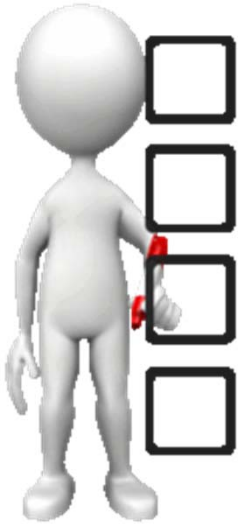
ENS4CARE
THEMATIC NETWORK



WP 5 - Guidelines
ICT Enabled Integrated Care:
Nurse ePrescribing

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ENS4Care Kick-off Meeting
Warsaw, 03 December 2013

INMO
Irish Nurses and Midwives Organisation
Working Together

Policy Drivers (Nurse Prescribing and ePrescribing)

Political

- Economic crisis – efficient and effective use of resources
- Epidemiological patterns – NCDs, chronic diseases, ageing population
- Shortage of health professionals
- Rural vs urban populations
- Changing models of practice

Societal

- Quality and safety of healthcare – outcomes of care
- Timely and cost effective health care
- Changing disease and disability patterns

Professional

- Expansion of scopes of practice
- Duplication and gaps in service
- Ethical principles essential to quality of care and safety
- Increasing specialisation
- Interprofessional education

European Commission

eHealth Action Plan 2012 – 2020 – Innovative healthcare for the 21st century *(EC 2012)*

> *"...healthcare we lag 10yrs behind virtually every other area in the implementation of IT solutions..."* *(T. Hendeik, 2012)*

Barriers include lack of:

- awareness/confidence in eHealth solutions
- interoperability between eHealth solutions
- legal clarity for mobile applications/utilisation of data
- reimbursement /inadequate or fragmented legal frameworks
- high start up costs

Horizin 2020

- EU framework programme for innovation and research
- securing Europe's global competitiveness (€70 billion)

