The Spanish Model of ACT: Methodology and Results

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The Spanish Model of ACT: Methodology
Spanish Model of ACT

- ACT Spanish Model try to be a faithful version of ACT original model (Madison Model).
- But adapted to the social and sanitary reality of Spain in the XXI century.

L. Stein y M. Test
The Avilés Model of ACT

- The first ACT team of Spain started to work in 1999, in the city of Avilés.
- In Spain the ACT is called Avilés Model.
- Nowadays there are more than 30 ACTs in Spain.
ACT’s Dissemination in Spain

- Since 2004 there have been **11 NATIONAL SYMPOSIUM OF ASSERTIVE COMMUNITY TREATMENT IN MENTAL HEALTH.**
- All conferences have been held in the town of Aviles.
- This annual congress has contributed decisively to the spread of ACT in Spain.
Dissemination of the TAC in Spain
Objective

- Adapt care and social-health resources to the real needs of the patient with **Severe Mental Disorders** in its community environment.
Public and Medical Teams

- ACT Teams of Spain belongs to the Public Mental Health Services. Not depend to the Social Services.
- This makes it easier the relationship with the health system.
- Strong collaboration with the social services of the council.
Admision Criteria

- Patients with Severe Mental Illness
- We say that a person has a **Severe Mental Disorder** when a combination of clinical criteria, severity and disability are met.
Severe Mental Disorder: Clinical Criteria

Patients with diagnosis of:

- Schizophrenia (F20)
- Schizotypal disorder (F21)
- Persistent delusional disorders (F22)
- Acute and transient psychotic disorders (F23)
- Schizoaffective disorders (F25)
- Bipolar affective disorder (F31)
- Obsessive-compulsive disorder (F42)

At least 2 year since the diagnosis.
Severe Mental Disorder. Severity and Disability Criteria

- Clinical Severity
- High Disability
Severe Mental Disorder

The following problems are taken into account:

- **Social Problems** (social exclusion risk, high family burden supported)
- **Services usage level** (no contact with Mental Health or revolving door)
Exclusion Criteria

- Patients with primary diagnosis of drug abuse, mental retardation, organic mental disorder and emotionally unstable or disocial personality disorders.
- Younger than 18 year old and older than 65 year old.
Principles

• Primary care place: **The community.**
• Standardized resource utilization.
• Maximum individualization (**Individualized treatment plan**) 
• Assertiveness.
• To achieve maximum patient autonomy.
• Active involvement of the patient.
• Main factor: **the family.**
Schedule

- **Schedule**: Monday through Friday, 8 to 15 hours
- Thank to our good coordination with the services that work 24 hours a day, our patients generate few emergencies, and admissions can be avoided for most of them until the ACT Team can re-engage.
Human Resources

- psychiatrist,
- nurse,
- nurse's aide
- social worker
- Other professionals: psychologists, occupational therapists, etc
Internal Organization

- Operating Model: **Assertive Community Treatment Aviles Model.**
- Patients are fully assumed by the team, which provides in a global manner all the Mental Health care.
- If the patient is referred to other devices, the ACT Team remains central point of responsibility.
Internal Organization

- Emphasis on shared responsibility and teamwork and a high degree of autonomy.

- **MEETINGS:** A weekly meeting to review cases and a daily half-hour meeting.
Home Visits

- The team spend 70% of their time performing community work.
- We always go to the homes of patients as a couple.
- A well-functioning team must be able to visit the most problematic patients daily for several weeks.
Patients assumed by the ACT Team are assigned to one of the two following programs:

- **High Intensity Program.** Frequent home visits (from several a week to 1 a month)

- **Intermediate Intensity Program.** Transition to discharge. Outpatient monitoring, and home visits only in specific situations.

Similar to the Dutch FACT
Internal Organization

High Intensity Program:

- Mentoring is assumed by the nursing team, and each case is assigned a principal supervisor and a second charge. Each tutor assumes a maximum of 15-20 patients.
- The intervention takes place mainly at the community level and the most common interventions are home visits and/or community support.
- Main objective is to increase treatment adherence and ensure treatment
Intervention phases

I) Derivation: Most teams only accept referrals from the public mental health services.

II) Host interviews, engage and evaluation: It ends with a report of acceptance or rejection.

III) Tutoring
    Assignment of a mentor.
IV) Individualized treatment plan:

- Evaluation of needs and interests (2-4 months)
- Preparation of ITP: By consensus of all members of de ACT Team.
V) Final phase. Patients will be at least 5 years in the ACT Team: after those first 5 years, if stabilized, begins one year follow up in the middle intensity program with a single outpatient visit per month. If no relapse at the time, would return to the Mental Health Center reference.

