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PSYCHOTROPIC DRUG USE WITH NEW YORK STATE NURSING HOME RESIDENTS

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PSYCHOTROPIC DRUG USE IN NEW YORK STATE NURSING HOMES

There has been much discussion about the use of psychotropic medication, drugs which modify and control behavior, with the frail elderly. Although much has been written about the inappropriate use of anti-psychotic medication with people who have no form of psychosis; the ineffectiveness of such medication with Alzheimer residents; and the medical risks and toxic reactions of using any psychotropic drugs, many studies suggest serious overuse and misuse of these potentially life-threatening and life-robbing drugs among the elderly in general and in nursing home residents specifically.

The Nursing Home Community Coalition of New York State (NHCC) has long been concerned about the overuse and inappropriate use of psychotropic drugs in nursing homes.

NHCC conducted a study of the use of psychotropic drugs in New York State. This study tried to answer the following questions:

1. How many residents are taking psychotropic drugs?

2. How many residents are taking anti-psychotics (medication to alleviate psychotic behavior), hypnotics (medication to put people to sleep), anti-anxiety medication (medication to eliminate worry and anxiety) and anti-depressants (medication to elevate mood)?

3. How much of these drugs are being given by nurses "as needed" (pro re nata [PRN]), when they believed it necessary, rather than on a regular schedule determined by a physician?

4. How often are non-medication alternatives tried before prescribing psychotropic drugs?

5. How many residents are taking more than one psychotropic drug?

6. How many residents taking psychotropic drugs are also physically restrained?

7. How often are underlying causes being looked at before prescribing psychotropic drugs?

8. How often is the need for the drug listed? Are diagnoses listed or are symptoms given?

9. What percentage of the residents given psychotropic drugs have diagnoses of Alzheimer or dementia?

10. How often are unnecessary drugs being given (drugs that are given in anticipation of side-effects of psychotropic drugs)?

11. How often is the regimen changed if a pharmacist suggests a change based upon her/his review?

12. What are the facility characteristics of low and high psychotropic use?

13. What are the facility characteristics of PRN use?

14. What are the characteristics of facilities which try alternatives and look for underlying causes prior to prescribing drugs?

A questionnaire (sample is attached) was developed with the help of two major pharmacy associations in the state that included both in-house and consultant pharmacists. In addition, a special task force from NHCC oversaw this project. The task force included a pharmacologist, a psychiatric nurse, a social worker, a relative of a nursing home resident, a pharmacist and nursing home advocates. The following organizations were represented:

The Coalition of Institutionalized Aged and Disabled (CIAD);
The Family Association of Daughters of Jacob Nursing Home;
Friends and Relatives of Institutionalized Aged (FRIA);
The National Association of Social Workers, New York City Chapter (NASW): and, The New York City Department of Aging

Of the 400 questionnaires sent out, NHCC received 38 responses. Since one might assume that facilities which admit a high percentage of residents from inpatient psychiatric hospitals would have a higher incidence of psychotropic use, only facilities which had 20 per cent or less of its residents admitted from inpatient psychiatric hospitals were used for the analysis. In addition, one questionnaire was eliminated because the percentages of psychotropic use recorded was so high that there were indications that the respondent did not correctly answer the questions. Thus, the analysis described below is based upon the experiences in 34 facilities encompassing at least 4260 beds.*

Although small, the sample includes a broad representation of the characteristics of facilities in the state in terms of bed size, level of care, in-house pharmacy versus the use of consultants and vendors, on-site physicians, and geographic location. The characteristics of the sample are listed below**:

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*In order to protect confidentiality, questionnaires did not ask exact numbers of beds. Thus, it is impossible to estimate exact numbers of beds in this study. 4260 is a low estimate assuming large facilities to be as least 300 beds and small facilities to be at least 30 beds. These are conservative figures.

**Since not every respondent answered every question, sums will not total 34 in every case.

1. Bed size:

   12 facilities were over 300 beds;
   22 facilities were under 300 beds.