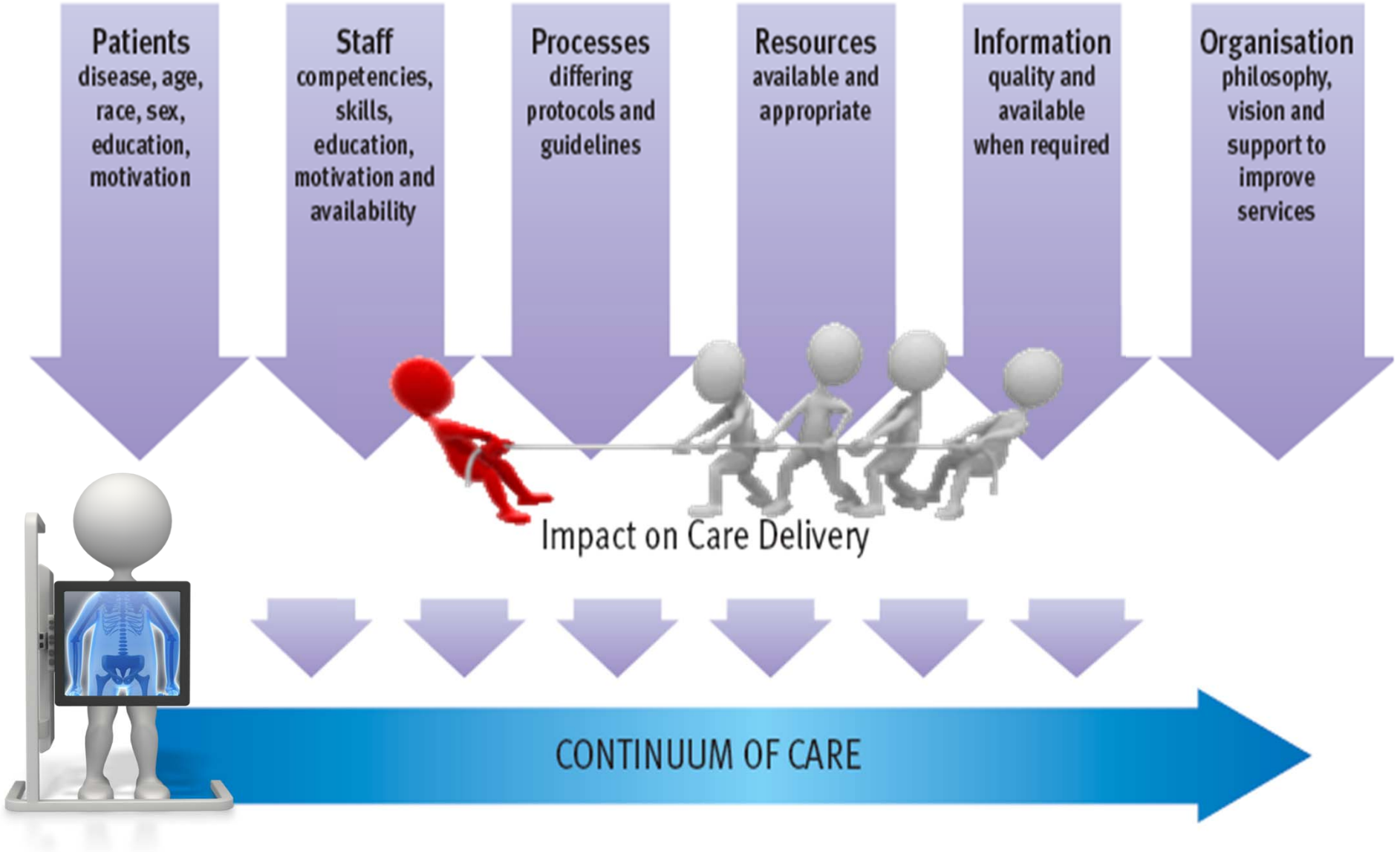
Chaining Healthcare

e-Patients

- patient empowerment – readily available health information and health choices provided through social networking
- e-Patients = **educated**, **empowered**, **engaged** – ability to contribute to their own healthcare, accessed in real time, by many different mobile formats

"…e-Patients use digital technology to research diseases, treatments modalities, and the physicians…. They are members of the healthcare movement that challenges the traditional norms of medicine and seeks to improve the quality of healthcare" **(soyer 2012)**

Variation in Health Care Delivery



Information – ePrescribing

- Estimated - 30% of the total health spent on handling information, collecting, sourcing and storing (HIQA 2012)
- Imperative that information is managed in the most effective way possible in order to ensure a high quality, safe service
- The Institute of Medicine, USA report '*To err is human, Building a Safer Healthcare System*' estimated that medication errors alone, occurring either in or out of the hospital, account for over 7,000 deaths annually (errors costing 2 billion) (IOM 1999)
- Safe, reliable, healthcare depends on access/use of information that is **accurate**, **valid**, **reliable**, **timely**, **relevant**, **legible** and **complete**
- **Benefits** of ePrescribing – reduction in medication errors, prescription and transcription errors with a corresponding improvement in patient safety.
  Supports monitoring of compliance, reduces costs

- Implementing ePrescribing system is complex and expensive. Return on investment? (Deloitte 2010)

ePrescribing - National Commitment

- **Australia** - National E-Health Transition Authority Limited (NEHTA) established in 2005
- **Canada** – Health Canada developed ePrescribing principles in 2003. National ePrescribing Task Force (NePTF) established in 2006
- **New Zealand** – National Health Board (NHB) established in 2009 (Health Information Strategy 2005)
- ***USA*** - *Medicare Prescription Drug, Improvement, and Modernization Act* (MMA) 2003(53) required Medicare to support ePrescribing (implementation date 2009). Slow progress so financial incentives introduced
  - *Medicare Improvement for Patients and Providers Act 2008* (MIPPA) – 2% bonus
  - *Health Information Technology for Economic and Clinical Health Act (HITECH)* - $19 billion fund to reward to adopt health IT by 2014

Medicinal Product Prescribing

- Internationally a growing number of countries introducing nurse/midwife prescribing (e.g. USA (1960s) Canada (1990s), Sweden (1994), United Kingdom (1998), Australia (2000), New Zealand (2001), Ireland (2007), Spain (2009), Portugal and Finland (2011).
- **Legislation**, **regulation**, **governance**, **educational** and **organisational arrangements** under which nurses/midwives prescribe medicinal products varies considerably between countries

Examples of the diversity and types of prescribing:

- **Independent prescribing** – legally permitted and qualified prescribers are responsible for the clinical assessment of a patient, diagnosis and treatment decisions.
- **Supplementary prescribing** – a voluntary partnership between an independent prescriber (for example: medical practitioner) and a supplementary prescriber such as a nurse or pharmacist.
- **Patient group directions** (or group protocols) – are written instructions for the supply and administration of named medicines in an identified clinical situation. Normally developed by the multidisciplinary team and are specifically developed for a particular group of patients with specific conditions (Kroezen et al. 2011)

