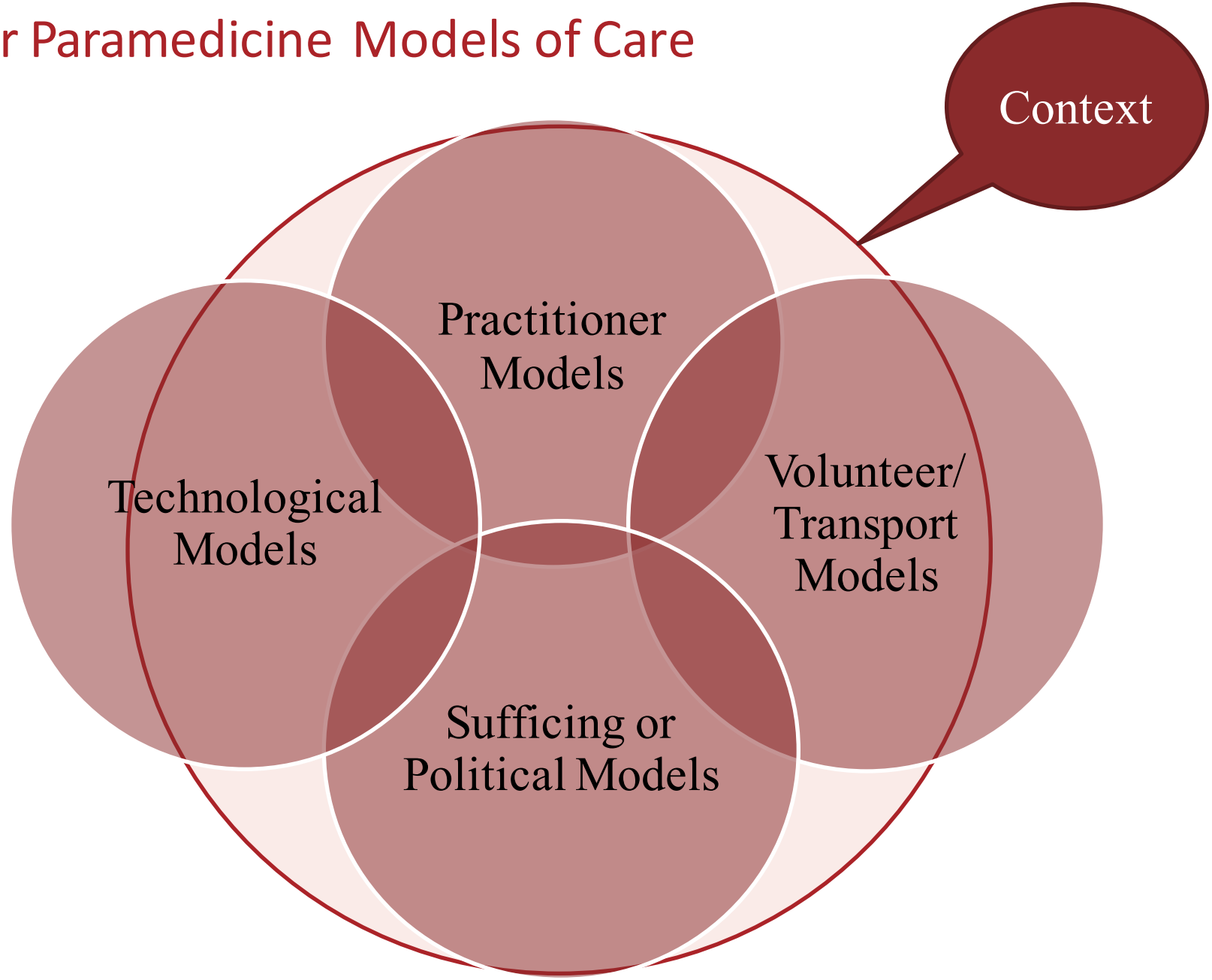
Models of Care

- ‘a model of care is an overarching design for the provision of a particular type of health care service that is shaped by a theoretical basis, EBP and defined standards.’ (Davidson 2006)

- More simply, the broad objective of a model of care is to ensure that people get the right care, at the right time, by the right team and right place (WA Dept of Health 2006).

