



Resilience, Recovery, Reform: Infectious Diseases Post Pandemic How can we do things better?



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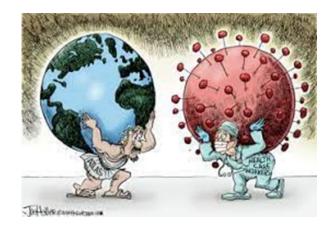
No Disclosures





Overview

- Infectious diseases
- Long COVID model of care
- Resilience for the next COVID 23



The Lancet Commission on lessons for the future from the COVID-19 pandemic



Jeffrey D Sachs, Salim S Abdool Karim, Lara Aknin, Joseph Allen, Kirsten Brosbøl, Francesca Colombo, Gabriela Cuevas Barron,
María Fernanda Espinosa, Vitor Gaspar, Alejandro Gaviria, Andy Haines, Peter J Hotez, Phoebe Koundouri, Felipe Larraín Bascuñán, Jong-Koo Lee,
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Infectious Diseases: Overview



COMMUNITY

HIV
Hepatitis B and C
Complex community infections
OPAT
TB
Sexual Health

IDSI

HOSPITAL

Acute community and HA infections

Complex infections in immunocompromised

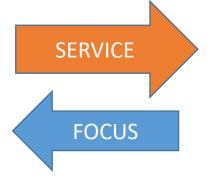
ICU care

Acute GIM

Antibiotic stewardship

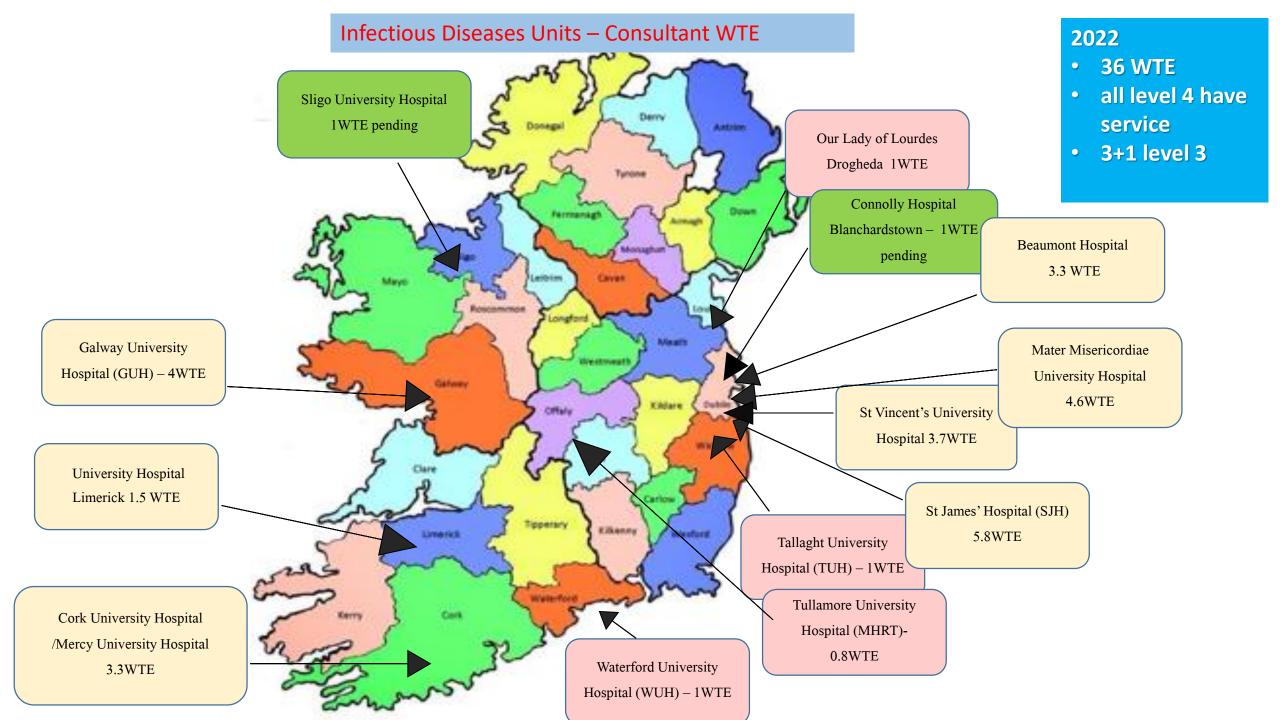
PREVENTION

Vaccination clinics
Immunodeficiency
PrEP
Latent TB treatment



RCPI Training

- 1993; consultant appointment Mater, 1998; CUH, 2001; SJH, 2004; Galway
- 2020; 18 WTE, 2 level 4 without ID, 2 stand alone sites, SAOLTA 2 WTE for group