Monitoring Prescribing in Ireland

- In the absence of ePrescribing - developed a national framework for monitoring nurse and midwife prescribing:

National Nurse and Midwife Prescribing Minimum Data Set

- Twelve items with **standard definitions**
  - RNP details (PIN number; site; grade; clinical area)
  - Date (prescription written on)
  - Shift (time period during which prescription was written)
  - Medical Record Number (encrypted used to count prescribing episodes)
  - Prescription Mode (Medication Record; Prescription Pad; or Electronic)
  - Clinical indication (prophylaxis, diagnosis, treatment)
  - Medicinal Product (generic name)
  - Prescription (dose, route, frequency)

Website: https://www.nurseprescribing.ie

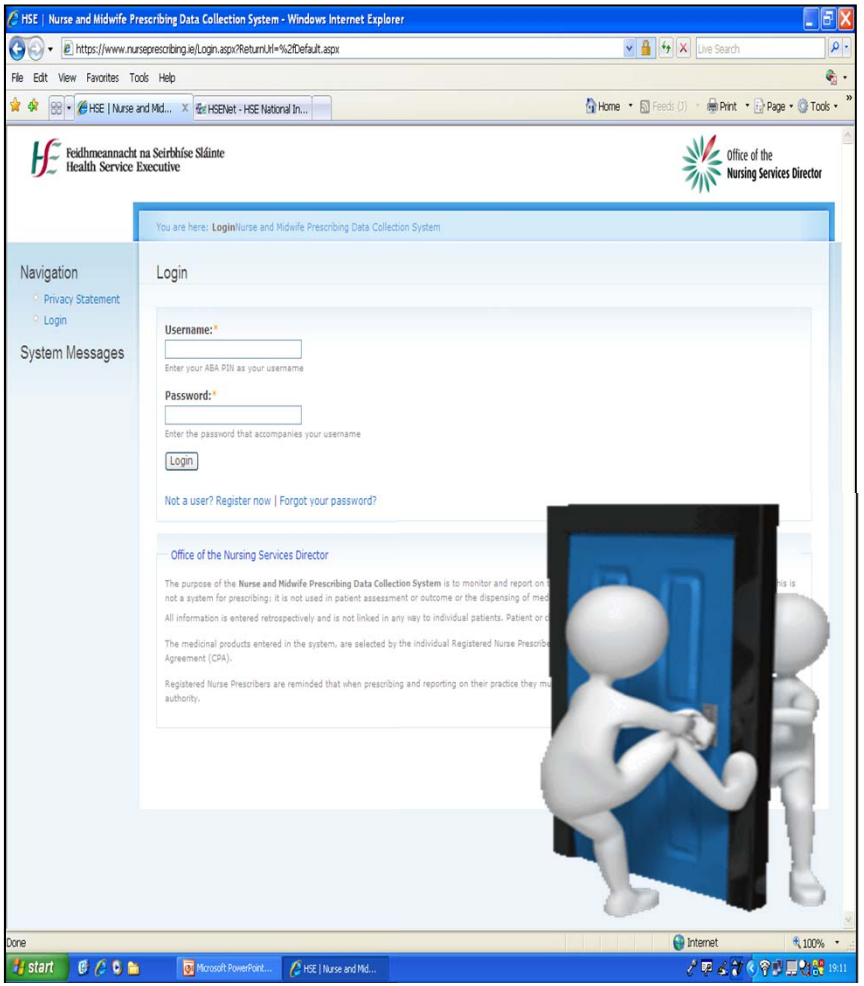
Irish Data Collection System

Developed a **centrally** administered **web-based** system for each individual to monitor and report on the number of prescriptions written by them and for what conditions

