PRISMA: Implementation and Impact of a Coordination-type Integrated Service Delivery System for Frail Older People

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« The Taming of the Queue / Maîtriser les files d’attente »

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- Quebec Health Research Foundation (FRSQ)
- Quebec Geronto-Geriatrics Research Network
- Sherbrooke Geriatric University Institute
- Quebec Research Network on Aging
PLAN

• Why a need for a better integration
• Models of integrated care
• 6 components of Integrated Network of Services
• Results of a large quasi-experimental study
Why a need for a better integration

- Preponderance of chronic diseases
- Strong pressure on both demand and supply
- Functional decline
  - Increased need for:
    - the individual & families
    - CGA, treatment, rehab, psychological and social support, home care, palliative care, LTC facility
- Multiple entry points, redundant evaluations, peacemeal response to needs
- Inadequate transmission of information
Comparison of two models of Integrated Care

Coordination model (PRISMA)
- Single entry
- Triage
- Home Care
- Case-Manager
- Long-term Care Inst.
- Hospital & Rehab.

Full Integration model (SIPA, PACE, CHOICE)
- Entry
- Home Care
- Case-Manager Multidisciplinary Team
  +/- Day Centre
  +/- Home care
- Hospital & Rehab.
- Long-term Care Inst.
Integrated Network of Services

1. Coordination between services
2. Single point of entry
3. Case-management
4. Individualized Service Plan
5. Unique assessment tool (SMAF) and Case-mix classification system (Iso-SMAF Profiles)
6. Information tool (Computerised Clinical Chart)
1. Co-ordination between services

- **Strategic (decision makers)**
  - Local Governance Table: structures, financing and protocols
    - Hospitals and CLSCs CEOs
    - Chairs and directors of voluntary or private agencies
    - Shift of paradigm: client-centered $\Rightarrow$ population-centered

- **Tactical (services’ managers)**
  - Local Management Committee: mechanisms

- **Operational (clinicians)**
  - Multidisciplinary team
Clientele (admission criteria)

- To be over 65
- To present moderate to severe disabilities
  - SMAF score $\geq 15$ (out of 87)
  - Iso-SMAF profiles $\geq 4$
- To show good potential for staying at home
- To need for 2 or more services (health and social)
2. Single point of entry

- Common door to get access to all services
- Triage (for people not referred by prof.)
  - screening instrument: PRISMA-7
  - reference to the right service or to the Integrated Service Delivery Network
  - link to the 24/7 nursing phone line.
- Basic data collection (socio-demography)
3. Case-Manager

- Functions
  - basic assessment (functional autonomy, needs)
  - reference to other professionnals (for completing the assessment)
  - planning of services (with patient & family)
  - service “broker”
  - patient advocacy
  - follow-up (periodic re-assessment)
Case-Manager

- Distributed by territory (neighbourhood)
- Nurse or Social worker or others
- Special training
- Intervenes wherever is the patient ("blue helmet") in any institution (hospital, CLSC…)
- May also provide direct care (in his/her field of competency)
- Case load: 40-45
Single point of entry

SCREENING

Case Manager

Social Economy Agencies

Family physician

Voluntary Agencies

Hospitals and Rehab. services

CLSC

Long-term care institutions

Meals-on-wheels

Domestic tasks

Day Centre

Institutionnalization
(temp or permanent)

Geriatric services

Specialized and General Care Services

Rehabilitation

Home Care

Nursing Care

Occ. Therapy, etc.

Specialized Physicians
4. Individualized Service Plan

- Prepared once the assessment is completed
- Lead by the Case-Manager
- Consensus amongst the providers
- Approval by patient (and/or family) – empowerment
- Includes the Management Plan of each provider
- Periodical revision
5. Unique assessment tool

• SMAF: disability and handicap scale
• Case-mix classification: Iso-SMAF Profiles
  – 14 different homogeneous patterns of disabilities
  – Functions:
    • Service allocation: admission criteria
    • Monitoring
    • Management
    • Financing
6. Information Tool

- Facilitates information flow
- Computerized Clinical Chart
  - accessible by all professionals and institutions
  - via internet (Quebec Health and Social services Network)
  - security and privacy
  - data generator: for monitoring and research
Estrie project

