Giovanni de Girolamo

COVID-19 EPIDEMIC: ARE PSYCHOSOCIAL ISSUES IMPORTANT?

YES, THEY ARE!

IRCCS
CENTRO SAN GIOVANNI DI DIO FATEBENEFRATELLI – BRESCIA
Centro Nazionale per lo Studio e la Cura
della Malattia di Alzheimer e Malattie Mentali

Integrated surveillance of COVID-19 in Italy

(Ordinanza n. 640 del 27/02/2020)

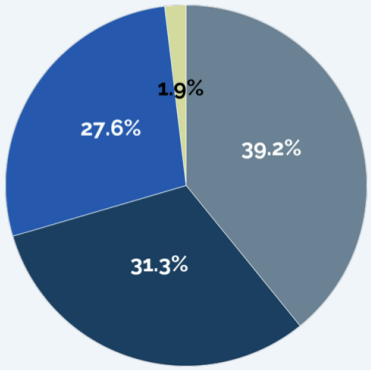
6 May 2020 UPDATE

212,532 cases of COVID-19*

23,718 health-care workers $

27,402 associated deaths

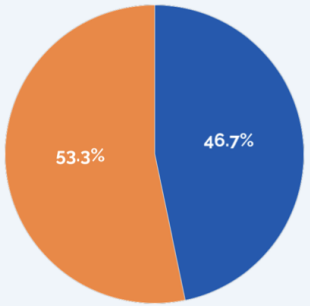
Age



0-18 19-50 51-70 >70

Median age of cases; **62 years**

Sex

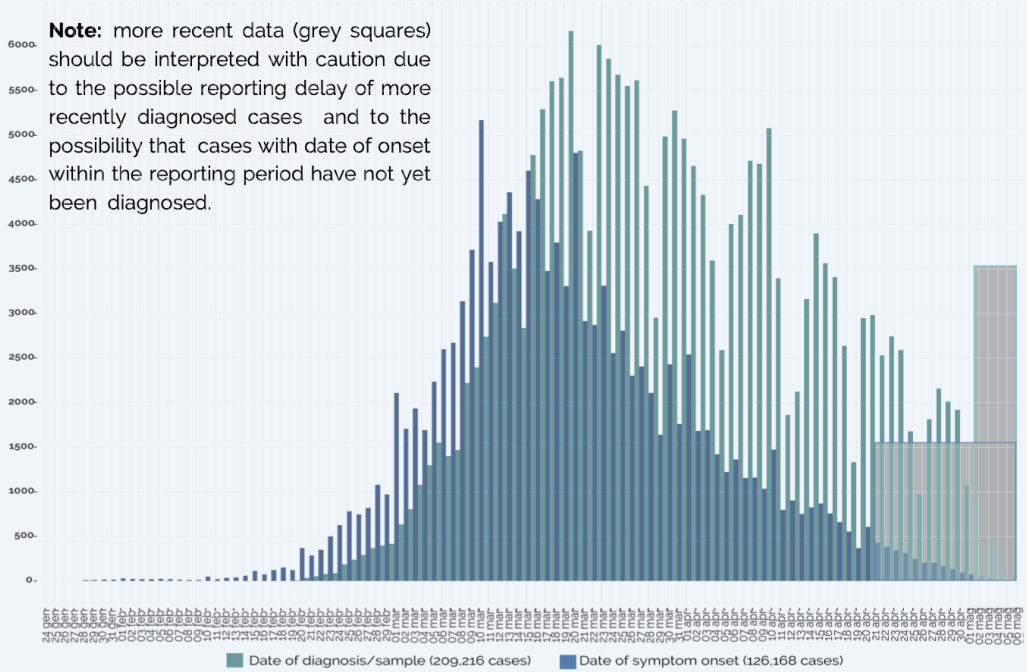


Female

Male

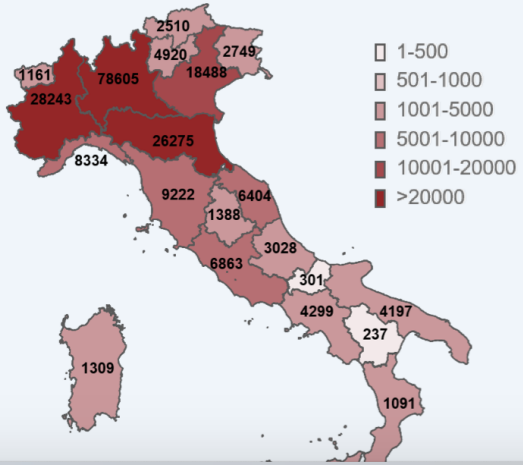
Age (years)	Deaths [n (%)]	CFR§
0-9	3 (0%)	0.2%
10-19	0 (0%)	0%
20-29	10 (0%)	0.1%
30-39	53 (0.2%)	0.3%
40-49	242 (0.9%)	0.9%
50-59	972 (3.5%)	2.5%
60-69	2935 (10.7%)	10.1%
70-79	7738 (28.2%)	24.6%

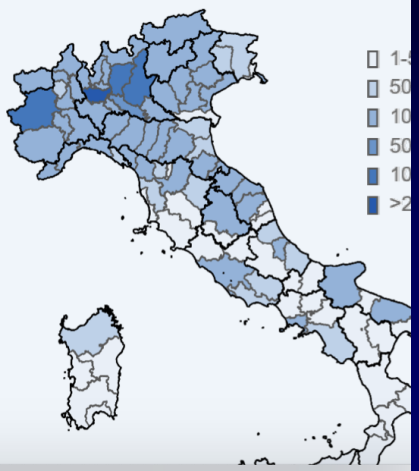
Note: more recent data (grey squares) should be interpreted with caution due to the possible reporting delay of more recently diagnosed cases and to the possibility that cases with date of onset within the reporting period have not yet been diagnosed.



99%
confirm

Total number of COVID-19 cases diagnosed by the Italian Regional Reference Laborat





ARTICOLI IN EVIDENZA COVID-19

Elenco dei Medici caduti nel corso dell'epidemia di Covid-19

AUTORE: REDAZIONE 06/05/2020

154 physicians died!

JAMA Psychiatry | Special Communication

Mental Health in the Coronavirus Disease 2019 Emergency
The Italian Response

Giovanni de Girolamo, MD; Giancarlo Cerveri, MD; Massimo Clerici, MD; Emiliano Monzani, MD; Franco Spinogatti, MD; Fabrizio Starace, MD; Giambattista Tura, MD; Antonio Vita, MD

IMPORTANCE This article briefly reports the experience of mental health services and the lessons learned during the coronavirus disease 2019 crisis. In particular, this report offers opportunities to build on experience gained in managing the coronavirus disease 2019 emergency in the Departments of Mental Health and Addiction (DMHAs) in Lombardy, the wealthiest Italian region, which has around 10 million inhabitants.

OBSERVATIONS Many challenges have occurred in the management of health services. In many hospitals, entire wards, including some psychiatric wards, have been reorganized to admit patients with coronavirus disease 2019, and many physicians and nurses have been diverted to wards managing patients with coronavirus disease 2019. Most day facilities for patients with psychiatric needs have been temporarily closed, whereas in residential facilities, patients who usually are free to come and go during the day have had to be confined in the facilities with very limited or no leave. These changes have produced considerable stresses on people with severe mental disorders. Many outpatient clinics have limited appointments to those with the most urgent cases, and home visits, a common practice in most DMHAs, have been drastically reduced with potentially detrimental consequences for patients' well-being. Another potential detrimental consequence of being forced stay at home has been an increase in the hours spent face to face with families with high amounts of conflict.

CONCLUSIONS AND RELEVANCE Departments of Mental Health need to be equipped with appropriate e-health technologies and procedures to cope with situations such as this. Additionally, there needs to be a rollout of interventions to mitigate the potentially harmful consequences of quarantine. Departments of Mental Health should be able to assume a leadership position in the psychosocial management of disasterlike situations, and this requires the acquisition of new skills, notably how to correctly inform the population about risk, train and disseminate effective preventive and management procedures for disasters, support health personnel and rescuers, and support those experiencing bereavement.