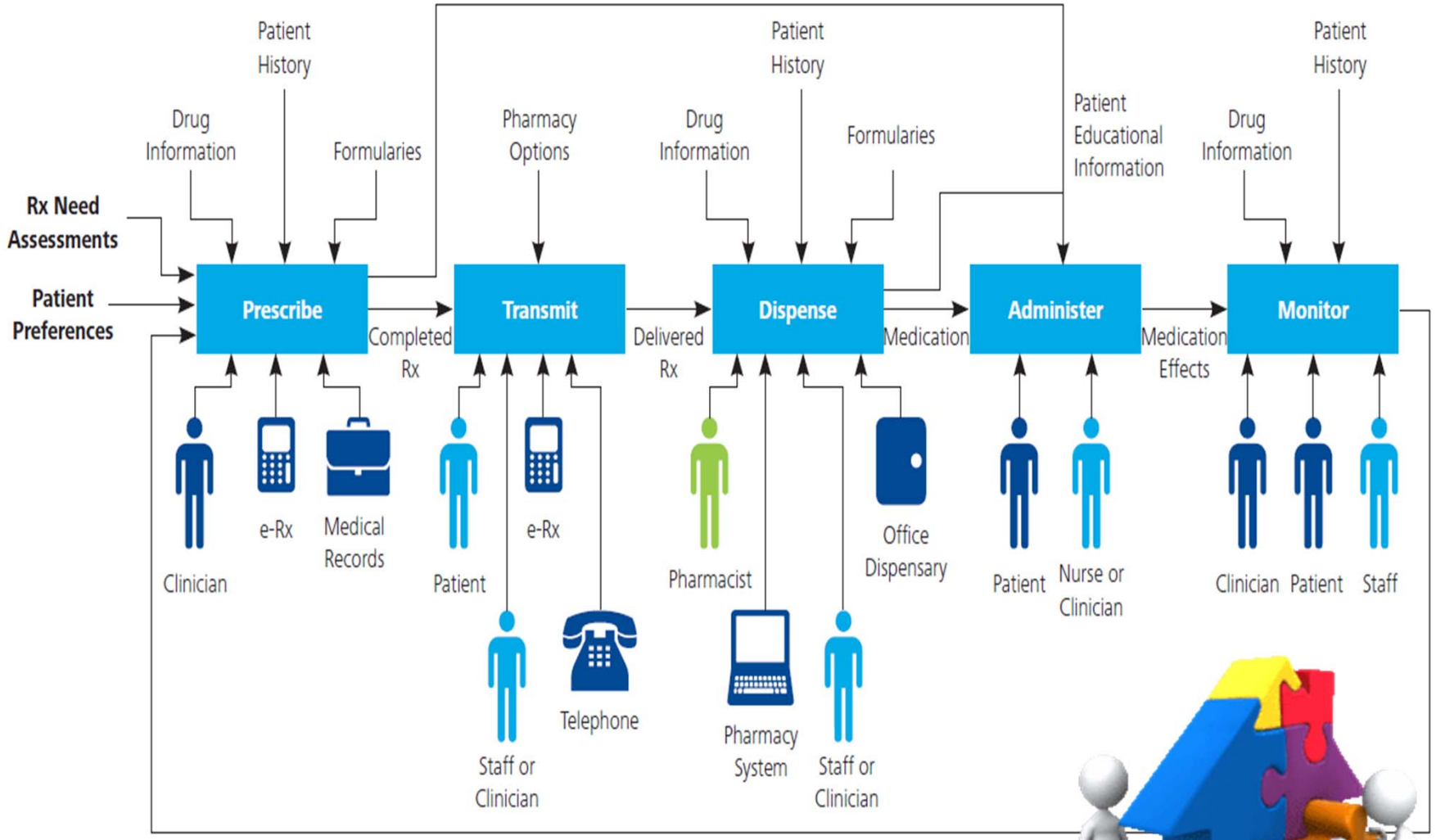
- 987 educated, 617 registered
- 102 clinical areas & 177 health service providers (49 acute hospitals and 128 community)