- **Reality Check**
  - Existing models of care are often historically based and subsequently not responsive to the changing needs of contemporary health systems (Davidson et al 2006).

Four Paramedicine Models of Care



‘Past’ Models of Care

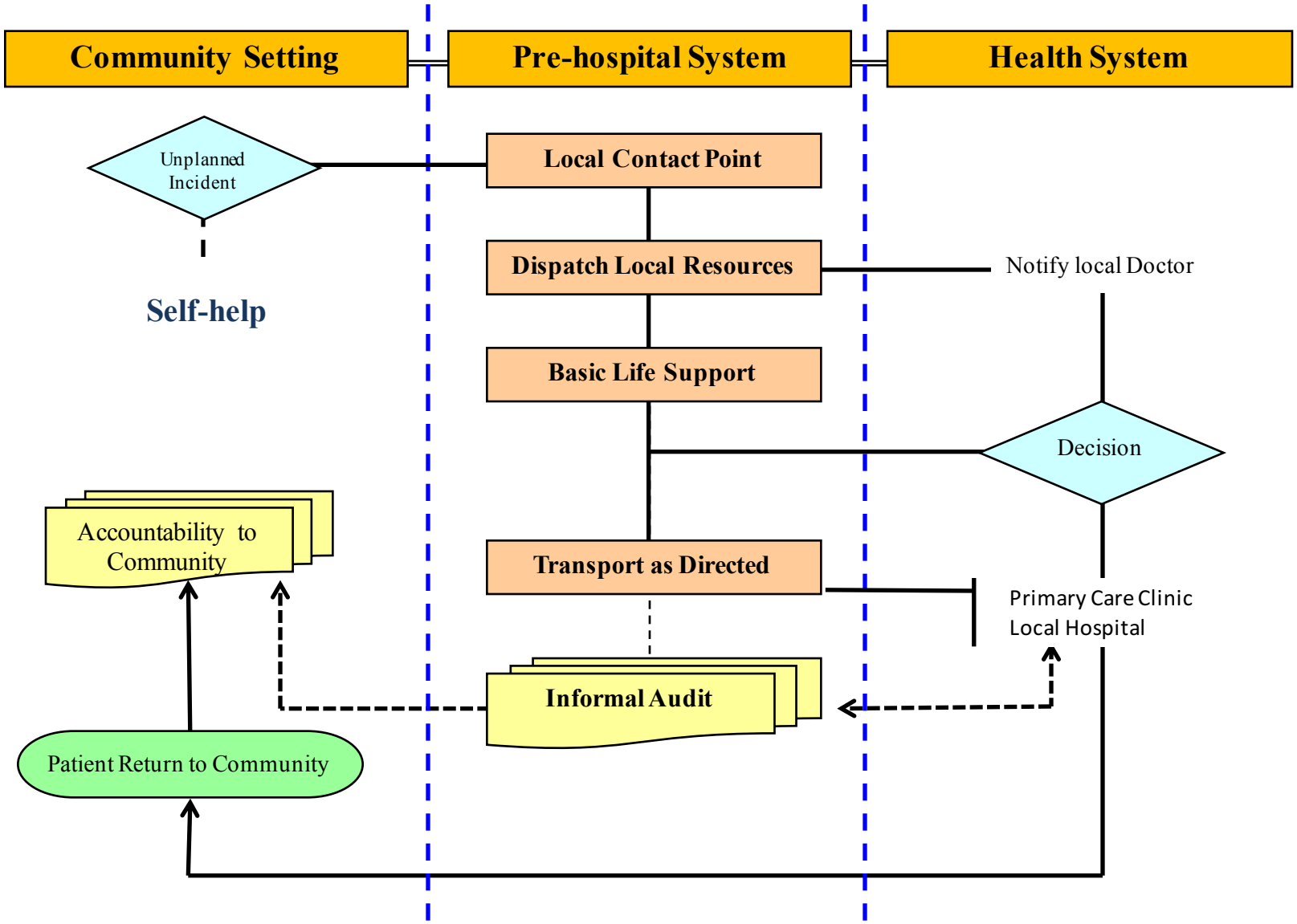
† **Volunteer/Transport Model**

- A community controlled and operated ambulance system that meets the pre-hospital expectations of a local community, resulting in the community feeling safe and secure.