2. Level of care:

   4 facilities were Health Related (HRF);
   9 facilities were Skilled Nursing (SNF);
   9 facilities were both HRF and SNF;
   6 facilities were hospital based.

3. Pharmacies:

   13 facilities had in-house pharmacies;
   20 facilities used vendors and/or consultants;
   11 facilities used vendor pharmacies;
   18 facilities used consultants

4. Physicians:

   12 facilities had on-site physicians;
   22 facilities did not.*

5. Geographic location:

   6 facilities were from Suburban New York (Metropolitan New York City area);
   8 facilities were located in New York City;
   9 facilities were located in Upstate Urban-suburban areas;
   10 facilities were located in Upstate Rural areas.

Over 83 per cent of the sample had computerized pharmacies and were thus able to get accurate usage rates easily.

FINDINGS

Psychotropic Drug Usage

It is reasonable to assume that the pharmacists who responded to NHCC's questionnaire tended to be those who believed that their facility was doing a good job in the use of psychotropic drugs. Thus, we expected to find low usage rates compared to other studies. This was not the case.

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* Only three facilities in the sample had a psychiatrist on site. This was too few to do any meaningful analysis.

** The median rather than the mean was used in all cases because it was thought that the median would give a truer picture. The ranges give a more complete picture.

Frequencies

approximately **50 per cent**** (range **7% to 80%**) of all the residents were being given some type of psychotropic medication (see table 1);

24.5 per cent of the residents (range, **1% to 78%**) in the sample were given anti-psychotic medication of which Haldol, the drug many physicians believe has the most serious life-threatening side effects, was the most frequently used (see table 2);

15 per cent of the residents (range, **3% to 93%**) were given hypnotics of which anti-histamines specifically used as hypnotics were the most frequently used;

7.5 per cent of the residents (range, **0% to 63%**) were given anti-anxiety drugs of which Valium and Xanax were the most frequently used;

9 per cent of the residents (range, **0% to 69%**) were given anti-depressants of which Elavil, the most sedating and anticholinergic (causing serious side effects such as urinary retention, blurry vision,constipation dry mouth and precipitation of hallucinations), was the most frequently used;

6 per cent of the residents (range, **0% to 50%**) were on more than one psychotropic medication. *

Facility Characteristics of Drug Use

Although we expected to find a negative relationship between the use of psychotropic drugs and the facility's looking for underlying causes and trying alternatives prior to use of medication, we found that relationship for only one type of psychotropic drug.

The findings indicate that:

Facilities that tended to look for causes and to try alternatives before using psychotropic medications were less likely to give hypnotics; and,

Facilities that had high use of PRN (described in the next section) orders tended to have high use of different psychotropic drugs.

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* It is interesting to note that a study recently conducted by Harvard Medical School (Journal of the Medical Association, November 25, 1988: Mike Beers, MD; Jerry Avorn, MD; Stephen B. Soumerai, ScD; Daniel E. Everitt, MD; David S. Sherman, RPh; and Susanne Salem, MHSA) studying 12 representative Health Related facilities (the lowest level of care) encompassing 850 beds in Massachusetts, found similar results in terms of anti-psychotic use and in terms of psychotropic drug use in general.

"PRN" Use

When orders are given PRN, it means that the nurse can give the medication whenever she/he believes it is necessary. Many practitioners do not use PRN orders because they believe that this is not in the best interest of the resident to have medication given on an irregular basis.

Frequencies

41.2 per cent of the facilities had policies allowing PRN use and 58.8 per cent did not;

10% of all the anti-psychotic medication in the sample (range, 3% to 50%) was given PRN;

10% of all the hypnotics (range, 0% to 80%) were given PRN;

5% of all the anti-anxiety drugs (range, 0% to 81%) were given PRN;

7.5% of all the anti-depressants (range, 0% to 18%) were given PRN.