1 Jan 2012 to 31 December 2012:

- 29,665 Prescriptions
- 24,448 Unique Patients
- 45,075 Items



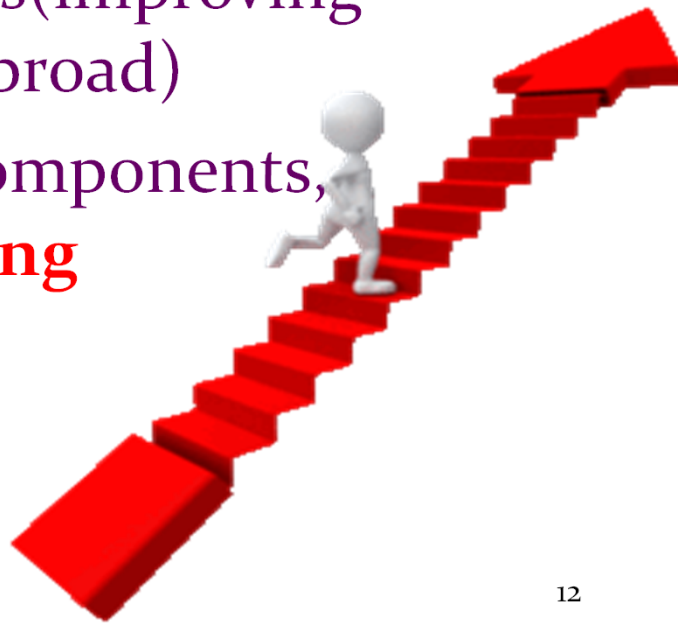
High Level ePrescribing Architecture



Source: E-Prescribing and Medication Management webinar, Agency for Healthcare and Research Quality (AHRQ), March 31, 2009.

European Patient Smart Open Services (epSOS)

- epSOS project is the main European eHealth interoperability project co-funded by the EC & Partners (€36.5 million, 2008 – 2013)
- Objective: develop a practical e-health framework and an ICT infrastructure that will enable secure access to patient health information and ePrescriptions between different European healthcare systems(improving medical treatment of citizens while abroad)
- epSOS ePrescribing consists of two components, electronic **prescribing** and **dispensing**



ePrescribing, eDispensing definitions

- *ePrescribing: electronic prescribing of medicine with the use of software by a **legally authorised** health professional and the electronic transmission of the prescription data to a pharmacy where the medicine can then be dispensed* (epSOS 2012)

- *eDispensing: electronic retrieval of a prescription and the dispensing of the medicine to the patient as indicated in the corresponding ePrescription. Once the medicine has been dispensed, the dispenser is to report the dispensation information using the ePrescription software* (epSOS 2012)

Note: Different countries participating were at various stages and levels of ePrescription implementation, it was necessary to define **functional minimum requirements** between the systems of each country

WHO Global Observatory for eHealth

http://www.who.int/goe/en/

Fundamental Building Blocks

International experience demonstrates that prior to developing an electronic transfer of prescriptions (ETP) solution, requires:

- individual health identifier (IHI) and an identifier for health and social care professionals and organisations (Denmark 1966, by late 1990s almost 100% of general practitioners used electronic patient records (EPRs)).
- interoperability framework and supporting infrastructure to facilitate the safe and secure electronic transfer of prescriptions between prescribers and dispensers (1983 first electronic prescription in Sweden)
- data model to support the implementation of a national drugs reference catalogue (different legislation and regulation in each country)
- messaging standards to support ETP across organisational boundaries

Best Practice Considerations – ePrescribing Questions

Scope inclusion and exclusion criteria

- National versus local innovation?
- Limit to nurse prescribing versus including midwife and social care?
- Gather best practice form countries with nurse/midwife prescribers only?
- Guidance for current ePrescribing systems or countries considering prescribing?
- System choices versus requirements when considering a system?
- Functional minimum requirements versus optional?
- High level overview or focus on one element (e.g. interoperability, standards, security, decision tools etc)
- Principles for different elements, e.g. Personal information Protection:
  - 1. Accountability, 2. identifying purpose, 3. consent, 4. limiting collection, 5. limiting use, disclosure/retention, 6. accuracy, 7.safegaurds, 8. Openness, 9. individual access, 10. challenging compliance
- Developing a International Nursing/Midwifery Minimum Data Set?
- Incorporate elements of other WPs depending on their focus?

Best Practice Considerations – ePrescribing Essentials

- Legislative and regulatory environment
- Common definitions
- Governance arrangements
- Principles for ePrescribing
- Model (desirable function ability and safety features)
  - System security, patient data access, decision support
- Architecture deployed – underpinned by:
  - Interoperability
  - Electronic Health Record
  - Technical standards (e.g. electronic drug messaging, authentication & security protocols)
  - Support tools: centralised drug information system/national drug formualary
  - Standard terminology (e.g. International Classification of Diseases
- Level of implementation reached (stakeholder engagement)
- Benefits realised
- Lessons learnt

Alternative Approach!

A possibility of achieving a better outcome through changing your ap

If we keep doing the same t
keep achieving the same outcom