A significant percentage of patients will require the services of ACT Team indefinitely.

If a patient does not benefit from ACT Team, it can raise their return to Mental Health Center after 6-12 months follow up.
The Spanish Model of ACT: Results
Reduction of Admission in 4 ACTs

- ACT team of Avilés
- ACT team of Gran Canaria
- ACT team of Aguilás - Lorca and
- ACT team of Ferrol
Patient Characteristics

- More than half, diagnosed with paranoid schizophrenia. Less than a 5%, diagnosed with a personality disorder cluster B.
- Ages range from 18 to 77.
- About 30% live alone and another 50% with the family of origin.
## Reduction of admission

<table>
<thead>
<tr>
<th>Town</th>
<th>Years</th>
<th>Nº patients</th>
<th>Hospital stay (in days) pre/post</th>
<th>Nº admission pre/post</th>
<th>% reduction hospital stay (in days)</th>
<th>% reduction admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVILÉS</td>
<td>5</td>
<td>65</td>
<td>2628 / 771</td>
<td>160 / 42</td>
<td>70.66%</td>
<td>73.75%</td>
</tr>
<tr>
<td>FERROL</td>
<td>8 años</td>
<td>53</td>
<td>4270/725</td>
<td>103/32</td>
<td>83%</td>
<td>69%</td>
</tr>
<tr>
<td>AGUILAS LORCA</td>
<td>4 años</td>
<td>45</td>
<td>4332/859</td>
<td>129/46</td>
<td>79,17%</td>
<td>64,34%</td>
</tr>
<tr>
<td>GRAN CANARIA</td>
<td>7 años</td>
<td>74</td>
<td>5471/1008</td>
<td>174/64</td>
<td>81,57%</td>
<td>63,21%</td>
</tr>
</tbody>
</table>
Results

- A very important reduction in the hospital stay (in days): 83 – 70%
- A reduction in admission: 63 - 73%
- Low incomes and generally of short duration.
RESULTS ACT
Ferrol
(First 10 years)
Study

- Retrospective observational study of 40 patients: pre-post designs (“mirror – image”).
- Two parameters: 1) Number of admissions in Acute Psychiatric Hospital Unit, and 2) Number of Inpatient days in the Unit.
- We compare these parameters 1, 2 and 3 years before and after their incorporation in the ACT team programme.
- 18 patients were excluded from the sample for being less than 3 years with the Ferrol´s ACT team.
- Statistical analysis we used a non parametric test, the Wilcoxon signed-rank test.
## Results 1 year pre - post

### nº Admissions

<table>
<thead>
<tr>
<th></th>
<th>1 year before</th>
<th>1 year after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>37</td>
<td>7</td>
</tr>
</tbody>
</table>

### Hospital stay (in days)

<table>
<thead>
<tr>
<th></th>
<th>1 year before</th>
<th>1 year after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means days admissions</td>
<td>40,52 (+/- 46,45)</td>
<td>3,35 (+/- 8,97)</td>
</tr>
<tr>
<td></td>
<td>1621</td>
<td>134</td>
</tr>
</tbody>
</table>

| Means admissions      | 0,88 (+/- 0,91) | 0,18 (+/- 0,39) |
|                       | 0,000          |               |
| Mean admissions       | 0,000          |               |
Results 2 year pre - post

<table>
<thead>
<tr>
<th></th>
<th>1 year before</th>
<th>1 year after</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means admissions</td>
<td>0.88 (+/- 0.91)</td>
<td>0.18 (+/- 0.39)</td>
<td>0.000</td>
</tr>
<tr>
<td>Means days</td>
<td>40.52 (+/- 46.45)</td>
<td>3.35 (+/- 8.97)</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Results 3 year pre - post

Means admissions
3 year before: 1,50 (+/- 1,38)
3 year after: 0,45 (+/- 0,82)
p = 0,000

Means days admissions
3 year before: 64,38 (+/- 57,00)
3 year after: 8,95 (+/- 16,87)
p = 0,000
Results

- Reduction in hospital admissions of patients after being followed up by the ACT Team, 81%, 73% and 70% respectively.
- Reduction in hospital stay (days) of 92%, 88% and 86% depending on the period studied.
- They all show a significant difference (**P=0.000**).
HoNOS Scale