JAMA Psychiatry. 2020;77(10):1-3. doi:10.1001/jamapsychiatry.2020.1276
Published online April 28, 2020.

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Acceptance Date: April 1, 2020.

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Ir J Psychol Med. 2020 May 5:1-23. doi: 10.1017/ipm.2020.29. [Epub ahead of print]

PSYCHIATRIC HOSPITALIZATION RATES IN ITALY BEFORE AND DURING COVID-19: DID THEY CHANGE? AN ANALYSIS OF REGISTER DATA.

Clerici M[#1], Durbano F[#2], Spinogatti F[#3], Vita A[#4], de Girolamo G[#5], Micciolo R[#6].

Author information

Abstract

OBJECTIVES: To assess admission rates to 7 General Hospital Psychiatric Wards (GHPWs) located in the Lombardy Region in the 40 days after the start of COVID-19 epidemic, compared to similar periods of 2020 and 2019.

METHODS: Anonymized data from the regional psychiatric care register have been obtained and analyzed. The seven GHPWs care for approximately 1.4 million inhabitants and have a total of 119 beds.

RESULTS: In the 40-day period (February 21st-March 31st 2020) after the start of the COVID-19 epidemic in Italy, compared to a similar 40-day period prior to 21 February, and compared to two 40-day periods of 2019, there has been a marked reduction in psychiatric admission rates. The reduction was explained by voluntary admissions, while there was not a noticeable reduction for involuntary admissions. The reduction was visible for all diagnostic groups, except for a group of 'Other' diagnoses, which includes anxiety disorders, neurocognitive disorders, etc.

CONCLUSIONS: Large-scale pandemics can modify voluntary admission rates to psychiatric facilities in the early phases following pandemic onset. We suggest that the reduction in admission rates may be due to fear of hospitals, seen as possible sites of contagion, as well as to a change in thresholds of behavioural problems acting as a trigger for admission requests from family relatives or referrals from treating clinicians. It is unclear from the study whether the reduction in admissions was contributed to most by the current pandemic or the lockdown imposed due to the pandemic.'

KEYWORDS: COVID-19; disaster; hospital admission

PMID: 32368994 DOI: 10.1017/ipm.2020.29

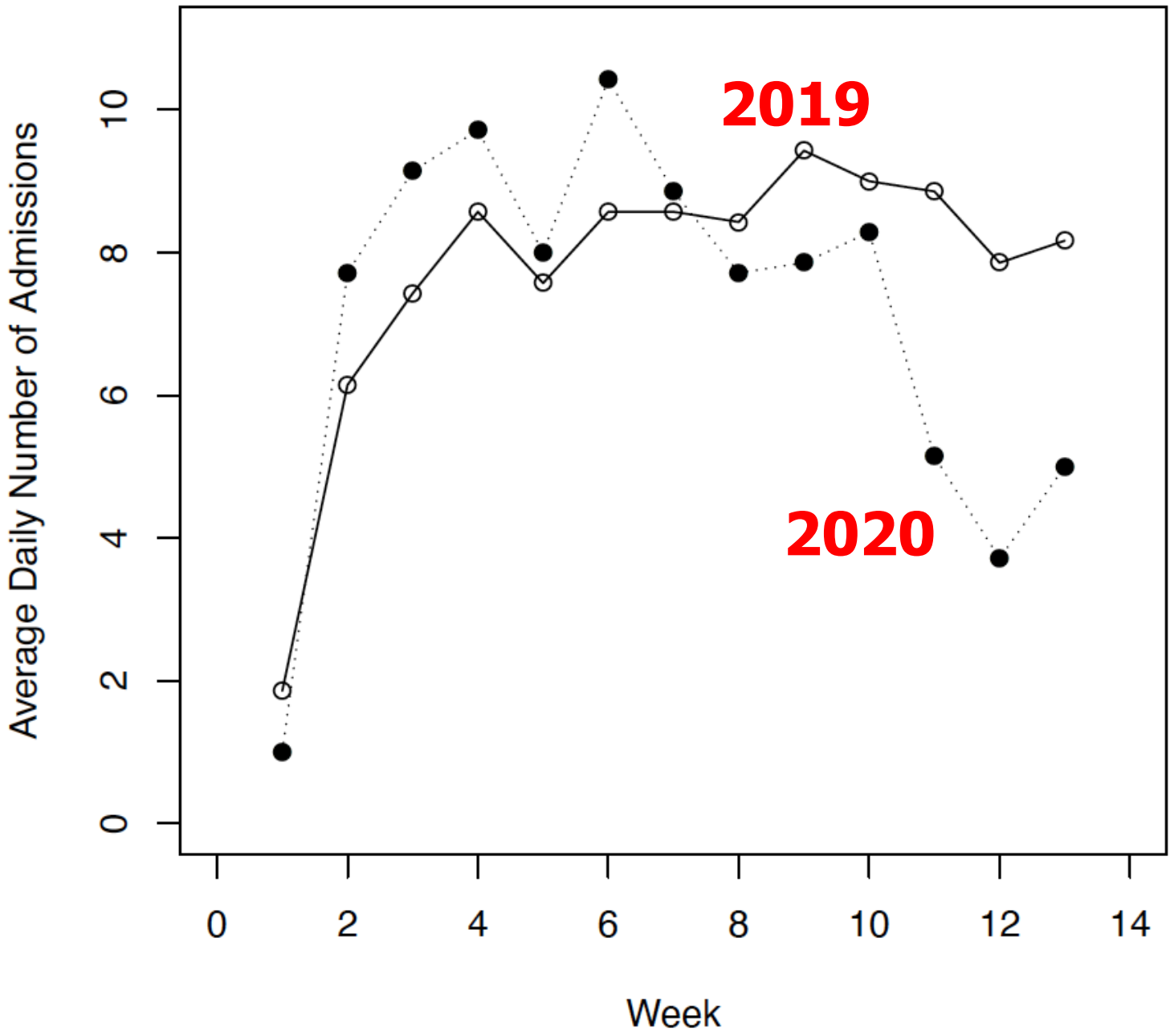
TABLE 1

CATCHMENT AREAS OF THE 4 DMHAs INCLUDED IN THE ANALYSIS

DMHA	CATCHMENT AREA POPN ≥18 YEARS	NUMBER OF MUNICIPALITIES	NUMBER OF PATIENTS IN TREATMENT*	NUMBER OF GHPWs**	GHPW BEDS
Brescia	484,357	52	8,643	2	44
Cremona	189,531	77	3,781	2	25
Melegnano Martesana	419,213	42	6,500	2	30
Monza	245,145	16	4,200	1	20
TOTAL	1,338,246	187	23,124	7	119

***Overall number of patients with at least one contact with the DMHA in the course of 2019**

****GHPWs= General Hospital Psychiatric Wards**


2019
2020
Average Daily Number of Admissions
0
2
4
6
8
10
0
2
4
6
8
10
12
14
Week

From the Department of Medicine, School of Medicine, University of Pennsylvania, Philadelphia, and the Veterans Administration Hospital, Coatesville, Pennsylvania, U.S.A.

WARTIME CHANGES IN HOSPITAL ADMISSIONS FOR SCHIZOPHRENIA

A comparison of admissions for schizophrenia and other psychoses in six countries during World War II

F. C. DOHAN, M. D.

It has been recognized for many years that the number of patients admitted to mental hospitals may decrease during a war (*Murphy* (1961)). Most reports, with a few outstanding exceptions have been based on impressions from local experience.

The purposes of this article are: (1) to present some data on numbers of admissions by diagnostic class which were collected on a nationwide basis by government agencies in Finland, Sweden and Canada, (2) to compare the degree of change experienced in six countries during World War II in admissions for schizophreina, (and for other major diagnostic classes of psychoses), (3) to discuss some environmental factors possibly influencing the patterns of change, and (4) to suggest that alterations in diet may have been an important cause of the differences.

