Catalan case study
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Polypharmacy in Europe
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Barcelona demographics

Life expectancy average 83 years

21.2% of the Barcelona population is ≥65 years old (N=342,328)

29.6% of BCN population ≥65 years old, take ≥5 medicines (N=101,329)

6% of BCN population ≥65 years old, take ≥10 medicines (N=19,111)
Polypharmacy Initiatives

Objectives:
- Appropriate patient drug prescription
- Patient drug compliance / adherence

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Creating teams and strategic vision

- Hospital strategic alliance 2009
  - Hospital Clinic Barcelona
  - Consorci Hospitalari de Vic (Osona)
- Pharmacy department alliance 2009
  - Territorial vision
  - Clinical vision & clinical pharmacist
  - Strategic plan
- Strategic alliance departments 2010
  - Geriatric Department
  - Pharmacy Department
  - Strategic plan “Patient Centered Prescription”
- Clinical alliance health care team 2010
  - Multidisciplinary health care team
    - Geriatricians
    - Clinical pharmacist
    - Nurses

Strengths & Opportunities
- Hospital Clinic & CH Vic Alliance
- FHSC Vic Patient centered health care vision
- Traditional Pharmacy model moving to clinical Pharmacy activities
- Clinical Pharmacists specialist in geriatrics

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Patient Centred Prescription Model

Systematic three step process carried out by a geriatrician and a clinical pharmacist

1. **Patient-centred assessment**
   - Multidimensional evaluation (clinical, functional, social, cognitive)
   - Establish therapeutic objectives (survival, maintaining function or symptomatic control)
   - Shared decision making with patient or care giver
   - Focus on adherence

2. **Diagnosis-centred assessment**
   - List patient health problems-drug-objective
   - Evaluate applicability of CPG according to patient’s care goal.

3. **Drug-centred assessment**
   - Assess drugs with high iatrogenic risk
   - Assess interactions, duplications, adjust drug dose to renal and hepatic function

**Individualised therapeutic plan**

Comprehensive Geriatric Assessment

Multidisciplinary team

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Interdisciplinary research team

**ACUTE GERIATRIC UNIT**

- 34.7 – 47.2% of patients with inappropriate prescribing
- 66% reduction of drugs in patients with advanced chronic conditions
- 8.5% of hospital admissions caused by adverse drug events
- Risk factors: Extreme polypharmacy (> 10 drugs), anticholinergics, high complexity

**INTERMEDIATE CARE**

- 76% of patients with inappropriate prescribing (STOPP-START)

**NURSING HOMES**

- 74% of patients with inappropriate prescribing
- 96.5% of patients with therapeutic plan interventions

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Building sustainability

Phase 1 – Goal (Hospital Vic Consortium “umbrella”)

- **Hospital**
  - Geriatric Unit ✓
  - Other Clinical Units ✓

- **Long term Hospital – Intermediated Care**
  - Palliative ✓
  - Long term ✓

- **Nursing homes**
  - Nadal ✓; Aura ✓

- **Primary care**
  - 12 health care centers
  - In progress ✓

Intensity of interventions

- Review / patients number
  - Daily review
  - Every 2-3 days review
  - Weekly review
  - Every 2 weeks review
  - 3-4 times per year?

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Polypharmacy picture in Europe

Scope
- National
- Regional
- No programme

Setting
- \(H\) Hospital
- \(I\) Intermediate / Care homes
- \(P\) Primary care
- \(C\) Community pharmacy

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Key Stakeholder Messages

Adding more work doesn’t work

Education is critical but inconsistent

Everything is local

ICT is essential for scaling

Nothing happens in a vacuum

Culture can help or hinder

“We will need to change the dynamic of how we work. If we want to do this [polypharmacy management] but continue doing the same, well, this will be difficult.” Primary care pharmacist, Catalonia

“One of the most important things is to start measuring drug use, to get a view of the situation and make healthcare professionals aware of the problem of inappropriate polypharmacy.” Geriatrician and policy maker, Sweden

“We cannot make an accreditation like Northerners based on checklists, that will never work with us, we are not Scottish, dude.” Hospital physician, Portugal