Facility Characteristics of PRN Use

The findings indicate that:

Facilities which had a pharmacy and/or a physician on site, were less likely to use PRN orders;

Facilities that had a high use of PRN orders for hypnotics and anti-depressants tended to have a use of psychotropic drugs;

Facilities that used PRN orders for anti-psychotics tended to have more residents on physical restraints as well as on psychotropics.

Looking for Underlying Causes and Using Alternatives

Good nursing home practice demands that underlying causes be looked at and non-medication alternatives be tried prior to ordering psychotropic medication. The findings discussed below are based upon pharmacist observations and record reviews. Sixty-four percent of the respondents used both observation and record review, the rest used observation only.

Frequencies

In 50% of the cases (range, 0% to 100%) underlying causes were looked into; and,

in 25% (range, 0% to 100%) alternatives were tried before prescribing psychotropic drugs.

Facility Characteristics Of Those Who Looked for Causes and Tried Alternatives

The findings indicate that:

Small facilities, those under 300 beds, were found more likely than large facilities to look for causes and to try alternatives before using psychotropic medications;

Facilities with a physician on site was found to be less likely to try alternatives before using psychotropic medications;

Facilities that used PRNs for hypnotics were more likely not to look at underlying causes of problems before prescribing psychotropic medications; and,

Facilities that tended to have more residents both physically restrained as well as being on a psychotropic drug were more likely to try alternatives.

Definitions of Need for Medication

Frequencies

97% of the facilities defined the need for the medication;

84.4% of the facilities listed diagnoses as well as symptoms when prescribing psychotropic drugs; and,

35% of the use of psychotropic medication was for Alzheimers or dementia residents.

Giving Medications to Counteract Side Effects

Frequencies

40.6 percent of the facilities reported that they gave other medications to counteract the side effects of the psychotropic medications they gave, while 59.6% said they did not.

Table 1

	Percent		Percent Causes Looked At	Percent Alternatives Tried	Percent Alzheimer or Dementia
	Med*	Range			
Psychotropic Drugs	50	7 - 80	50	25	35

* Median

Table 2

	Percent Median	Range	Percent PRN Median	Range
Anti-Psychotics	24.5	1 - 78	10.0	3 - 50
Hypnotics	15.0	3 - 93	10.0	0 - 80
Anti-Anxiety	7.5	0 - 63	5.0	0 - 81
Anti-Depressants	9.0	0 - 69	7.5	0 - 18

Facility Characteristics of Giving Medications

The findings indicate that:

Small facilities were less likely to prescribe other medications;

Use of Unnecessary Drugs

Drugs given in anticipation of side-effects of other medication are considered unnecessary because no effect has manifested itself and the drug may not be needed.

Frequencies

27.3% of the facilities prescribed drugs in anticipation of side-effects of psychotropic medication.

Facility Characteristics of Use of Unnecessary Drugs

The findings indicate that:

Facilities with physicians and/or pharmacies on site were less likely to use unnecessary drugs;

Facilities using vendor pharmacists were more likely to use unnecessary drugs;

Facilities with low use of anti-psychotics and anti-depressants tended to use less unnecessary drugs; and,

Large facilities were more likely to use unnecessary drugs.

Change in Regimen as a Result of Pharmacist Medication Review

Frequencies

75% of the facilities responded to pharmacists' comments by changing the resident's drug regimen.

Facility Characteristics

The findings indicate that:

Faculties that don't have PRN policies were more likely to change a resident's drug regimen based upon pharmacists' review.

Adjustment of Dosages

Frequencies

47% of the facilities adjusted medication dosages with 38.5% adjusting down, 57.7% adjusting both up and down and only 3.8% adjusting up only.

Psychotropic Drug and Physical Restraint Use

Frequencies

12 per cent of the residents (range, 0% to 85%) receiving psychotropic drugs are also physically restrained.

Facility Characteristics

The findings indicate that:

Facilities that had PRN orders for anti-psychotics were more likely to physically restrain residents on medication.

Psychotropic Drugs and Alzheimers

Frequencies

35% of the psychotropic drugs given were given to Alzheimers and/or dementia residents.