Challenges



New infections:

- 2020 COVID -19
 - Acute infection diagnosis and manager
 - Therapeutics

Top Hospital Refe 300 250 200 The number of chlamydia and gonorrhoea notifications each week can include batch notifications of cases confirmed through the online STI testing service SH24. 50% 150 40% 100 30% 20% 50 10% 0 0% SVUH MMUH SJH UHL CUH UHW UCHG Tallaght OLOL Connolly BEAU SOPAT 40 36 52 39 2 89 2 3 67 16 ■ HOPAT 122 150 99 123 62 92 12 48 63 52 126 % SOPAT 37% 24% 23% 34% 2% 39% 3% 85% 25% 2% 4%

Table 1: Summary of HIV and Sexually Transmitted Infections reported for week 39, 2022

Disease	Week Ending	2022	2021	Increase/Decrease	
	10/1/2022	Week 1 - 39	Week 1 - 39	n	%
Chancroid	0	0	0	0	0.00
Chlamydia trachomatis infection	355	7358	5085	2273	44.70
Gonorrhoea	74	2679	1387	1292	93.15
Granuloma inguinale	0	0	0	0	0.00
Herpes simplex (genital)	34	1211	896	315	35.16
HIV	20	652	268	384	143.28
Lymphogranuloma venereum	1	17	9	8	88.89
Syphilis (early infectious)	20	706	520	186	35.77
Trichomoniasis	1	51	22	29	131.82
Total	505	12,674	8,187	4,487	54.81



Long COVID



- Persistent symptoms \geq 12 weeks following covid- 19 infection
 - Post acute covid symptoms up to 12 week
- Different clusters of symptoms fatigue and reduced functional activity relapsing
- Reduced ability to engage in ADL, reduced quality of life
 - 50% reduce work, 25 % unable to work
 - Loss of income, social interaction, leading to poor mental health
- Affects 2-20%
 - 41% > 1 years
 - 19% > 2 years
- Rates lower in those vaccinated (5% delta, 4.2% omicron)
- Rates increased
 - Female: male
 - Preexisting illness
 - Age 35 69
 - Working in healthcare, social care or education
 - Aetiology unknown autoimmune, low grade inflammation, microvascular disease, neurological damage –autonomic
- Treatment is supportive, symptom directed, modified rehab and fatigue management
- June 2022 70% UK population had been infected with COVID



Overview of official UK estimates of the prevalence of self-reported long COVID

Daniel Ayoubkhani Health Analysis & Life Events Division, ONS 28 September 2021



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Prevalence of symptoms 12 weeks after lab-confirmed infection

Approach 1: An 5.0% with syr

30% of people with long COVID reported depressive symptoms (PHQ-8) in the last 2 weeks, compared with 16% of those without COVID-19

Approach 2: A 3.0% with

25% of people with long COVID reported anxiety (GAD-7) in the last 2 weeks, compared with 15% of those without COVID-19

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ection

12 weeks

Approach

11.7% with sel

7.5% with activity miniming sent reported long covid at





Principles of care

- Making diagno
- Sharing
- Encour
- Subset⁶
 - eg n
- Setting
- Optimi

PRACTICE POINTER

Long covid—an update for primary care

Trisha Greenhalgh, 1 Manoj Sivan, 2 Brendan Delaney, 3 Rachael Evans, 4 Ruairidh Milne5

What you need to know

- Long covid (prolonged symptoms following covid-19 infection) is common
- The mainstay of management is supportive, holistic care, symptom control, and detection of treatable complications
- Many patients can be supported effectively in primary care by a GP with a special interest

This article updates and extends a previous BMJ
Practice Pointer published in August 2020 when
almost no peer reviewed research or evidence based
guidance on the condition was available. In this
update we outline how clinicians might respond to

2000) has around 65 patients with long covid, 27 of whom will have been unwell for more than a year, and 12 for more than two years. Most general practices have far fewer patients with a long covid diagnostic code on their electronic health record⁹ for a combination of reasons, including lack of presentation, lack of recognition, and inadequate coding. These figures do not cover children, who are outside the scope of this article.

