

No effect of the 1918 influenza pandemic on the incidence of acute compulsory psychiatric admissions in Amsterdam

Douwe H. van der Heide¹ & Roel A. Coutinho^{2,3}¹Phoenix, Centre for Psychiatric Treatment of Refugees, Psychiatric Hospital “De Gelderse Roos”, The Netherlands; ²Center for infectious Disease Control, National Institute for Public Health and the Environment, Bilthoven, The Netherlands;³Academic Medical Center/University of Amsterdam, Department of Human Retrovirology, Amsterdam, The Netherlands

Accepted in revised form 17 January 2006

Key words: Influenza, Pandemic, Mental Health

Influenza pandemics are a recurrent phenomenon with a considerable impact on public health. Little is known however of their influence on mental health. Influenza A viruses are neurovirulent; during the pandemic of 1918 for instance, neurological complications were observed ranging from single neuropathies to encephalitis lethargica. Another complication was acute psychosis, which could occur in hitherto mentally healthy individuals until shortly after the symptoms of infection had subsided and which was hard to distinguish from schizophrenia (Menninger [1]).

A new influenza pandemic causing this kind of morbidity could affect facilities for acute psychiatric admissions that often already are strained to their limits. We studied the impact of the 1918 influenza pandemic in Amsterdam on the number of acute psychiatric admissions in that period by comparing mortality data with data from the registry for acute compulsory psychiatric admissions of the Municipal Health Authority.

Only data on mortality due to influenza proper were used (Quanjer [2]); as fatalities due to the viral

infection itself usually occurred within a week after the first symptoms, these numbers were considered to be a reasonable measure for the timeframe within which the morbidity reached pandemic levels.

Acute compulsory admissions were well documented because of their judicial consequences; registrations included an abstract of the psychiatric examination; they were tallied by hand by one of the authors. At face value the same type of patient was admitted as nowadays in Amsterdam. Admission facilities were just as constrained. The registry reflects the incidence of psychotic complications as the typical agitation and loss of impulse control would necessitate psychiatric commitment, which was usually involuntary; in the Netherlands, “open” wards for voluntary placement in psychiatric hospitals only started to be developed after 1915.

The results are presented in Figure 1 and Table 1. In October and November the pandemic passed through Amsterdam and most of the mortality occurred. The admission numbers during this period were slightly

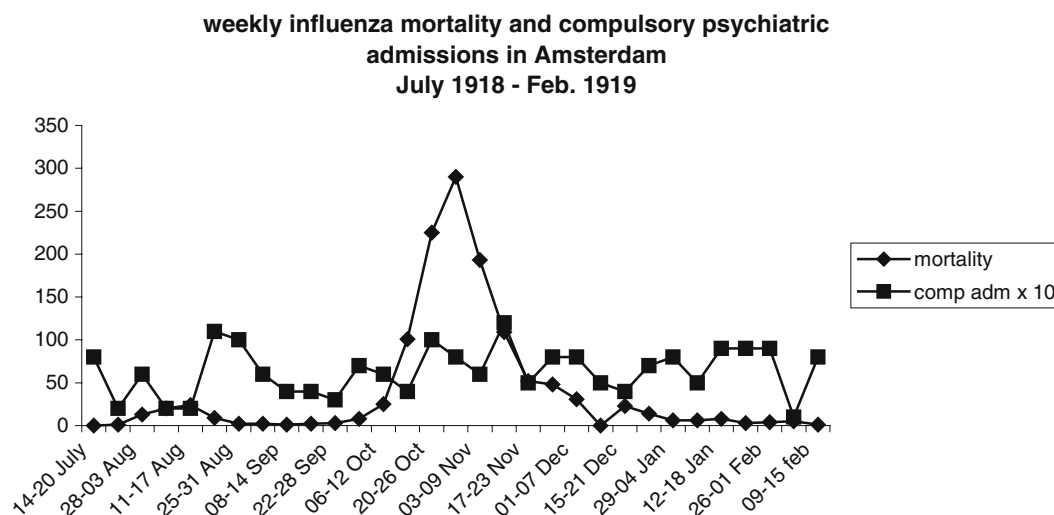


Figure 1. The absolute mortality numbers due to influenza proper per week in Amsterdam (Table 1) plotted against the absolute weekly numbers of acute compulsory psychiatric admissions in Amsterdam (times 10, for convenience of comparison).

Table 1. The absolute numbers of acute compulsory psychiatric admissions per month in Amsterdam in 1918 compared to the mean monthly numbers and the maximum monthly numbers in the period 1908–1923. The pandemic passed through the city during October and November 1918

	Absolute numbers of admissions per month in 1918	Mean admission numbers per month 1908–1923	Maximum admission numbers per month 1908–1923
January	22	30.3	46
February	21	30.4	51
March	26	28.4	41
April	29	27.1	42
May	29	27.9	42
June	20	27.8	45
July	29	28.0	40
August	28	22.3	31
September	21	24.1	39
October	32	26.0	37
November	34	25.4	35
December	27	29.5	41

The study was done under auspices of the Netherlands School of Public and Occupational Health in Amsterdam.

higher than usual for the time of the year but this was not significant. Although it cannot be ruled out that staffing problems in the public services during the pandemic have affected the registration, the present results do not indicate a possible impact of the 1918 influenza pandemic on mental health provisions.

References

1. Menninger KA. Influenza and schizophrenia. An analysis of post-influenzal "dementia precox" as of 1918,

and five years later further studies of the psychiatric aspects of influenza 1926. *Am J Psychiatry* 1994; 151(6): 182–187.

2. Quanjor AAJ. *De griep in Nederland in 1918 tot 1920*. 1st ed. The Hague: Gezondheidsraad, 1921: 11–12.

Address for correspondence: D.H. van der Heide, Phoenix, Centre for Psychiatric Treatment of Refugees, Psychiatric Hospital "De Gelderse Roos", P.O. Box 27, 6870 AA Renkum, The Netherlands

Phone: (31) 26 483 31 45; Fax: (31) 26 483 31 73
E-mail: d.van.der.heide@degelderseroos.nl