FLUCTUATION OF DANISH PSYCHIATRIC ADMISSION RATES IN WORLD WAR II: INITIAL DECREASE AND SUBSEQUENT INCREASE

(*Trends in Psychiatric Hospital Admissions* 1939-1948)

BY B. B. SVENDSEN, M. D.

From the times of Pinel and Esquirol to the present, general interest in the problems of psychiatric statistics has been considerable in most of the civilized countries, although some of the methods and particular topics of concern may have varied. One of the reasons for this interest can be traced to the long-known fact that admissions to mental hospitals may show rather significant variations within any given period of time, thus revealing certain important trends in certifiable morbidity rates.

According to Deutsch, Pliny Earle was the first to stress the need of careful psychiatric statistics more than a hundred years ago. The formulation of such a discriminative approach was an essential part of a plan to replace the then customary "cure" statistics, published by mental hospitals from a strictly competitive point of view and, therefore, often grossly unreliable. The main objective of this new system was, of course, to raise psychiatric statistics to the level of a scientific discipline.

Although the causes of significant fluctuations in admissions to mental hospitals have been subjected to various comprehensive investigations in the United States, they have received relatively little attention in European psychiatry. Of the major American studies, those of Dayton; Landis and Page; Malzberg; and Pollock are particularly worth mentioning. In the Danish literature, statistical problems of this kind have been discussed particularly by Selmer and Hallager.

Research

ANZJP

Australian & New Zealand Journal of Psychiatry
2015, Vol. 49(4) 346–350
DOI: 10.1177/0004867414560651

Psychiatric admissions fall following the Christchurch earthquakes: An audit of inpatient data

Ben Beaglehole[1,2], Caroline Bell[1,2], John Beveridge[2] and Chris Frampton[1]

Abstract

Objective: Following the devastating earthquake in Christchurch, New Zealand, there was the widespread perception that the demand for inpatient mental health services would increase. However, our clinical observation was to the contrary, with substantial reductions in inpatient utilisation being noted. We therefore examined psychiatric bed occupancy and admission data to improve understanding of the impact of the disaster on mental health services.

Method: We audited acute psychiatric bed occupancy and admission rates prior to and following a major earthquake.

Results: After the earthquake, total bed occupancy reduced from an average of 93% to 79%. Daily admissions also reduced by 20.2% for the 30 days following the earthquake. All diagnostic groups, with the exception of the 'Schizophrenia, schizotypal and delusional disorders' category, contributed to the reduction. No rebound to increased occupancy or admissions was seen over the study period.

Conclusion: The study confirmed our clinical observation that demand for acute inpatient psychiatric services were markedly reduced after the February 2011 earthquake.

Eur Arch Psychiatry Clin Neurosci (2004) 254 : 330–334
DOI 10.1007/s00406-004-0507-0

ORIGINAL PAPER

Helene Haker · Christoph Lauber · Tina Malti · Wulf Rössler

Is there an impact of global and local disasters on psychiatric inpatient admissions?

Received: 14 November 2003 / Accepted: 9 March 2004

Abstract *Background* Disasters of the magnitude of September 11, 2001 have a serious public health impact. By dominating media broadcasts, this effect is not limited to the site of the disaster. We tested the hypothesis whether such extraordinary burden results in an increase of psychiatric inpatient treatment. As such we analysed all psychiatric inpatient admissions in the Canton of Zurich/Switzerland. To test the influence of proximity to a disaster, we additionally analysed the impact of a local amok run on September 27, 2001. *Methods* Psychiatric inpatient admissions in the Canton of Zurich from September 2000 to September 2002 were analysed based on the data of the psychiatric case register. ARIMA modelling was employed to describe time-series of admissions per week over the 2-year period and to identify the impact of the incidents of 9/11 and 9/27, 2001. *Results* Mean numbers of weekly admissions were comparable in a time span of one month before and one month after the two incidents, thus, no significant changes were detected by the ARIMA modelling. *Conclusion* Against widespread beliefs, for patients with severe mental disorders requiring hospitalisation illness factors seem to play a more relevant role for decompensation than external psychosocial factors such as the described incidents.

Introduction

Disasters of the magnitude of September 11, 2001 have a serious and widespread public health impact. By dominating all media broadcasts, the attacks on the World Trade Centre and the Pentagon were despite the geographical distance ubiquitous and paralysed parts of public life worldwide. Previous research on trauma demonstrated that deleterious mental health consequences are not limited to those who experience the trauma directly (Dixon et al. 1993; Pfefferbaum et al. 2000; Terr et al. 1999). Furthermore, the degree of consequences is not simply predicted by the intensity of the direct exposure to or bereavement inflicted by the traumatic event. A wide range of feelings of sadness, anger, anxiety and uncertainty may put individuals at risk for developing psychiatric symptoms, regardless of the personal involvement or the geographical proximity to the incident (Lee et al. 2002; Schlenger et al. 2002; Schuster et al. 2001).

The relationship between 9/11 and subsequent mental disorders is well documented. As such, community surveys in the US found significant posttraumatic stress symptoms in the general population after the attacks,

Received: 23 June 2017 | Revised: 17 September 2017 | Accepted: 4 December 2017
DOI: 10.1111/appy.12307

ORIGINAL ARTICLE

WILEY ASIA-PACIFIC PSYCHIATRY

Increase in the number of admissions to psychiatric hospitals immediately after the Great East Japan Earthquake

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Abstract

Introduction: Major natural disasters have a significant impact on the mental health of survivors in affected communities. Although it has been speculated that the number of survivors requiring admission to psychiatric hospital increases immediately after a major disaster, few studies have examined the issue.

Methods: On March 11, 2011, the Great East Japan Earthquake and subsequent tsunami devastated the relatively isolated city of Kesennuma. We therefore compared the weekly number of patients admitted to 2 psychiatric hospitals in Kesennuma in the 4 weeks immediately after the earthquake with those in the 4 weeks immediately preceding the earthquake. We also made comparisons between this 8-week period and the corresponding 8-week periods in 2009, 2010, and 2012.

Results: The number of patients admitted to the 2 psychiatric hospitals increased in 4 weeks after the disaster in 2011, with a weekly median (range) of 13 (9-16), compared with 6 (5-9) in the preceding 4 weeks in 2011. The corresponding figures were 5.5 (2-10) in 2009, 6.5 (5-9) in 2010, and 4 (3-7) in 2012 ($P = .01$, $H = 13.05$). By diagnostic category, admissions for schizophrenia spectrum disorder and neurotic stress-related disorder increased significantly following the disaster.

Discussion: Demands for inpatient psychiatric treatment increased immediately after the Great East Japan Earthquake. Government officials and mental health professionals must strengthen support for survivors with mental illness, especially those with schizophrenia spectrum disorder. This should include support for mental health authorities and medical staff in the affected community.

KEYWORDS

disaster medicine, natural disaster, patient admission, psychiatric hospitals, schizophrenia spectrum and other psychotic disorders

Psychiatr Serv. 2005 Nov;56(11):1367-73.

Use of mental health services after hurricane Floyd in North Carolina.

Fried BJ[1], Domino ME, Shadle J.

⊕ Author information

Abstract

OBJECTIVE: The aim of this study was to examine the impact of a natural disaster, Hurricane Floyd, on the use of mental health services in a Medicaid population in North Carolina.

METHODS: Difference-in-differences techniques were used to determine month-by-month and 12-month postevent average effects of the hurricane on the use of mental health services at the county level. The exposure group was drawn from 14 severely affected counties, and the control group was drawn from 56 unaffected counties. Data were analyzed from July 1998 (14 months before the hurricane) to September 2000 (12 months after the hurricane).

RESULTS: The number of per-enrollee per-month outpatient visits to psychologists or licensed clinical social workers and the number of outpatient visits to non-mental health specialists showed a statistically significant increase over the 12-month postevent period, whereas the number of inpatient admissions for behavioral health reasons decreased. Dollars spent on antianxiety medication per enrollee per month showed a statistically significant decrease.