Rates of long covid are lower in people who are triple vaccinated, but prevalence of long covid (persistent symptoms at 12-16 weeks after laboratory confirmed SARS-CoV-2 infection) remains high at 5% for the delta variant and 4.2% for omicron BA.2.¹⁰

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National Program Principles for Care

- Single governance structures closely related post acute and long COVID services
- Evolve with best practise and consistent standards of care
- Integrated with pre existing Community and Hospital services
- Defined referral pathways
- Close interaction with Primary Care system
- Academic partnerships
- Research, surveillance and reporting purposes
- Accountability and performance
- Cost effectiveness



THE LONG WAIT FOR A LONG-COVID THERAPY

After a slow start, researchers are ramping up the search for long-COVID treatments.

Over the past two years, Mewar has spent nearly all of her life savings seeing heart and respiratory specialists, haematologists, urologists dermatologists and more, in a desperate bid to tame her long. COVID symptoms. She has taken a slew oldrugs: beta blockers to calm her racing heart, steroid inhalers to each er laboured breathing and an antimalarial drug prescribed to he from the steroid she will be supported to the programment of the steroid she will be supported to the programment of the steroid she will be supported to the programment of the support of the programment of the program

And when Mewar — a curator at an art museum in Ahmedabad, India, who has been sick since what was probably a bout of COVID-19 in March 2020 — would visit her lung doctor twice a month, he always told her the same thing; you need to exercise. "Ican't even walk to the bathroom," she would reply.

millions of people living with long COVID, a complex and sometimes debilitating syndrome that can linger for months or years

Specialist Assessment Clinics for Long COVID

Specialties required

- Infectious Diseases Lead
- Clinical Nurse Specialist
- Administrative Support/Grade V/VI Data Manager
- Physiotherapy
- Respiratory physiologist
- Occupational Therapy
- Neuro Rehab/Psychiatry/Psychology
- Cardiology
- **Occupational Health**
- **Dietitians**
- **Immunologists**

Diagnostics

- Radiology
 - CXR
 - CT Scan
- PFTs
- O2 Sats
- Blood tests
- **BNP**
- Echo

- HR
- CRP

- Pulse oximetry
- Walk test
- Others...

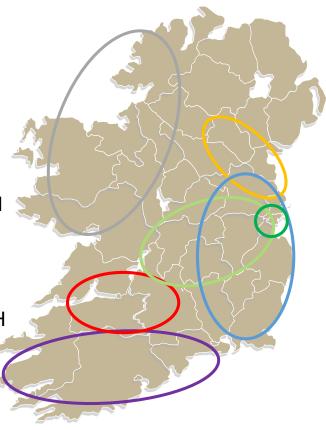


Other

- Physical Space
- Consistency of approach
- Research element
- Close GP collaboration
- Possibility for Chronic Fatigue Specialist service

Long COVID service

- Ireland East Hospital Group SVUH
- RCSI Hospitals Group Beaumont
- Dublin Midlands Hospital Group -SJH
- University Limerick Hospitals Group* LUH
- South/South West Hospital Group*- CUH
- Saolta University Health Care Group GUH



MDT assessment

OT

PT

CNS

Psychology

ID consultant

Supports

Fatigue management Physio

Co located respiratory services Expedited cardiology work up

Specialist Neurology referral SJUH

Agreed pathways

* Clinics not yet operational

11





Markers of fungal translocation are elevated during post-acute sequelae of SARS-CoV-2 and induce NF-kB signaling

Leila B. Giron, Michael J. Peluso, Ijanyi Ding, Grace Kenny, Netanel F. Zilberstein, Jane Koshy, Kai Ying Hong, Heather Rasmussen, Gregory E. Miller, Faraz Bishehsari, A. Robert A. Balk, 4 James N. Moy, 4 Rebecca Hoh, 2 Scott Lu, 2 Aaron R. Goldman, 1 Hsin-Yao Tang, 1 Brandon C. Yee, 8 Ahmed Chenna, John W. Winslow, Christos J. Petropoulos, J. Daniel Kelly, Haimanot Wasse, 4 Jeffrey N. Martin, 2 Qin Liu, 1 Ali Keshavarzian, 4,7 Alan Landay, 4 Steven G. Deeks, 2 Timothy J. Henrich, 2 and Mohamed Abdel-Mohsen

³The Wistar Institute, Philadelphia, Pennsylvania, USA. ²UCSF, San Francisco, California, USA. ³Centre for Experimental Pathogen Host Research, University College Dublin, Dublin, Ireland. Department of Internal Medicine, Rush University, Chicago, Illinois, USA. 5University of Nebraska-Lincoln, Lincoln, Nebraska, USA. 6Northwestern University, Evanston, Illinois, USA. 7Rush Center for Integrated Microbiome and Chronobiology Research, Rush University, Chicago, Illinois, USA. Monogram Biosciences, Inc., Labcorp, South San Francisco, California, USA.