- **Nation Health of the Outcome Scale**
- **HoNOS scale** consists of 12 items or subscales, grouped into 4 sections. Are scored from 0 (no problem) to 4 (extremely serious problem).
- **Behavioral problems** (aggressiveness, self-injurious behavior, and substance use), **impairment** (cognitive dysfunction and physical problems), **clinical problems** (depressive symptoms, psychotic symptoms, other psychiatric symptoms) and **social problems** (social relationships, general functioning, housing problems and occupational problems).
HoNOS Scale

- Observational and descriptive study.
- We compared the scores on the HoNOS scale for patients to complete treatment program at the time of referral and in January 2011.
- In 2 ACT teams:
  - ACT team of Avilés (95 patients)
  - ACT team of Ferrol (34 patients)
HoNOS Results Ferrol

Total Score HoNOS
HoNOS Result Ferrol

Average Score Sections HoNOS

<table>
<thead>
<tr>
<th>Section</th>
<th>Start</th>
<th>January 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>HoNOS Behavior</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>HoNOS Impairment</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>HoNOS Psychopath.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>HoNOS Social</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

Start: January 2011
HoNOS Results Ferrol

Average Score Subscales HoNOS

Start date: January 2011
HoNOS Results Avilés

Total Score HoNOS

- Start: 2500
- January 2011: 1000
HoNOS Result Avilés

Average Score Sections HoNOS

- HoNOS Behavior
- HoNOS Impairment
- HoNOS Psychopat.
- HoNOS Social

- Start
- January 2011
HoNOS Results Avilés

Average Score Subscales HoNOS

- Aggressiv.
- Self-injurious
- Subst. use
- Cognit. d.
- Physical p.
- Depression
- Other p. s.
- Psychotic s. relationships
- General f.
- Housing p.
- Occupational p.

Start: January 2011
## HoNOS Results

<table>
<thead>
<tr>
<th></th>
<th>AGRESSIV.</th>
<th>SELF-INJURIOUS</th>
<th>SUBST. USE</th>
<th>COGNITIVE D.</th>
<th>PHYSICAL P.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ferrol</strong></td>
<td>- 65.21%</td>
<td>- 88.8%</td>
<td>- 55.5%</td>
<td>- 16.4%</td>
<td>- 9.2%</td>
</tr>
<tr>
<td><strong>Avilés</strong></td>
<td>-69.6%</td>
<td>- 76.6%</td>
<td>- 57.8%</td>
<td>- 11.5%</td>
<td>+22%</td>
</tr>
</tbody>
</table>
# HoNOS Results

<table>
<thead>
<tr>
<th></th>
<th>DEPRESS.</th>
<th>OTHER S. P.</th>
<th>PSYCHO.S.</th>
<th>RELATION SHIPS</th>
<th>GENER. FUNCT.</th>
<th>HOUSING PROBL.</th>
<th>OCCUPAT. PROBL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferrol</td>
<td>-37.1%</td>
<td>-17.5%</td>
<td>-46%</td>
<td>-20.8%</td>
<td>-12.2%</td>
<td>-24.5%</td>
<td>-18.5%</td>
</tr>
<tr>
<td>Avilés</td>
<td>-51.1%</td>
<td>-54%</td>
<td>-47.6%</td>
<td>-22.6%</td>
<td>-42.7%</td>
<td>-38%</td>
<td>-29.7%</td>
</tr>
</tbody>
</table>
The average score of the HoNOS scale is reduced by 30% (Ferrol) – 42% (Avilés)

The most important reductions in scores are observed in the following subscales: aggressiveness (65% - 69%), self-harm (88% - 76%), drugs (55% - 57%), positive symptoms (46% - 47%), depressive symptoms (37% - 51%), and other symptoms (17% - 54%).
HoNOS Results

- **Social problems**, although significantly reduced, remain the main problem of our patients in the two teams.

- Results are very similar in the two teams.
Conclusions

- Our data support the replicability of the Avilés Model and its effectiveness in reducing hospital admissions for people with severe mental disorders.
Conclusión

- ACT Avilés model reduces the productive psychotic symptoms and control behavioral disorders. They also improve the social problems.
- Studies are needed to support our subjective impression of improvement in the quality of life of patients and reduction of family burden supported.
Conclusión

- El modelo español es un modelo sencillo y efectivo.
- El modelo ACT Avilés muestra que recursos modestos con una correcta organización pueden obtener importantes cambios en la evolución de los pacientes con Enfermedad Mental Grave.
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