CONCLUSIONS: The aftermath of Hurricane Floyd was associated with significantly greater use of mental health services in the Medicaid community in North Carolina for a few services. However, it is unclear whether changes in utilization patterns were due to the greater demand for services or to the availability of other services that may have served as substitutes. The results of this study underscore the importance of planning for service implementation and delivery after similar events in other states.

Article

Use of Mental Health Services by Veterans With PTSD After the Terrorist Attacks of September 11

Robert Rosenheck, M.D.

Alan Fontana, Ph.D.

Objective: Community surveys have demonstrated significant psychological distress since the terrorist attacks of Sept. 11, 2001. Since people with posttraumatic stress disorder (PTSD) and other mental illnesses are especially vulnerable to stressful events, the authors examined the use of PTSD treatment services and other mental health services at Department of Veterans Affairs (VA) medical centers in New York City and elsewhere after the attacks.

Method: Analysis of variance was used to compare changes in average daily service use in the 6 months before and the 6 months after September 11, with changes in service use across the same months in the 2 previous years. Chi-square tests were used to examine differences from previous years in the proportion of new patients (i.e., who had not received treatment in the previous 6 months) entering treatment after September 11.

Results: There was no significant increase in the use of VA services for the treatment of PTSD or other mental disorders or in visits to psychiatric or nonpsychiatric clinics in New York City after September 11 and no significant change in the pattern of service use from previous years. Nor was there a significant increase in PTSD treatment in the greater New York area, Washington, D.C., or Oklahoma City or in the proportion of new patients.

Conclusions: No increase was observed in the use of mental health services among VA patients with PTSD or other mental illnesses in response to the terrorist attacks of September 11.

(Am J Psychiatry 2003; 160:1684–1690)

TABLE 1. Use of New York City Veterans Affairs Mental Health Facilities in the 6 Months Before and After September 11 in 1999–2000 and 2001

	Daily Use of Services					Analysis			
	Before September 11[a]		After September 11[b]		%	Change From Before to After September 11		Interaction of Year and Before/After September 11	
Type of Service and Year	Mean	SD	Mean	SD	Change	t (df=737)	p	F (df=3, 737)	p
Outpatient visits									
Diagnosis of PTSD								0.16	0.69
1999–2000	238.2	63.0	234.6	0.6	–1.5	0.63	0.52		
2001	231.8	57.5	232.1	69.2	0.1	0.04	0.96		
Diagnosis of serious mental illness[c]								2.52	0.11
1999–2000	258.7	74.7	237.6	60.9	–8.1	3.60	0.0003*		
2001	225.1	48.4	220.0	61.8	–2.3	0.62	0.53		
Diagnosis of substance abuse								0.38	0.53
1999–2000	702.4	183.6	667.6	171.8	–5.0	2.29	0.02*		
2001	581.0	148.8	530.1	146.1	–8.8	2.37	0.02*		
Any mental health diagnosis								0.04	0.84
1999–2000	1,408.4	305.5	1349.1	276.0	–4.2	2.35	0.01*		
2001	1,264.2	213.4	1213.7	288.3	–4.0	1.42	0.15		
Specialized PTSD clinic								0.43	0.51
1999–2000	139.2	44.0	144.3	42.1	3.6	1.29	0.19		
2001	139.4	38.0	140.0	46.1	0.4	0.11	0.91		
Specialized mental health clinic								0.46	0.50
1999–2000	1,205.8	267.0	1,149.8	248.3	–4.6	2.53	0.01*		
2001	1,065.4	188.3	1,035.3	244.2	–2.8	0.96	0.34		
Medical clinics								0.15	0.70
1999–2000	1,072.2	217.7	1,108.4	234.9	3.4	1.75	0.08		
2001	1,059.8	170.9	1,082.2	285.2	2.1	0.76	0.44		
Admission to mental health inpatient care								0.20	0.65
1999–2000	8.8	3.0	8.7	3.9	–0.5	0.13	0.89		
2001	6.0	2.9	6.2	3.5	3.3	0.46	0.64		

[a] Before September 11, there were 252 days in 1999–2000 and 126 days in 2001.
[b] After September 11, there were 242 days in 1999–2000 and 121 days in 2001.
[c] Schizophrenia, major affective disorder, or other psychosis (ICD-9 codes 295.01–298.99).
*p<0.05.

TABLE 3. Use of Veterans Affairs Outpatient Mental Health Facilities By Veterans With a PTSD Diagnosis in the 6 Months Before and After September 11 in 1999–2000 and 2001, by Region

	Daily Use of Services					Analysis			
	Before September 11[a]		After September 11[b]		%	Change From Before to After September 11		Interaction of Year and Before/After September 11	
Region and Year	Mean	SD	Mean	SD	Change	t (df=737)	p	F (df=3, 737)	p
New York City								0.16	0.69
1999–2000	238.2	63.0	234.6	0.6	–1.5	0.63	0.52		
2001	231.8	57.5	232.1	69.2	0.1	0.04	0.96		
Greater New York area								0.45	0.50
1999–2000	176.2	40.4	175.2	48.9	–0.6	0.22	0.82		
2001	184.2	44.9	188.2	56.9	2.2	0.66	0.50		
Washington, D.C.								0.27	0.60
1999–2000	91.2	26.1	84.8	26.5	–7.1	0.73	0.46		
2001	84.7	26.5	85.2	43.2	0.6	0.11	0.91		
Northeastern United States								6.24	0.01*
1999–2000	563.9	100.6	552.0	121.6	–2.1	1.08	0.27		
2001	561.6	101.3	596.9	169.5	6.3	2.28	0.02*		
Oklahoma City								5.31	0.02*
1999–2000	85.2	30.3	93.6	36.1	9.9	3.01	0.03*		
2001	74.7	22.5	72.0	28.5	–3.6	0.68	0.49		
Other U.S. metropolitan areas								0.46	0.49
1999–2000	1484.2	267.1	1540.1	38.4	3.8	1.75	0.07		
2001	1664.3	341.3	1757.7	516.8	5.6	2.07	0.04*		

[a] Before September 11, there were 252 days in 1999–2000 and 126 days in 2001.
[b] After September 11, there were 242 days in 1999–2000 and 121 days in 2001.
*p<0.05.

Isr J Psychiatry Relat Sci Vol 42 No. 4 (2005) 258–262

Psychiatric Inpatients' Reactions to the SARS Epidemic: An Israeli Survey

Iulian Iancu, MD, Rael Strous, MD, Amir Poreh, PhD, Moshe Kotler, MD, and Yossi Chelben, MD

Beer Yaakov Mental Health Center, Beer Yaakov, affiliated with the Sackler School of Medicine, Tel Aviv University, Ramat Aviv, Israel

Abstract: Background: The threat of the potential spreading of the SARS epidemic caused significant stress to many individuals from non-affected countries. In this study, we investigated whether the SARS threat affected the subjective mood and behavior of Israeli patients with schizophrenia and compared their reactions with those noted in their clinical staff. *Methods:* Subjects were evaluated with a specially designed questionnaire and a modified form of the Spielberger Scale for State Anxiety. *Results:* As compared to staff, patients had higher scores on the Modified Spielberger State Anxiety Scale. However, many responses (e.g., dysphoria) to the SARS threat did not differ from staff. Patients felt more protected by the authorities and some perceived the epidemic in a psychotic manner. *Conclusions:* It seems that patients attempt to reduce the effect of external stressors by living in an "autistic bubble" (in which outside threats cannot enter) or by denying the significance of these stressors and over-emphasizing the power of medical authorities to protect them. On the other hand, some patients also psychotically interpreted these stressors.