Contents lists available at ScienceDirect

Brain, Behavior, & Immunity - Health

journal homepage: www.editorialmanager.com/bbih/default.aspx

Safety and efficacy of low dose naltrexone in a long covid cohort; an interventional pre-post study

Brendan O'Kelly a,b,*, Louise Vidal b, Tina McHugh b, James Woo a, Gordana Avramovic b, John S. Lambert a,1

Abstrac

BEHAVIO and IMMUNIT

Press release

Minister for Health announces €2 million investment in National Irish

COVID-10 Biohank

Protocol

Long COVID and episodic disability: advancing the conceptualisation, rement and knowledge of

ic disability among people living ong COVID - protocol for a methods study





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To Date

- Four of the six clinics established
- 20 new patients per month
- Wait time 3-4 months from referral < 4 weeks urgent
- Post acute resp clinics
- Pre existing clinics in Tallaght and Mater



Patient X



- 53 year old chef, baseline active, walked 6-10 km/day
- Covid in October 2020 not requiring hospitalisation
- Referred October 2021
 - Fatigue, myalgias and unrefreshing sleep (5Km slowly)
 - Brain fog word finding, multitasking
 - Drenching night sweats
- Medics
 - perimenopausal HRT
 - Liaise occ health HSE
- OT
 - Fatigue management, pacing prioritising activities, Sleep hygiene
 - Telehealth Fatigue management group
- Physio
 - Graded exercise program, focus certain muscle groups

VSS, 6 min walk test FBC, SMAC, CRP TFTS, HBAIc normal CXR normal FSH/LH

Discharged slightly better

Evidence based approach Hyperbaric Oxygen







Model of Care for the provision of Infectious Disease Specialty care in Ireland; Implications for workforce planning. July 22

Model of Care for the configuration of ID services

















- **ID Service Delivery Model**
- 6 Hospital Groups
- Level 4 services and strategic level 3
- Hub and Spoke
- Equitable access to care
- No single handed services
- Transparent
- Hanley report (2003) 61 clinical WTE

- Isolation facilities within framework of the NIU.
- OPD and dedicated ID wards
- Enhanced IT

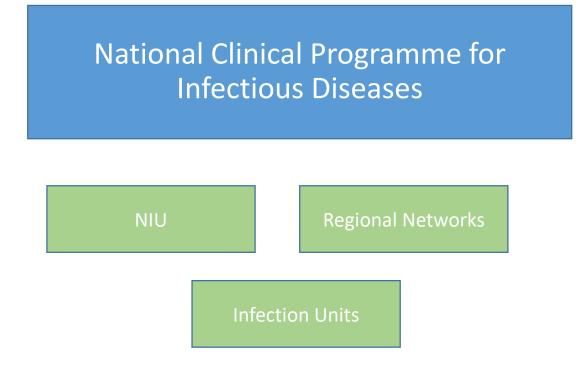
- Devolution of care to the community
- Integrated care with community hubs

- Incorporation of OPAT
- Incorporation of NIU
- Surveillance
- Epidemiology
- Stewardship
- Committee participation
- Best practice findings/international research
- Guidelines and Guidance

- 32 ID trainees in programme
- Collaboration with RCPI
- Training and posts linked to GIM

Surge capacity and preparedness proposal

- National model of care
 - Develop the ID clinical programme office
 - Create posts with strategy as components of the post for regional leadership
 - Regional network of receiving hospitals to support the NIU
 - Ring-fence day to day activities eg OPAT
 - Resource for facilities OPD/ED/Inpatient isolation rooms and dedicated ID wards
 - IT support for surveillance, stewardship of resource allocation



Allied Partners
(Public Health, Laboratory Medicine, Patient Groups, NCAGL etc)

Recovery ...Reforms..Innovation

- National plan for service provision
 - Who
 - Sustainable staffing CNS, ANP, AHP, consultant led
 - Where
 - Community in addition to level 4/3 hospitals
 - How
 - National systematic approach
 - Networked units
- Investment
 - IT
 - Hospital Infrastructure and community sites
- Surge capacity
 - Protect routine care Ability to flex





Clinical leadership

Not just responsible for the patient in front of you

John Kotter, Harvard Business School, defines leadership by what leaders do:

'leaders cope with change, they set direction, they align people to participate in that new direction, and they motivate people'







Acknowledments

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ID working group

AMRIC

Institute of Medicine RCPI



Hospital management

GPs