Value Statement

- Community self-reliance and control is highly valued, with it delivering on the expectations of the local community.

Patient Pathway for Volunteer/Transport Models



Present Paramedic Models of Care (1 of 2)

† **Modified Volunteer/Transport Model**

- Alive and well in rural and remote areas (10,000 volunteers in Aust & NZ)
- Integrated into regional paramedic and health systems
- Includes 1st responder capacity from community or emergency services
- BLS and ALS care available – international variations abound

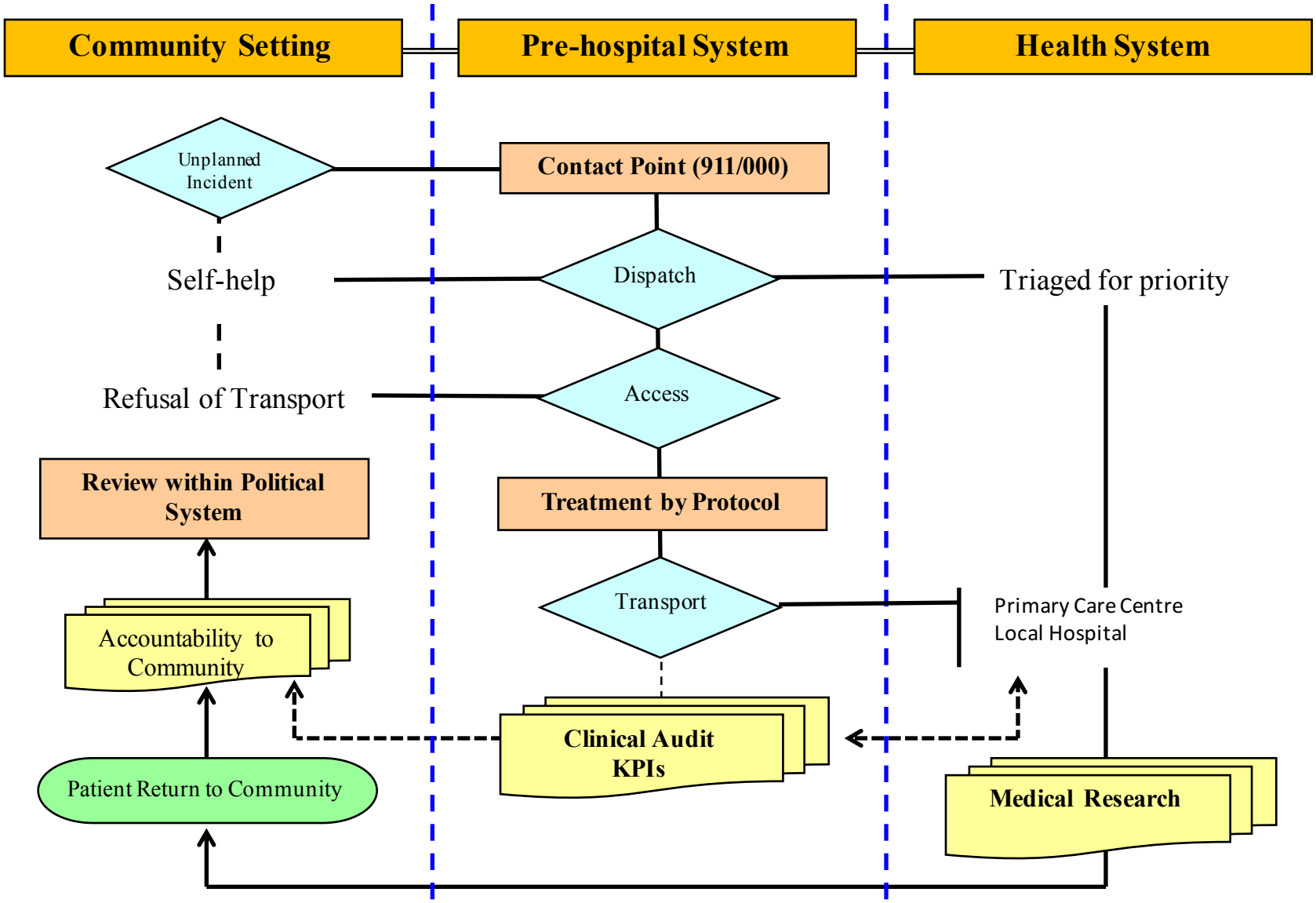
† **Sufficing/Conflict Model**

- Ambulance system providing accessible and equitable pre-hospital care to a standard that satisfies the powerful stakeholders throughout the state, territory or area of operation.