Prevalence of Psychiatric Disorders Among Toronto Hospital Workers One to Two Years After the SARS Outbreak

William J. Lancee, Ph.D.
Robert G. Maunder, M.D.
David S. Goldbloom, M.D.
and Coauthors for the Impact of SARS Study

Available online at www.sciencedirect.com
ScienceDirect
General Hospital Psychiatry 32 (2010) 590 – 598
ELSEVIER
General Hospital Psychiatry

Risk factors for chronic post-traumatic stress disorder (PTSD) in SARS survivors

Ivan Wing Chit Mak, F.H.K.C.Psych., F.H.K.A.M. (psychiatry), M.R.C.Psych. (UK), D.C.Psyc., R.C.P.&S. (Irel), M.Sc. Epidemiology and Biostatistics (CUHK)[a,b,*], Chung Ming Chu, M.D., F.R.C.P.[a,c], Pey Chyou Pan, F.H.K.C.Psych., F.H.K.A.M. (psychiatry), M.R.C.Psych. (UK)[b], Michael Gar Chung Yiu, F.H.K.C.Psych., F.H.K.A.M. (psychiatry), M.R.C.Psych. (UK)[b], Suzanne C. Ho, M.Sc., M.P.H., Ph.D., F.A.C.E.[d], Veronica Lee Chan, F.H.K.A.M. (Medicine), M.R.C.P. (UK)[a,c]

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Received 11 January 2010; accepted 20 July 2010

Epidemiol. Infect. (2008), **136**, 997–1007. © 2007 Cambridge University Press
doi:10.1017/S0950268807009156 Printed in the United Kingdom

Understanding, compliance and psychological impact of the SARS quarantine experience

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(*Accepted 13 June 2007; first published online 30 July 2007*)

SUMMARY

This study examines a cohort of persons quarantined during the 2003 SARS outbreak in Canada and describes their understanding of, difficulties and compliance with, and the psychological impact of the quarantine experience. A mailed questionnaire was administered to 1912 eligible adults and included the Impact of Events Scale – Revised (IES-R) to assess symptoms of post-traumatic stress disorder (PTSD). Self-reported compliance with all required quarantine measures was low (15·8±2·3%), although significantly higher when the rationale for quarantine was understood ($P=0{\cdot}018$). Health-care workers (HCW) experienced greater psychological distress, including symptoms of PTSD ($P<0{\cdot}001$). Increasing perceived difficulty with compliance, HCW, longer quarantine and compliance with quarantine requirements were significant contributors to higher IES-R scores. The low compliance with quarantine requirements introduces concerns about the effectiveness of quarantine as a public health measure. Improvements in compliance and reduced psychological distress may be possible by minimizing duration, revising requirements, and providing enhanced education and support.

Original Research

Stress and Psychological Distress Among SARS Survivors 1 Year After the Outbreak

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Available online at www.sciencedirect.com
ScienceDirect
Journal of Psychiatric Research 41 (2007) 119–130
ELSEVIER
JOURNAL OF PSYCHIATRIC RESEARCH
www.elsevier.com/locate/jpsychires

Prevalence of psychiatric morbidity and psychological adaptation of the nurses in a structured SARS caring unit during outbreak: A prospective and periodic assessment study in Taiwan ☆

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Received 15 August 2005; received in revised form 29 November 2005; accepted 20 December 2005

Comprehensive Psychiatry 87 (2018) 123–127
Contents lists available at ScienceDirect
Comprehensive Psychiatry
journal homepage: www.elsevier.com/locate/comppsych
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Psychological impact of the 2015 MERS outbreak on hospital workers and quarantined hemodialysis patients

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ARTICLE INFO

Keywords:
Middle East respiratory syndrome coronavirus infection
Quarantine
Healthcare workers
Mental health

ABSTRACT

Objectives: This study aimed to assess the immediate stress and psychological impact experienced by quarantined patients undergoing hemodialysis and university hospital workers who treated patients Middle East respiratory syndrome (MERS) during its outbreak.
Design: The group of subjects consisted of 1800 hospital practitioners and 73 quarantined patients undergoing hemodialysis. The Impact of Events Scale–Revised (IES-R) was administered to the practitioners twice, once during the hospital shutdown and again one month after the shutdown. The Mini International Neuropsychiatric Interview and Hospital Anxiety and Depression Scale were administered to patients undergoing hemodialysis.
Results: During the initial stages of the MERS outbreak, healthcare workers who performed MERS-related tasks scored significantly higher on the total IES-R and its subscales. In the second assessment of the high-risk group, the sleep and numbness subscale scores from the IES-R differed depending on the implementation of home quarantine, and the intrusion subscale scores differed depending on the performance of MERS-related tasks.
Conclusion: Medical staff that performed MERS-related tasks showed the highest risk for post-traumatic stress disorder symptoms even after time had elapsed. The risk increased even after home quarantine. Prompt and continuous psychiatric intervention is needed in high mortality infectious disease outbreaks.

Psychosocial effects of SARS on hospital staff: survey of a large tertiary care institution
Nickell, Leslie A;Crighton, Eric J;Tracy, C Shawn;Al-Enazy, Hadi;et al
Canadian Medical Association. Journal; Mar 2, 2004; 170, 5; ProQuest
pg. 793

Research
Recherche

Psychosocial effects of SARS on hospital staff: survey of a large tertiary care institution

Leslie A. Nickell, Eric J. Crighton, C. Shawn Tracy, Hadi Al-Enazy, Yemisi Bolaji, Sagina Hanjrah, Ayesha Hussain, Samia Makhlouf, Ross E.G. Upshur

† See related article page 811

Schizophrenia Bulletin vol. 37 no. 1 pp. 101–107, 2011
doi:10.1093/schbul/sbp052
Advance Access publication on June 2, 2009

Coronavirus Immunoreactivity in Individuals With a Recent Onset of Psychotic Symptoms

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Prenatal influenza exposure increases the risk for schizophrenia and brings to question how other respiratory viruses may contribute to neuropsychiatric disease etiopathology. Human coronaviruses cause respiratory infections that range in seriousness from common colds to severe acute respiratory syndrome. Like influenza, coronaviruses can be neurotropic. To test for associations between coronaviruses and serious mental disorders, we utilized a recently developed assay and measured immunoglobulin G (IgG) response against 4 human coronavirus strains (229E, HKU1, NL63, and OC43) in 106 patients with a recent onset of psychotic symptoms and 196 nonpsychiatric controls. We expressed results quantitatively as antibody levels and qualitatively as seroprevalence relative to a defined seropositivity cutoff value. Patient IgG levels were higher than controls for HKU1, NL63, and OC43, with HKU1 and NL63 both showing highly significant patient-to-control differences (HKU1, $P \leq .002$; NL63, $P \leq .00001$). All 4 coronaviruses were more seroprevalent in patients vs controls, with greatest intergroup differences observed for HKU1 (93% vs 77%, $P \leq .0001$). HKU1 and NL63 associations with the patient group were further supported by multivariate analyses that controlled for age, gender, race, socioeconomic status, and smoking status (HKU1, odds ratio [OR] = 1.32, 95% confidence interval [CI] = 1.03–1.67, $P \leq .027$; NL63, OR = 2.42, 95% CI = 1.25–4.66, $P \leq .008$). Among patients, NL63 was associated with schizophrenia-spectrum (OR = 3.10, 95% CI = 1.27–7.58, $P \leq .013$) but not mood disorders. HKU1 and NL63 coronavirus exposures may represent comorbid risk factors in neuropsychiatric disease. Future studies should explore links between the timing of coronavirus infections and subsequent development of schizophrenia and other disorders with psychotic symptoms.