Facility Characteristics for Use

The findings indicate that:

Facilities that used vendor pharmacists are more likely to give psychotropic drugs to Alzheimer and/or dementia residents.

Small and Large Facilities

Small Facilities - Under 300 Beds

When looking at small facilities only, some interesting findings appear in terms of Alzheimer residents and in terms of looking at underlying causes and trying alternatives:

Small facilities that gave a high percentage of its psychotropic drugs to Alzheimer or dementia residents tended to look at underlying causes and to try alternatives before prescribing medication;

Small facilities that gave a high percentage of its psychotropic drugs to Alzheimer or dementia residents tended generally to give less psychotropics to its residents; and,

Small facilities that used hypnotics more tended to look at underlying causes and to try alternatives less.

Large Facilities - Over 300 Beds

Looking at large facilities specifically found different results when looking at the use of physical restraints:

Large facilities that gave a high percentage of its psychotropic drugs to Alzheimer and/or dementia residents, tended to use physical restraints with the medication for all its medicated residents;

Large facilities that prescribed medications to counteract side effects more often tended to use restraints more often with psychotropic drugs;

Large facilities that had high use of anti-anxiety drugs tended not to look at underlying causes prior to ordering; and,

Large facilities which had high use of hypnotics tended to use restraints more with the psychotropic drugs.

Discussion of Findings

Increasing studies are demonstrating the medical risks of using psychotropic drugs: death, hip fractures, falls, oversedation, and confusion. The clinical literature fails to show much benefit of the use of psychotropic medication for elderly patients without psychoses. However, the present study, like others before it, indicates a high incidence of psychotropic drug use in our state's nursing homes. Why are so many of our nursing home residents on psychotropic drugs? How much this medication is appropriate and how much of it is being used to "chemically" restrain our frail elderly?

The data demonstrates that the drugs most commonly used in each psychotropic category were the ones that tend to be the most toxic and dangerous for the frail elderly. The choice of anti-histamines as the most common hypnotic used, may be due to two reasons.

One, it may be that facilities believe that anti-histamines are safer than other hypnotics (which, given its anticholinergic properties, may not be the case), or, two, it is an attempt to avoid state and federal scrutiny as anti-histamines are not officially designated as a hypnotic and therefore, its use has not been examined in the past. This finding indicates the need to include anti-histamines when looking at the use of hypnotics.

The findings also indicate that the high use of "as-needed" (pro re nata [PRN]) orders tended to lead to a high use of psychotropics. In addition, facilities that had PRN orders for anti-psychotics were more likely to physically restrain their residents on psychotropic drugs. It might be beneficial for facilities to look into their PRN policy use to see if it is appropriate to use such orders with psychotropic drugs and to see if they can appropriately reduce their percentage of psychotropic medication use by reducing their use of PRN orders.

It is the responsibility of the pharmacist to examine each resident's medication regimen and report the results. In 75% of the cases in the present sample, the resident's regimen was changed as a result of the pharmacist's comments. This seemed to be influenced by the incidence of PRN policies: facilities that did not have a PRN policy were more likely to change a resident's drug regimen based upon the pharmacist's review than those that did. This is another reason to examine the use of PRN orders.

The low incidence reported by the pharmacists of looking for underlying causes (50%) and the trying of non-medication alternatives (25%) prior to prescribing psychotropic drugs indicates a need for facilities to look carefully into their care practices. Troubling was the finding that for facilities in this sample, those that had a physician on-site were <u>less</u> likely to look at underlying causes or to try alternatives prior to prescribing psychotropic medication (Because only 64% of the pharmacists answering these questions used both observations and record reviews, these answers may indicate pharmacist perception. If so, why would they perceive poor medical practice?). The negative relationship between looking for causes and trying alternatives and the use of hypnotics (facilities that looked into causes and tried alternatives used <u>less</u> hypnotics), further adds to the need for facilities to look into this issue.

