The Geriatric Day Service for BPSD
a model of integration between hospital and primary Care

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Behavioural and Psychological Symptoms in Dementia

Worse patients health
Increase Disability
Increase hospitalization
Increase institutionalization
Increase caregiver's burden
Increase health and social costs

O’Brien JA, Shomphe LA, Caro JJ. 2000; Rodney, 2000; Draper et al, 2000; Maslow K. 1994; Davidson TE et al., 2007
BPSD due to...

- Neuropathological/Neurotransmitterial genesis due to dementia
- Diseases interaction and pain
- Drugs
- Environment
- Caregiver relationship

Haupt, 1999
Management of BPSD according to their severity

Modified by www.alcove-project.eu 2013

A
BPSD +/-
Prevention or (1° o 2°) & management of di moderate BPSD

B
BPSD +/-
Acute BPSD

C
BPSD +/-
Post-acute BPSD

HOME

Moderate BPSD

Severe BPSD

Day Service

Alzheimer SCU

D Diagnosis C Counseling

Psycho-geriatrics Service

• Specialist consultant at home
• Day Service

Nursing Home

• Memory Clinics
• Primary care
• Psychological service
• Volunteers
• Day Center

BPSD +/-

BPSD +/-

BPSD +/-

BPSD +/-
BPSD and Delirium Day-Service for diagnosis and treatment

Prevent People with Dementia's (PwD) ER access

Prevent PwD's hospitalization

DS is located into Nuovo Ospedale Civile Sant’Agostino-Estense (NOCSAE) Hospital in Modena (North Italy) provides assessment and treatment of patients coming from all Modena district, according to “Hub and Spoke” model.

We take in charge patients for temporary period in order to define confusional state/BPSD genesis and to treat it.
Inclusion Criteria

- PwD diagnosis and BPSD, afferent from memory clinics and after specialist (geriatrics) evaluation
- High score at the Neuropsychiatric Inventory (UCLA-NPI), in spite of pharmacological treatment
- Old patients (>65 years old) from Emergency Room, with confusional state or behaviors including insomnia, wandering, agitation, physical aggression and delusions, not yet framed as PwD and not in treatment

Psychiatric patients and young or middle age patients are excluded
DS organization

Fist step: we receive medical record of Hospital IT systems, e-mail or fax. We accept PwD from memory clinic within one week and from ER within 72 hours. In this case ER physician has to exclude comorbidities requiring hospitalization. We organize evaluations by BPSD severity (Triage phase).

Second step: we program medical and neuropsychological evaluations, biochemical, radiological and neuroradiological tests. We also evaluate caregiver burden by psychological evaluation.

Third step: we treat comorbidities and BPSD by pharmacological and non-pharmacological treatments in a tailored way, according to patients’ needs.

Fourth step: we discharged patient to memory clinic according to specialists and GP. In case of social problems or institutional needs we inform and alert social services.
We take in charge 107 patients

49 PATIENTS FROM MEMORY CLINICS
58 PATIENTS FROM EMERGENCY ROOM

<table>
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<th>SEX</th>
<th>M = 34,6 %</th>
<th>F=65,4 %</th>
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<tbody>
<tr>
<td>Mean AGE</td>
<td>81,6 (sd 10,8)</td>
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<tr>
<td>Median MMSE</td>
<td>17 (mode 20; min 0 max 28)</td>
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<tr>
<td>Median NPI</td>
<td>34 (mode 24: min 0 max 81)</td>
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DIAGNOSIS AT BASELINE

BPSD = 54,2%
CONFUSION = 45,8%
MAIN GOALS:
only 18% of hospitalization

49 PATIENTS FROM MEMORY CLINICS
None of the patients have been sent to ER for severe BPSD
Only 7 patients (11%) were hospitalized for comorbidities causing BPSD (i.e. heart failure)

58 PATIENTS FROM ER
Only 10 patients (17%) were hospitalized:
- 1 for social problem
- 9 for unpredictable events (i.e. AMI, Falls or Stroke)

72 patients (77.4%) - Remain at home
2 patients - Institutionalization
15 – special care units fo BPSD (Nucleo demenze)
Comorbidities and BPSD

- **Delirium**: 40 patients (37.4%): 34 (31.8%) hyperactive delirium, 2 (1.9%) hypoactive, 4 (3.7%) mixed

- **BPSD etiology**:
  - 22 patients (20.6%): urinary infections
  - 4 patients: trauma/fracture
  - 8 patients: pneumonia
  - 5 patients: drugs
  - 8 patients: Transitory Ischemic Attack, Minor Stroke
  - 18 patients: Other causes (liver encephalopathy, hypothyroidism, lung cancer...)

45 patients (42.1%): Only environmental factors and caregiver-relationship were related to BPSD
During Day Service Take in Charge: there is a significant improvement of BPSD between baseline (T0) and dimission (T1) (7 points at UCLA-NPI score).

<table>
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<tr>
<th>NPI T1-NPI T0</th>
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<tr>
<td>Z</td>
<td>-5.148^</td>
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<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.000</td>
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a. Based on positive ranks.
b. Wilcoxon Signed Ranks Test

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<th>Delta NPI (difference between NPIT1 and NPIT0)</th>
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<tr>
<td>Median</td>
<td>-7.0</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>13.14861</td>
</tr>
<tr>
<td>Minimum</td>
<td>-45.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>15.00</td>
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These results are significant only for patients who remain at home. Patients hospitalized, institutionalized or recovered in special care units, don't show BPSD improvement (any significant difference in NPI T1-NPI T0).
Treatment
(patients remained at home)

Trazodone (low doses) 12,5 %
BDZ 20,8%
Atiphycaal AP 20,8%
AP 20,8%

25,1 % do not receive psychoactive drugs
CONCLUSIONS

In our experience DS is a good model of continuity of care and of hospital-community integration, based on team work model, finalized to prevent PwD hospitalization.

Thank You for attention!

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