Key words: schizophrenia/infection/immunology/pathogen/bipolar disorder/virus

Introduction

Prenatal and perinatal infections are associated with the onset of adult psychiatric illness in some susceptible individuals.[1,2] Maternal exposure to *Toxoplasma gondii*, influenza, measles, polio, and genital and/or reproductive infections confers an increased risk of schizophrenia to the developing offspring.[3–10] Childhood infections such as bacterial or viral meningitis may also play a role in psychotic disease etiology.[11,12] The connection between adult infections and schizophrenia is less clear-cut.[2] Serological collections that include samples taken prior to disease diagnosis can provide valuable information regarding microbial exposure at the time of symptom onset in adult populations. In a prospective study of a US military cohort, antibodies to *T. gondii* and human herpesvirus 6 were significantly associated with the subsequent development of schizophrenia in some individuals.[13,14]

Respiratory viruses such as influenza viruses and coronaviruses are potentially neurotropic and can enter the brain via the olfactory neural pathway.[15–18] Human coronaviruses cause infections ranging from common colds to severe acute respiratory syndrome (SARS).[19,20] Coronaviruses are single-stranded RNA viruses with outer envelopes that have distinct crown-like morphologies. Non-SARS respiratory infections occur from group I (229E and NL63) and group II (OC43 and HKU1) coronaviruses. 229E and OC43 were first described in the 1960s,[21–23] whereas NL63 and HKU1 were more recently discovered and first described in 2004–2005.[24,25] Data from clinical, postmortem, in vitro, and animal studies support that coronavirus exposure can have neurological consequences including psychiatric symptoms and encephalitis.[26–33] Clinical reports of psychiatric symptoms such as auditory and visual hallucinations and manic and depression disorders have been described in studies

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Surge Capacity Associated with Restrictions on Nonurgent Hospital Utilization and Expected Admissions during an Influenza Pandemic: Lessons from the Toronto Severe Acute Respiratory Syndrome Outbreak

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Abstract

Background: Current influenza pandemic models predict a surge in influenza-related hospitalizations in affected jurisdictions. One proposed strategy to increase hospital surge capacity is to restrict elective hospitalizations, yet the degree to which this measure would meet the anticipated is unknown.

Objectives: To compare the reduction in hospitalizations resulting from widespread nonurgent hospital admission restrictions during the Toronto severe acute respiratory syndrome (SARS) outbreak with the expected increase in admissions resulting from an influenza pandemic in Toronto.

Methods: The authors compared the expected influenza-related hospitalizations in the first eight weeks of a mild, moderate, or severe pandemic with the actual reduction in the number of hospital admissions in Toronto, Ontario, during the first eight weeks of the SARS-related restrictions.

Results: Influenza modeling for Toronto predicts that there will be 4,819, 8,032, or 11,245 influenza-related admissions in the first eight weeks of a mild, moderate, or severe pandemic, respectively. In the first eight weeks of SARS-related hospital admission restrictions, there were 3,654 fewer hospitalizations than expected in Toronto, representing a modest 12% decrease in the overall admission rate (a reduction of 1.40 admissions per 1,000 population). Therefore, influenza-related admissions could exceed the reduction in admissions resulting from restricted hospital utilization by 1,165 to 7,591 patient admissions, depending on pandemic severity, which corresponds to an excess of 0.44 to 2.91 influenza-related admissions per 1,000 population per eight weeks, and an increase of 4% to 25% in the overall number of admissions, when compared with nonpandemic conditions.

Conclusions: Pandemic modeling for Toronto suggests that influenza-related admissions would exceed the reduction in hospitalizations seen during SARS-related nonurgent hospital admission restrictions, even in a mild pandemic. Sufficient surge capacity in a pandemic will likely require the implementation of other measures, including possibly stricter implementation of hospital utilization restrictions.

ACADEMIC EMERGENCY MEDICINE 2006; 13:1228–1231

Keywords: pandemic, influenza, surge capacity, SARS

Reduced Rate of Hospital Admissions for ACS during Covid-19 Outbreak in Northern Italy

TO THE EDITOR: To address the coronavirus (Covid-19) pandemic,[1] strict social containment measures have been adopted worldwide, and health care systems have been reorganized to cope with the enormous increase in the numbers of acutely ill patients.[2,3] During this same period, some changes in the pattern of hospital admissions for other conditions have been noted. The aim of the present analysis is to investigate the rate of hospital admissions for acute coronary syndrome (ACS) during the early days of the Covid-19 outbreak.

In this study, we performed a retrospective analysis of clinical and angiographic characteristics of consecutive patients who were admitted for ACS at 15 hospitals in northern Italy. All the hospitals were hubs of local networks for treatment involving primary percutaneous coronary intervention. The study period was defined as the time between the first confirmed case of Covid-19 in Italy (February 20, 2020) and March 31, 2020. We compared hospitalization rates between the study period and two control periods: a corresponding period during the previous year (February 20 to March 31, 2019) and an earlier period during the same year (January 1 to February 19, 2020). The primary outcome was the overall rate of hospital admissions for ACS. We calculated incidence rates for the primary outcome by dividing the number of cumulative admissions

Table 1. Comparison of Hospital Admissions for Acute Coronary Syndrome (ACS) in Northern Italy between the Onset of the Covid-19 Outbreak and Two Control Periods.*

ACS Subtype	No. of Patients	Study Period (N=547)	Control Periods	
			Same Year (N=899)	Previous Year (N=756)
All ACS	2202			
No. of daily admissions		13.3	18.0	18.9
Incidence rate ratio (95% CI)			0.74 (0.66–0.82)	0.70 (0.63–0.78)
P value			<0.001	<0.001
STEMI	957			
No. of daily admissions		6.1	7.8	8.0
Incidence rate ratio (95% CI)			0.77 (0.66–0.91)	0.75 (0.64–0.89)
NSTEMI	832			
No. of daily admissions		4.2	7.1	7.5
Incidence rate ratio (95% CI)			0.59 (0.49–0.71)	0.56 (0.46- 0.67)
Unstable angina	413			
No. of daily admissions		3.1	3.1	3.4
Incidence rate ratio (95% CI)			1.00 (0.79–1.26)	0.91 (0.72–1.16)

* The study period was defined as the time between the first confirmed case of Covid-19 in Italy (February 20, 2020) and March 31, 2020. The two control periods were from January 1 to February 19, 2020 (same year) and from February 20 to March 31, 2019 (previous year). The 95% confidence intervals are not adjusted for multiple testing and therefore should not be used to infer definitive effects. CI denotes confidence interval, NSTEMI non–ST-segment elevation myocardial infarction, and STEMI ST-segment elevation myocardial infarction.

SCIENCE

FRIDAY, MAY 30, 1919

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MSS. intended for publication and books, etc., intended for review should be sent to The Editor of Science, Garrison-on-Hudson, N. Y.

THE LESSONS OF THE PANDEMIC

THE pandemic which has just swept round the earth has been without precedent. There have been more deadly epidemics, but they have been more circumscribed; there have been epidemics almost as widespread, but they have been less deadly. Floods, famines, earthquakes and volcanic eruptions have all written their stories in terms of human destruction almost too terrible for comprehension, yet never before has there been a catastrophe at once so sudden, so devastating and so universal.

The most astonishing thing about the pandemic was the complete mystery which surrounded it. Nobody seemed to know what the disease was, where it came from or how to stop it. Anxious minds are inquiring to-day whether another wave of it will come again.

The fact is that although influenza is one of the oldest known of the epidemic diseases, it is the least understood. Science, which by patient and painstaking labor has done so much to drive other plagues to the point of extinction has thus far stood powerless before it. There is doubt about the causative agent and the predisposing and aggravating factors. There has been a good deal of theorizing about these matters, and some good research, but no common agreement has been reached with respect to them.

The measures which were introduced for the control of the pandemic were based upon the slenderest of theories. It was assumed that the influenza could be stopped by the employment of methods which it was assumed would stop the other respiratory diseases. This double assumption proved to be a weak reed to lean upon. The respiratory diseases as a class are not under control. They constitute the most frequent cause of death, yet it is not known how they can be prevented.