An interesting finding was that facilities that tended to have more residents both medicated and physically restrained (the median of the sample was 12% with a range of 0 to 85%) were <u>more</u> likely to try alternatives prior to medication. Perhaps some facilities consider physical restraints alternatives to psychotropic drugs. The present writer considers environmental and personnel change real alternatives to psychotropic medication. Physical restraints may be just another way to control and quiet.

Another indication of the danger of psychotropic drugs is the amount of medication that is given to counteract side effects. Much has been written on the dangers of polypharmacy in elderly people. In the present study, 40.6% of the facilities gave additional medication with 27.3% prescribing these drugs before they were needed. The relationship found between the lower use of anti-psychotics and anti-depressants and the lower use of unnecessary drugs is another reason for facilities to examine their practices and reduce the use of psychotropic drugs.

There were some findings indicating good care practices.

1. Most facilities in the present sample (97%) defined the need for the psychotropic drug before prescribing using diagnoses as well as symptoms (84.4%).

2. Many facilities did not give additional drugs to counteract side effects of psychotropic drugs (59.6%) and many (72.7%) did not give these drugs unnecessarily.

3. Three quarters of the facilities in the present sample responded to the pharmacist's review of each resident's medication regimen in a favorable way by changing the regimen.

4. A majority of the facilities in the sample (57.7%) adjusted psychotropic medication with 47% reducing the dosage and with only 3.8% raising the dosage.

Major differences were found in the present sample between the small and large facilities. Small facilities tended to have better care practices in some instances: they were less likely to prescribe other medications to counteract psychotropic drugs; and, were more likely to look for underlying causes and to try non-medication alternatives prior to prescribing psychotropic drugs while large facilities in the present sample were more likely to use unnecessary drugs.

It is possible that small facilities are less institutional, more able to spend time looking at individual residents and less focused on medical solutions. However, the data does <u>not</u> demonstrate that small facilities used psychotropic drugs any less than the large facilities.

There is a need for consumers, care providers and state and federal regulators to carefully examine the use of psychotropic

medication in New York State nursing homes. The wide ranges found in the use of this medication in the present study, with some facilities giving psychotropic drugs to over 90% of their population, indicate the need to look carefully at those facilities at the high end of the ranges.

With the help of NHCC, the New York State Health Department has developed a new method for gathering accurate data on the amount of psychotropic drugs taken by each nursing home resident in the state. This method will include data relating to the use of anti-histamines. The data will be gathered twice a year. The information will be used to focus inspections and will be used to send inspectors on surprise visits to those facilities medicating large percentages of their populations. NHCC hopes the State will go into any facility where psychotropic drug use goes above the median for the state.

In addition, due to consumer pressure nationally, the federal government has also begun to focus on the inappropriate use of psychotropic drugs and has issued regulations and inspection guidelines that will give more scrutiny to the misuse and overuse of these drugs.

The time has come to question seriously the use of psychotropic drugs in our state's nursing homes. We must urge our state regulators to question physicians' practices in the use of psychotropic drugs. The time has come to say there must be a better way.

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**PLEASE RETURN BY MARCH 5

PSYCHOTROPIC MEDICATION USE IN NURSING FACILITIES

THE INTENT OF THIS QUESTIONNAIRE IS TO GATHER INFORMATION ON THE USE OF PSYCHOTROPIC MEDICATION IN OUR STATE. IT IS NOT THE INTENT TO GATHER ANY FACILITY-SPECIFIC DATA. THEREFORE, THE QUESTIONNAIRES WILL REMAIN ANONYMOUS AND ARE NOT CODED IN ANY WAY.

Please answer all the questions to the best of your ability.
If you do not know an answer please write "DK."