Value Statement

- The delivery of ambulance services is a public good, with all citizens entitled to a minimum level of service irrespective of income, geographic location, gender or race. Access and equity are espoused as the most important aims for the service provider.

Patient Pathway for Sufficing/Political Model



Present Paramedic Models of Care (2 of 2)

† **Technological Model**

- A professionally staffed and managed ambulance system providing pre-hospital care based on the medical model including advanced technology and technically-skilled staff, resulting in a reduction in mortality and morbidity rates.

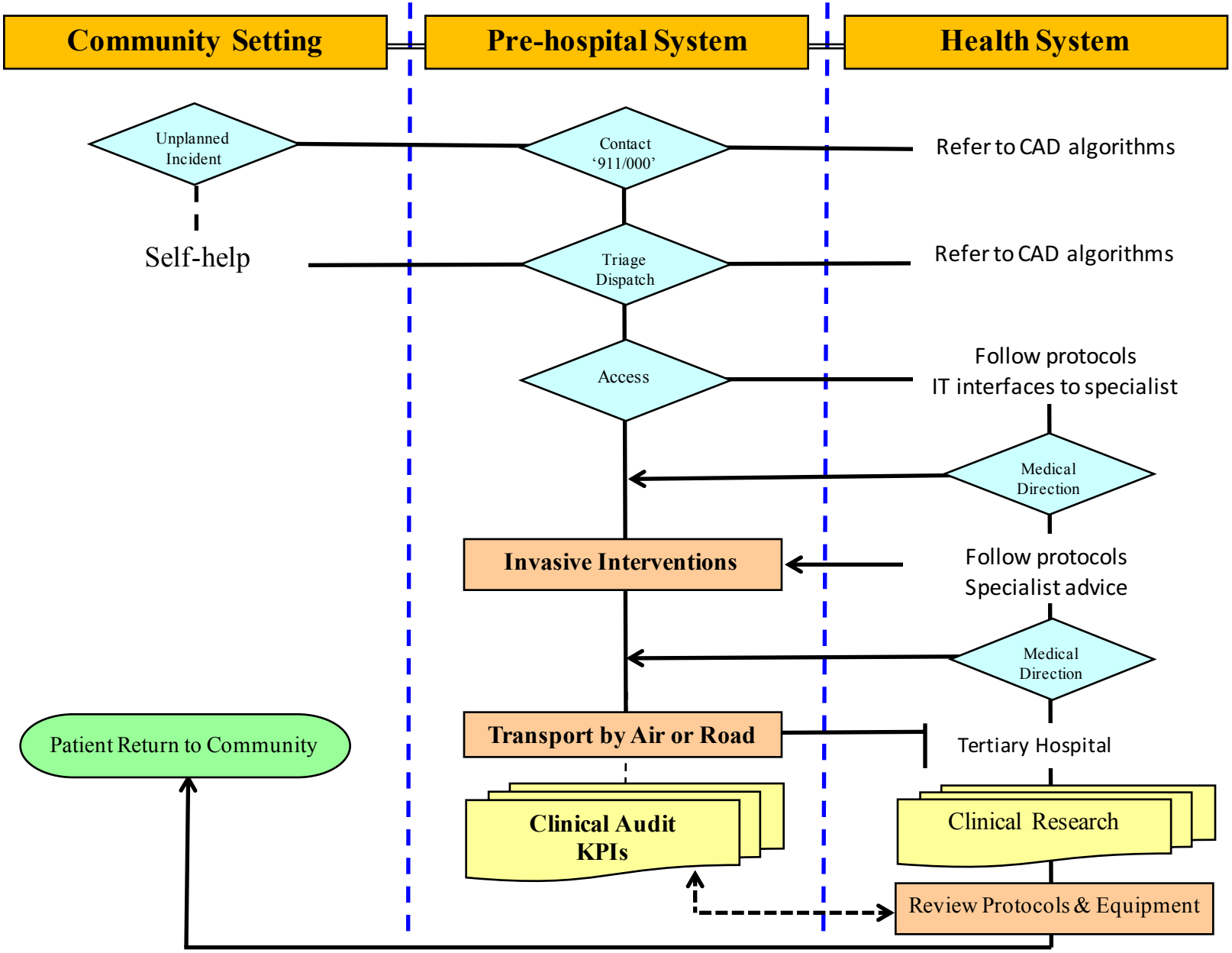
Value Statement

- Based on the notion that the specialized health professionals, through their training and experience are best able to determine the needs of the community. Letting communities and other stakeholders have a direct say would distort priorities and result in less than 'best practice' standards.
- Mainly metropolitan-based, flight paramedics, clinical leads
- Successful for specific patient cohorts (eg. cardiac, trauma)
- Experience and post-graduate qualifications required

† **Franco-German Model**

- 'Elephant in the Room'
- Physician and or Nurse staffed ambulances

Patient Pathway for Technological Models



Future (emerging) Paramedic Models of Care

† **Practitioner Models**

- An integrated pre-hospital system that provides a range of services to prevent injury and illness, respond to emergencies and facilitate recovery, resulting in a healthy community.