• Funded by

• Implementation of the Integrated Service Delivery Network within 3 areas
  – 1 urban: Sherbrooke
  – 2 rural: Granit (Lac Mégantic) & Coaticook

• Evaluation
  – implementation (process): case-studies
  – impact (outcome): quasi-exp population design
Summary Flow of the Study

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End: Mid-march 2006

Implantation du RISPA

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TOTAL: 920 + 581 = 1501

Ces données sont basées sur le nombre de sujets évalués à domicile

Functional Decline

Evolution of subjects exposed to PRISMA (excluding death and institutionalized)

- Loss of 5 points + SMAF
- Death
- Institutionnalised

2 first years:
- X: (n=465)
- T: (n=365)  
  - P=0.685

2 last years:
- X: (n=541)
- T: (n=579)  
  - P=0.030
  - 6.3% dif.
  - P=0.027
New Cases of Functional Decline (Incidence)

- **Second Year**
  - X (n=310)
  - T (n=237)
  - p = 0.316

- **Third Year**
  - X (n=412)
  - T (n=485)
  - p = 0.259
  - Loss of 5 pts + on SMAF
  - Death
  - Institutionnalisation

- **Fourth Year**
  - X (n=244)
  - T (n=271)
  - 14% dif.
  - p < 0.01

**Notes**:
- X: Control Group
- T: Test Group
Handicap (SMAF): Proportion with at least one unmet need

- **Study (X)**: Proportion with at least one unmet need
- **Control (T)**: Proportion with at least one unmet need

- **T1**: X(n=419) vs. T(n=327)
  - p = 0.026
  - ↓31%

- **T2**: X(n=588) vs. T(n=636)
  - p = 0.054

- **T3**: X(n=483) vs. T(n=509)
  - p = 0.203

- **T4**: X(n=394) vs. T(n=433)
  - p < 0.001
  - ↓31%
Satisfaction with services

Delivery

Organization
At least one visit to ER

Probability of at least one visit

An 1  An 2  An 3  An 4

p<0.001  p<0.001  p=0.149  p=0.232

p=0.300  p<0.001

p<0.001
At least one hospitalisation

Probability of being admitted at least once

- An 1: p=0.204
- An 2: p=0.364
- An 3: p=0.953
- An 4: p=0.449

X

T

p=0.113

p=0.707

p=0.027
Other services

• No significant differences on:
  – Re-hospitalization
  – Consultations with health prof.
  – Utilization of home care services
  – Utilization of geriatric services
### Efficiency of the Model

#### Outcome

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<th>Cost</th>
<th>Less efficient</th>
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Knowledge Transfer

• PRISMA Group
  – Good strategy for ensuring KT
• Actually in implementation in all other regions of Quebec
  – Impact of a health and social structure reform
• Experimental implementation in France
Evaluation of the Implementation of PRISMA, a Coordination-Type Integrated Service Delivery System for Frail Older People in Québec

Impact of PRISMA, a Coordination-Type Integrated Service Delivery System for Frail Older People in Quebec (Canada): A Quasi-experimental Study

Réjean Hébert,1,2 Michel Raîche,2 Marie-France Dubois,1,2 N’Deye R. Gueye,2 Nicole Dubuc,1,2 Michel Tousignant,1,2 and The PRISMA Group

Consult the web site at: www.usherbrooke.ca/prisma
# PRISMA-7 Questionnaire

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<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tr>
<td>1. Are you more than 85 years old?</td>
<td>Yes</td>
<td>No</td>
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<td>2. Male?</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>3. In general, do you have any health problems that require you to limit your activities?</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>4. Do you need someone to help you on a regular basis?</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>5. In general, do you have any health problems that require you to stay at home?</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>6. In case of need, can you count on someone close to you? *</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>7. Do you regularly use a cane, a walker or a wheelchair to move about?</td>
<td>Yes</td>
<td>No</td>
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Number of Yes an No: __ __

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Population approach for older persons needs

- Needs for Home care: 13.8% (PRISMA)
- Case mngt: 7-10% (PRISMA)
- Clinical care pathways selfcare: 70-80% (population survey)
- Prevention Health Promotion: 100%
- Nursing Home: 3%

Geriatric Teams
Spec. Medicine
FMG