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Cochrane Nursing Care Field – Cochrane Review Summary

Prepared for the

Issues in Mental Health Nursing Journal

Chlorpromazine versus penfluridol for schizophrenia (Review)

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- **Background**:

Schizophrenia is a chronic and relapsing mental disorder that affects how a person thinks, feels and behaves. Symptoms typically first appear in people between the ages of 16 and 30 years of age and can be so severe as to be disabling. Sufferers experience formal thought disorder and some cognitive disturbances with symptoms categorised as positive or negative in nature. Positive symptoms include delusions and hallucinations while negative symptoms include poverty of speech, flattened affect, anhedonia and lack of motivation (Nikvarz et al, 2017).

Front line treatment to manage the symptoms of schizophrenia involves the use of antipsychotic medications, such as chlorpromazine and penfluridol, however patient compliance can be problematic due to the adverse side effects of the drugs and/or lack of insight in to their illness (Nikvarz et al, 2017). Chlorpromazine is recognised as benchmark antipsychotic drug against which others are measured (Adams, 2014). Its use is associated with a wide range of side effects, including extrapyramidal, anticholinergic and antihistaminergic effects, for example dry mouth, blurred vision, urinary retention and tremors (Adams, 2014). Penfluridol is a long-acting antipsychotic drug with similar side effects to chlorpromazine, however has the advantage of being able to be administered weekly

- **Objective/s:** .

This review aimed to determine the clinical effects of chlorpromazine compared with penfluridol for adults with schizophrenia..

- **Intervention/Methods:**

The review included randomised controlled trials (RCTs) that compared chlorpromazine to penfluridol , at any dose and mode or pattern of administration, for adults with schizophrenia or related disorders such as schizophreniform disorder and schizoaffective disorder. Quasi- randomised studies were excluded.

Outcomes were categorised as either short term (less than 12 weeks), medium term (12-52 weeks) or long-term (over one year).

The primary outcome measures considered in this review were:

- Service utilisation – hospital admission/readmission;
- Global state - clinically important change in global state;
- Adverse events – clinically important extra-pyramidal side effects.

The secondary outcomes assessed included

- Service utilisation (days in hospital);
- Global state – average endpoint/change in score on global state scale and relapse;
- Mental state;
- Behaviour;
- Adverse effects/events;
- Leaving the study early;
- Social functioning;
- Economic outcomes;
- Quality of life/satisfaction with care for either recipients of care or carers;
- Cognitive functioning.

- ## Results:

Only a limited number of studies relevant to the review objectives were identified. This included three studies (five reports), representing 130 participants aged between 19 and 60 years of age. The duration of the studies ranged from 13 to 52 weeks. None of the studies were recent, dating from 1977, 1979 and 1982.

No difference was found between the medication regimes for service utilisation: hospital readmission, however the evidence for this was rated as poor. No studies reported on global state, relapse, mental state or death. The results of two studies were suggestive that larger sample sizes may have found that patients treated with chlorpromazine experienced less akathisia, however the small sample size and probable reporting bias mean that this result should be viewed with caution.

- ## Conclusions:

The authors concluded that the quality of evidence in the review was low, due to the limited number of studies, the age of the studies and poor reporting techniques which meant that much of the data were wasted. For these reasons no firm conclusions could be drawn from the results regarding the efficacy of chlorpromazine and penfluridol for the treatment of schizophrenia and related disorders in adults. The drug penfluridol only needs to be administered weekly, which the authors suggest could aid in compliance rates.

- ## Implications for Practice:

Researchers have an ethical duty to use data collected from patients responsibly and with integrity. The authors reported that much of the data in the included studies were wasted due to poor reporting and lack of recording. As the age of the studies included in this review indicates, chlorpromazine and penfluridol have been used for the treatment of schizophrenia and related disorders in adults for decades. However the reviewers identified that due to the absence of high quality evidence to support this practice, a complete picture of the comparative effects of these drugs is still lacking.

- ## References:

Nikvarz, N., Vahedian, M., Khalili, N. 2017. Chlorpromazine versus penfluridol for schizophrenia. (Review). *Cochrane Database of Systematic Reviews*, 2017, Issue 9, Art.No: CD011831 DOI: 10.1002/14651858.CD011831.pub2.

Adams, CE, Awad, GA, Rathbone, J, Thornley, B, Sores-Weiser, K. 2014. Chlorpromazine versus placebo for schizophrenia. *Cochrane Database of Systematic Reviews*, 2014, Issue 1. DOI: 10.1002/14651858.CD000284.pub3.