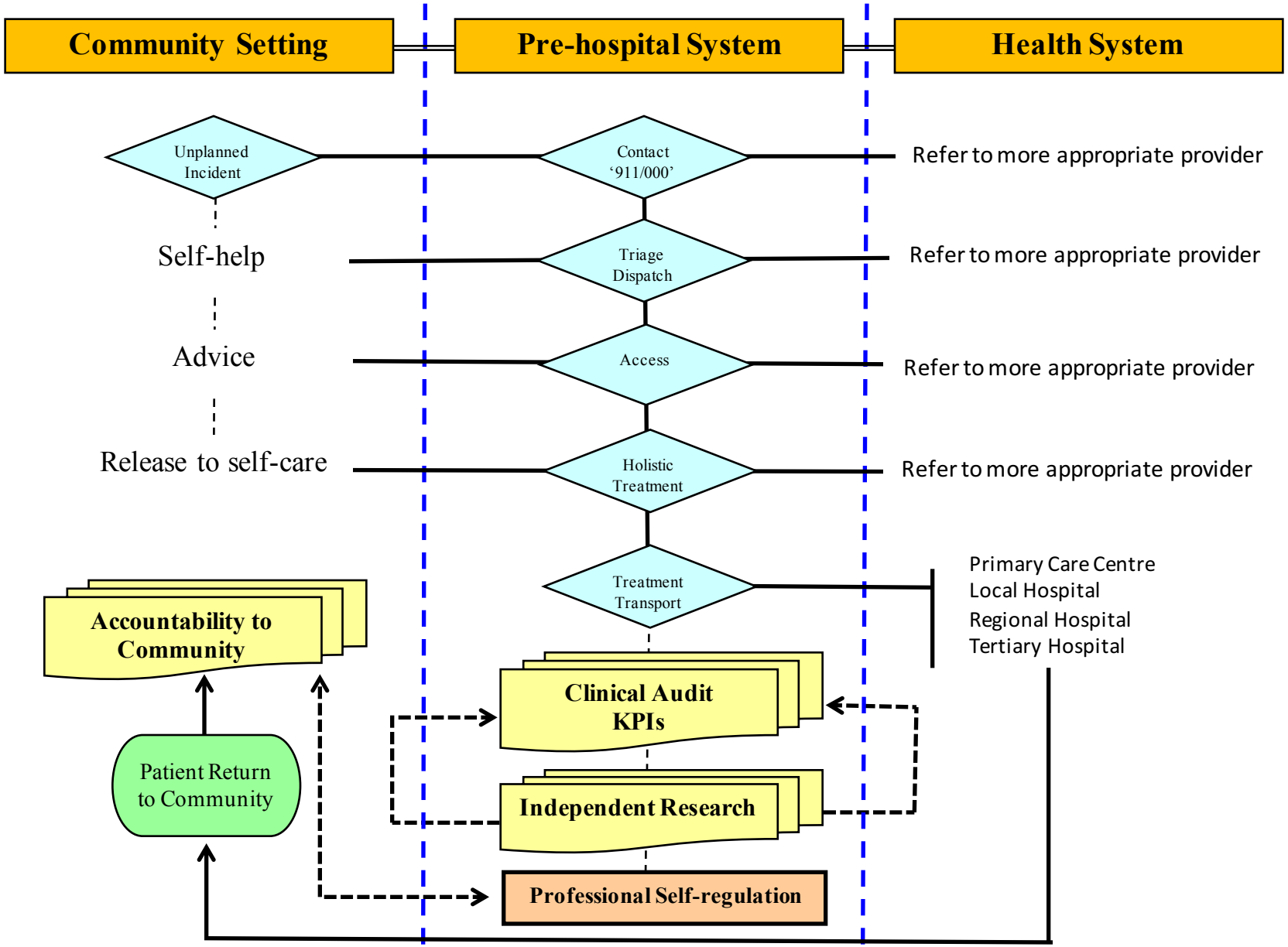
Value Statement

- A view that sees pre-hospital care as an integral part of an integrated health care system, with professional staff sharing roles that best utilize their skills and knowledge.

Two versions evolving

- Extended Care Paramedics (UK, Australia, New Zealand)
- Community Paramedicine (USA, Canada)

Patient Pathway for Practitioner Models



Paramedic Practitioner Model

Health needs of whole population

Public health education

Stakeholders/Owners
- Whole community
- Health system
- Emergency services
- Health professionals
- Researchers & Educators
- Funders & Regulators

Expectations
- Availability
- Timeliness
- Competence & skills
- Communication & teamwork
- Professional & ethical

Policy Framework
- Whole of health approach
- Evidence-based practice
- Interdisciplinary teamwork
- Flexible and multi-skilled workforce
- Public participation
- Self-regulated profession

Systems Research
- Interdisciplinary research
- Review health team activities
- Influence policy & practice

Paramedicine System

Clinical Activities
- Public health activities
- Respond to patients in need
- Clinical assessment
- Independent decision-making
- Referral to other providers
- Treatment and stabilization
- Transport to definitive care

Strong teamwork and integration framework

Co-located facilities & shared equipment

Clinical judgment & decision-making

Professional Staffing
- Broadly skilled in Emergency & Primary Care
- Drawn from range of health professionals
- Dual qualifications/professional registration

Performance Indicators
- Efficacy
- Efficiency
- Effectiveness
- Ethicality

Pre-hospital clinical research (component)

Broad education & training in universities

Implications for Policy and Practice (1 of 3)