Background data: IN-HOUSE PHARMACIST____ VENDOR PHARMACY _____ CONSULTANT____

OVER 300 BEDS _____ UNDER 300 BEDS ____ HRF ____ SNF ___ HOSPITAL BASED _____

PHYSICIAN ON-SITE: yes ___ no ___ PSYCHIATRIST ON-SITE: yes _ no ____

PERCENT ADMITTED FROM INPATIENT PSYCHIATRIC HOSPITALS _____

SURBURBAN NY ___NEW YORK CITY ___ UPSTATE URBAN/SUBURBAN ____UPSTATE RURAL____
(Long Island or Northern Metropolitan Area)

IS YOUR PHARMACY COMPUTERIZED? ___YES ____NO

1. MEDICATIONS

Anti-Psychotic	% of Residents Receiving	Anti-Anxiety	% of res. Receiving
Haloperidol (Haldol)	_____		
Chlorpromazine (Thorazine)...	_____	Diazepam (Valium).....	_____
Thioridazine (Mellaril).....	_____	Chlordiazepoxide (Librium).	_____
Fluphenazine (Prolixin).....	_____	Oxazepam (Serax).....	_____
Perfenazine (Trilafon).....	_____	Chlorazepate (Tranxene)....	_____
Trifluoperazine (Stelazine)..	_____	Lorazepam (Ativan).....	_____
Thiothixene (Navane).....	_____	Alprazolam (Xanax).....	_____
Loxapine (Loxitane).....	_____	Buspirone (Buspar).....	_____
Molindone (Moban).....	_____	Other	_____
Other_____	_____	_____.....	_____

Hypnotics		Anti-depressants	
Flurazepam (Dalmane).....	_____	Imipramine (Tofranil).....	_____
Temazepam (Restoril).....	_____	Amitriptyline (Elavil)....	_____
Triazolam (Halcion).....	_____	Amoxapine (Ascendin).....	_____
Others		Desipramine (Norpramin)...	_____
Barbiturates.....	_____	Maprotiline (Ludiomil)....	_____
Phenobarbital.....	_____	Nortriptyline (Pamelor)...	_____
Chloral Hydrate.....	_____	Protriptyline (Vivactil)..	_____
Noludar.....	_____	Trazodone (Desyrel).....	_____
Meprobamate.....	_____	Fluoxetine (Prozac).....	_____
Tryptophan.....	_____	Other _____.....	_____
Other _____.....	_____		
Antihistamine _____			
(used as a hypnotic).....	_____		

(OVER PLEASE)

2. Does your facility have a policy of using PRN orders for psychotropic medications? yes _____ no _____

If your answer to question # 2 was no, skip question 3.

3. PRNs	PERCENT ARE PRN	PERCENT OF PRNs WITH STANDING ORDERS
Anti-psychotic	_____	_____
Anti-anxiety	_____	_____
Hypnotics	_____	_____
Anti-depressants	_____	_____

4. The use of alternatives and looking for underlying causes prior to ordering psychotropic medications.

THIS QUESTION IS EXTREMELY IMPORTANT. PLEASE ANSWER TO THE BEST OF YOUR ABILITY. IF POSSIBLE, PLEASE REVIEW NOTES AND CARE PLANS.

Percent where non- medication ALTERNATIVES were tried prior to ordering_____

Percent where under-lying CAUSES were looked for prior to ordering _____

The basis of this data is: review of records_____ my own observation_____ another _____

5. Generally, is the need for the medication defined? yes ——— no ———

A. If yes, how is it defined? symptoms ——— diagnoses ——— both ———

B. What percent of diagnoses or symptoms are "dementia" or "Alzheimers?"___

6.A. Generally, are other medications used to counteract the side effects of the psychotropic medications? yes _____ no _____

B. If yes, were they prescribed in anticipation of the side effects? yes___ no___

7. Generally, has the resident's medication regimen changed as a result of your medication review comments? yes_____ no_____

8. What percentage of the residents are on more than one psychotropic medication? _____

9.A. What percentage of the residents on psychotropic medication have had their dosage adjusted? _____

B. If yes, was it adjusted up_____ or down_____?

10. What percentage of residents on psychotropic drugs are also in physical restraints? _____

THANK YOU FOR FILLING OUT THIS QUESTIONNAIRE.