Three main factors stand in the way of pre-

Schizophrenia Bulletin
doi:10.1093/schbul/sbaa051

The COVID-19 Global Pandemic: Implications for People With Schizophrenia and Related Disorders

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The coronavirus disease-19 (COVID-19) global pandemic has already had an unprecedented impact on populations around the world, and is anticipated to have a disproportionate burden on people with schizophrenia and related disorders. We discuss the implications of the COVID-19 global pandemic with respect to: (1) increased risk of infection and poor outcomes among people with schizophrenia, (2) anticipated adverse mental health consequences for people with schizophrenia, (3) considerations for mental health service delivery in inpatient and outpatient settings, and (4) potential impact on clinical research in schizophrenia. Recommendations emphasize rapid implementation of measures to both decrease the risk of COVID-19 transmission and maintain continuity of clinical care and research to preserve safety of both people with schizophrenia and the public.

may put these individuals at higher risk of becoming infected with COVID-19. Furthermore, people living with schizophrenia are at greater risk for adverse outcomes, including death, because compared with the general population, they typically have poorer physical health,[4–6] greater socioeconomic disadvantage,[7] are more socially disconnected,[8] and experience pervasive stigma and discrimination.[9] Here, we discuss (1) why people with schizophrenia are at increased risk of infection with COVID-19 and poor outcomes; (2) possible mental health consequences of COVID-19 infection in people with schizophrenia; (3) possible consequences for health professionals and institutions that serve patients with schizophrenia; and (4) potential adverse impact on clinical research related to schizophrenia.

nature human behaviour

PERSPECTIVE

https://doi.org/10.1038/s41562-020-0884-z

Using social and behavioural science to support COVID-19 pandemic response

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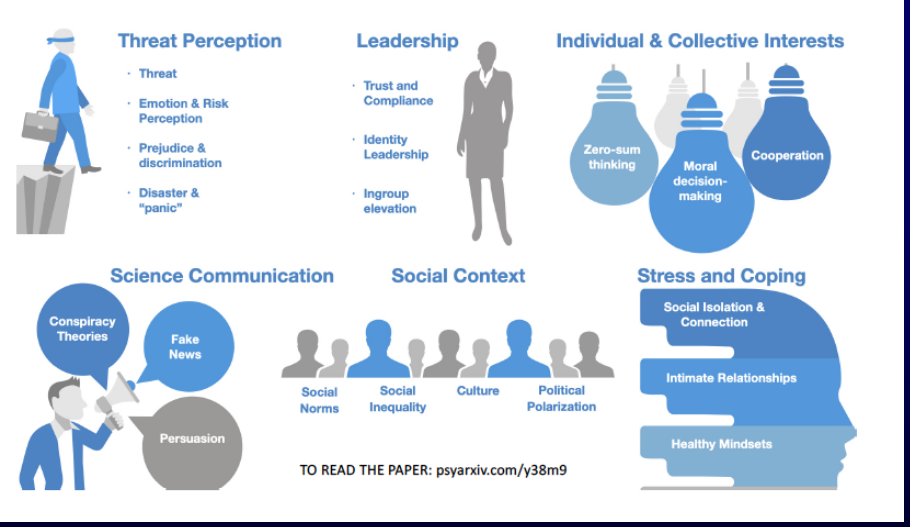
The COVID-19 pandemic represents a massive global health crisis. Because the crisis requires large-scale behaviour change and places significant psychological burdens on individuals, insights from the social and behavioural sciences can be used to help align human behaviour with the recommendations of epidemiologists and public health experts. Here we discuss evidence from a selection of research topics relevant to pandemics, including work on navigating threats, social and cultural influences on behaviour, science communication, moral decision-making, leadership, and stress and coping. In each section, we note the nature and quality of prior research, including uncertainty and unsettled issues. We identify several insights for effective response to the COVID-19 pandemic and highlight important gaps researchers should move quickly to fill in the coming weeks and months.



A Sample of Insights & Implications

- Build a shared sense of identity by addressing the public in collective terms ("us") and by urging people to act for the common good.
- Identify sources (e.g., community leaders) who are credible to different audiences to share public health messages.
- Use ingroup models (e.g., members of your community) who are well connected and accompanied by social approval to role model norms
- To help slow infections, it may be helpful to make people aware that they benefit from others' access to preventative measures.
- Prepare people for misinformation and ensure they have accurate information and counterarguments.
- Instead of "social distancing", use "physical distancing," because it signals that connection is possible even when people are physically separated.

Journal of Psychiatric Research 59 (2014) 77–84

Contents lists available at ScienceDirect

Journal of Psychiatric Research

journal homepage: www.elsevier.com/locate/psychires

Frequency of trauma exposure and Post-Traumatic Stress Disorder in Italy: analysis from the World Mental Health Survey Initiative

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Table 2
Prevalence of trauma exposure in the Italian sample ($n = 1{,}779$).

Event type	Prevalence %	SE	Mean number of occurrences[a]	SE	Proportion of traumas in population[b]	SE
War Events	6.9	0.72	1.4	0.13	4.3	0.49
• Combat experience	1.0	0.34	1.0	0.00	0.4	0.15
• Relief worker in war zone	0.8	0.32	1.0	0.00	0.3	0.14
• Civilian in war zone	4.6	0.66	1.0	0.00	2.1	0.33
• Civilian in region of terror	1.1	0.29	1.0	0.00	0.5	0.12
• Refugee	0.5	0.22	1.0	0.00	0.2	0.09
• Purposely injured, tortured or killed someone	0.2	0.11	3.2	1.27	0.2	0.21
• Saw atrocities	0.5	0.24	2.1	0.86	0.5	0.22
Physical Violence	9.9	0.95	1.4	0.07	6.4	0.67
• Kidnapped	1.3	0.35	1.1	0.00	0.6	0.15
• Beaten up by caregiver	2.8	0.55	1.0	0.00	1.2	0.22
• Beaten up by spouse or romantic partner	1.1	0.28	1.0	0.00	0.5	0.12
• Beaten up by someone else	1.5	0.27	2.1	0.28	1.4	0.29
• Mugged or threatened with a weapon	4.7	0.67	1.3	0.09	2.7	0.46
Sexual Violence	3.7	0.56	2.1	0.20	3.4	0.48
• Raped	0.7	0.18	1.9	0.32	0.6	0.14
• Sexually assaulted	1.1	0.26	2.2	0.18	1.0	0.28
• Stalked	2.2	0.39	1.8	0.17	1.7	0.31
Accidents	25.8	1.92	1.9	0.11	22.0	1.63
• Toxic chemical exposure	1.8	0.44	3.6	0.39	3.0	0.79
• Automobile accident	11.7	1.16	1.3	0.05	6.6	0.70
• Other life threatening accident	2.9	0.54	1.4	0.14	1.8	0.35
• Natural disaster	7.8	1.29	1.4	0.13	4.9	0.81
• Man-made disaster	2.3	0.41	1.3	0.14	1.4	0.28
• Life-threatening illness	8.0	0.81	1.2	0.06	4.4	0.58
Unexpected death of loved one	20.4	1.16	1.5	0.05	13.3	0.92
Network events	29.4	2.11	3.6	0.24	47.5	2.65
• Child with serious illness	5.4	0.65	1.2	0.07	2.8	0.44
• Traumatic event to a loved one	0.7	0.18	1.1	0.08	0.3	0.09
• Witnessed death/dead body, or saw someone seriously hurt	25.4	2.23	3.9	0.26	44.1	2.89
• Accidentally caused serious injury or death	0.6	0.18	1.1	0.06	0.3	0.09
Others	7.0	0.76	1.0	0.02	3.2	0.36
• Some other event	2.5	0.54	1.0	0.00	1.1	0.23
• Private event	4.8	0.56	1.0	0.00	2.1	0.29
Total with any event	56.1	2.24	4.0	0.23	100.0	0.00