† Expanding the roles of paramedic services

- Moving beyond ‘core roles’ and not seeing challenges as some-one else’s problem
- More patient centred approach
- Greater community engagement

Implications for Policy and Practice (2 of 3)

† Changing paramedic scopes of practice

- Less protocol driven and more autonomous practice
- Greater interdisciplinary teamwork (and potentially conflict)
- Higher levels of self regulation

Implications for Policy and Practice (3 of 3)

† Life long education needs to address functions related to:

- Patient diagnosis, decision-making and treatment
- Population health (public health)
- Organisational issues (management, finance, etc.)
- Insight and knowledge (research and evaluation, quality improvement)

Discussion and Questions

1. Do these broad models of care make sense to you?

2. Can the models be used to set objectives and develop measures of success?

3. What are the implications for paramedic education, practice and regulation?

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Thank you

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Tool to evaluate new models of care

(Adapted from Hawe, Degeling and Hall 1990 in Davidson et al 2006)

Steps	Questions
1	Is there a clearly defined model of care?
2	Are there specific goals and expected outcomes attributed to the model of care?
3	Have the primary users of the information derived from the evaluation, and their needs, been clearly identified?
4	Have the primary users of the information derived from the evaluation, and their needs, been clearly identified?
5	Is there agreement on measurable and testable key performance indicators?
6	Is there agreement on what data items are necessary in the evaluation plan?
7	Is there agreement on what data items are necessary in the evaluation plan?