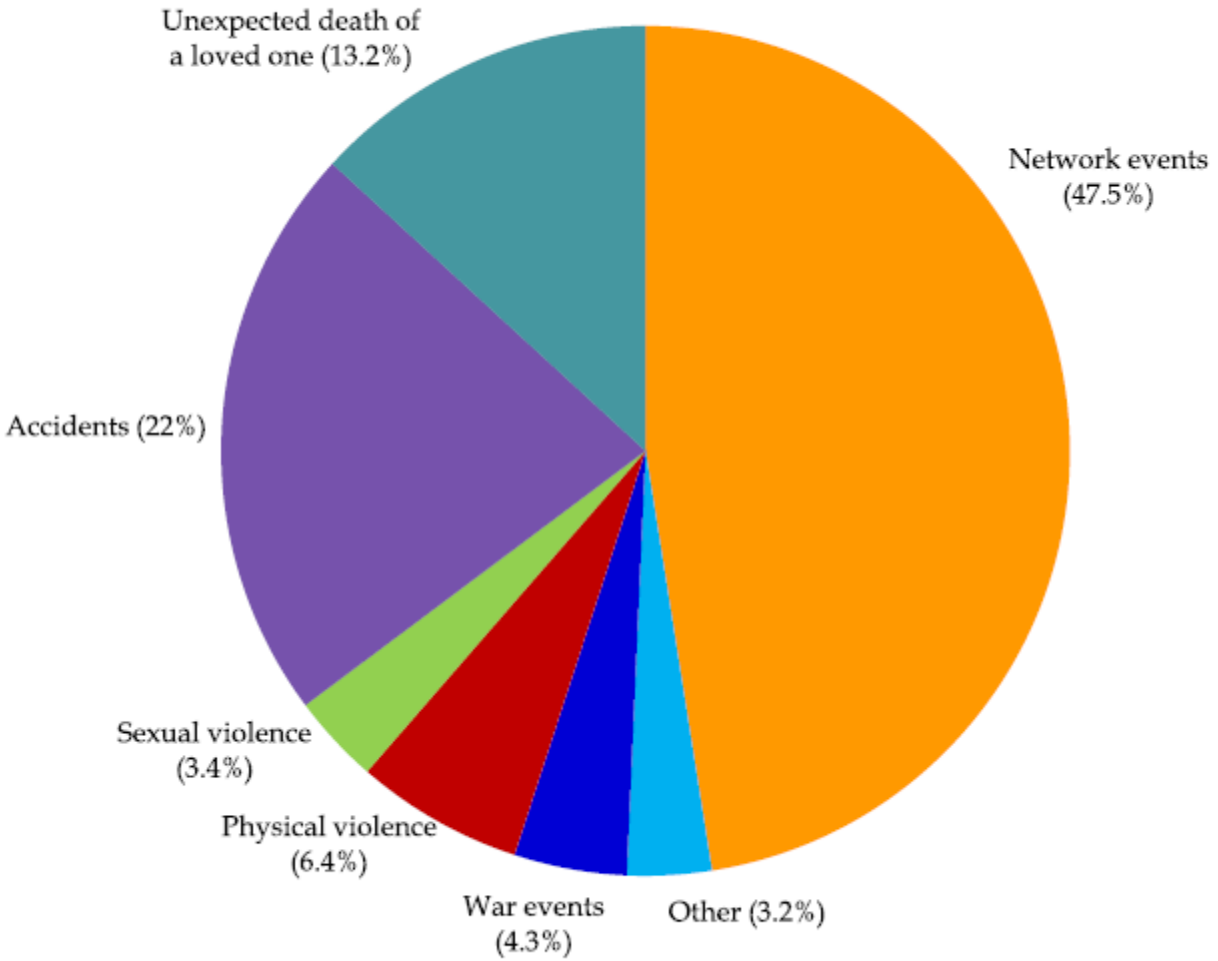

Fig. 1. Traumatic events by category as percentage of all traumatic events.

Table 3
Conditional risk of dsm-iv/cidi ptsd by te type, mean duration and relative ptsd burden associated with tes in the italian sample ($n = 1,779$).

Event type	Conditional PTSD risk[a]	SE	No. of lifetime to date PTSD episodes[b]	SE	Mean PTSD duration (Months)[c]	SE	% Relative PTSD burden[d]	SE
War Events	12.2	4.86	1.2	0.51	530.1	74.70	20.6	9.31
• Combat experience	0.0	0.0	–	–	–	–	–	–
• Relief worker in war zone	0.0	0.0	–	–	–	–	–	–
• Civilian in war zone	3.0	2.56	0.1	0.11	18.0/	6.28	2.5	1.56
• Civilian in region of terror	0.0	0.0	–	–	–	–	–	–
• Refugee	0.0	0.0	–	–	–	–	–	–
• Saw atrocities	100	0.00	1.0	0.52	600.0	0.00	18.2	9.71
Physical Violence	2.7	1.39	0.4	0.20	14.0	12.74	6.9	3.25
• Kidnapped	1.8	1.96	0.0	0.02	24.0	0.00	0.4	0.45
• Beaten up by caregiver	0.4	0.46	0.0	0.00	240.0	0.00	0.2	0.09
• Beaten up by partner	30.6	16.11	0.3	0.20	5.2	2.78	5.8	3.25
• Beaten up by someone else	0.8	0.80	0.0	0.01	12.0	0.00	0.4	0.18
• Mugged or threatened with a weapon	0.0	0.0	–	–	–	–	–	–
Sexual Violence	0.8	0.55	0.1	0.04	199.8	128.58	1.1	0.64
• Raped	2.6	2.6	0.0	0.03	347.8	80.38	0.6	0.46
• Sexually assaulted	1.2	1.18	0.0	0.03	4	0.00	0.5	0.49
• Stalked	0.0	0.0	–	–	–	–	–	–
Accidents	1.5	1.08	0.7	0.53	35.9	18.58	13.0	7.08
• Toxic chemical exposure	0.0	0.00	–	–	–	–	–	–
• Automobile accident	0.0	0.00	–	–	–	–	–	–
• Other life threatening accident	0.0	0.00	–	–	–	–	–	–
• Natural disaster	1.9	1.86	0.2	0.21	2.0	0.00	3.7	3.46
• Man-made disaster	0.0	0.00	–	–	–	–	–	–
• Life-threatening illness	5.3	4.82	0.5	0.48	49.4	27.82	0.3	6.56
Unexpected death of loved one	4.6	1.47	1.4	0.46	21.8	7.48	24.1	5.78
Network events	1.1	0.70	1.2	0.75	14.3	14.77	21.7	11.84
• Child with serious illness	12.5	9.13	0.8	0.65	11.1	8.87	14.0	11.42
• Traumatic event to loved one	0.0	0.00	–	–	–	–	–	–
• Witnessed death/dead body, or saw someone seriously hurt	0.4	0.36	0.4	0.36	20.0	9.77	7.7	6.45
• Accidentally caused serious injury or death	0.0	0.00	–	–	–	–	–	–
Others	10.1	4.01	0.7	0.29	14.9	6.49	12.6	5.30
• Some other event	3.0	1.95	0.1	0.05	4.7	2.61	1.3	0.94
• Private event	13.5	5.87	0.6	0.28	16	7.33	11.3	5.13
Total with any event	2.5	1.24	5.7	2.94	127.3	114.66	100.0	0.00

NHS
National Institute for
Health and Clinical Excellence

Post-traumatic stress disorder (PTSD)

Support for education and learning

2nd.edition - March 2012

NICE clinical guideline 26

Clinical Guideline Implementation Tools

Initial response to trauma

- For individuals who have experienced a traumatic event, the systematic provision to that individual alone of brief, single-session interventions (often referred to as **debriefing**) that focus on the traumatic incident, should **NOT** be routine practice when delivering services.

TRAUMA AND RESILIENCE

- Most people are resilient!!
- People should be helped FORGET the trauma, not ruminate on the event!
- Memories increase the risk of long-term traumatic sequelaes!

Trauma-focused psychological treatment :1

- Trauma-focused cognitive behavioural therapy should be offered to those with severe post-traumatic symptoms or with severe post-traumatic stress disorder in the first month after the traumatic event. These treatments should normally be provided on an individual outpatient basis.

Trauma-focused psychological treatment: 2

- All PTSD sufferers should be offered a course of trauma-focused psychological treatment (trauma-focused cognitive behavioural therapy or eye movement desensitisation and reprocessing). These treatments should normally be provided on an individual outpatient basis.