

BMJ Open Mental health services in response to the COVID-19 pandemic in high-income countries: protocol for a rapid review

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ABSTRACT

Introduction The COVID-19 pandemic has caused disruptions to mental health services, forcing the rapid implementation of alternative ways of delivering services alongside a greater immediate, and continuously growing, demand across those services. The care and level of mental health service provided are felt to be inadequate to respond to the increasing demand for mental health conditions in the time of the pandemic, leading to an urgent need to learn from service change and consequences to inform solutions and plans to support the NHS postpandemic plan in the UK. This rapid review aims to understand the changes in mental health services during the pandemic and summarise the impact of these changes on the health outcomes of people with mental health conditions.

Methods and analysis Cochrane CENTRAL, MEDLINE, Embase and PsycInfo will be searched for eligible studies with key terms indicating mental health AND COVID-19 AND health services. Peer-reviewed empirical studies aiming to investigate or describe new models of care, services, initiatives or programmes developed or evolved for patients (aged 18 years or over) with mental health in response to COVID-19, published in the English language and undertaken in a high-income country defined by Organisation for Economic Co-operation and Development (OECD) member will be included. Studies reporting views of the general public, letters of opinion to peer-review journals, editorial or commentaries will be excluded. Study selection and data extraction will be undertaken independently by two reviewers. Evidence will be summarised narratively and in a logic model.

Ethics and dissemination Ethics approval is not required for this review. A list of interventions/services/models of care delivered to people with mental health conditions will be grouped as 'Do', 'Don't' and 'Don't know' based on the evidence on effectiveness and acceptability. The results will be written for publication in an open-access peer-reviewed journal and disseminated to the public and patients, clinicians, commissioners, funders and academic conferences.

PROSPERO registration number CRD42022306923.

INTRODUCTION

There was a substantial deterioration in mental health, and the prevalence of mental health symptoms increased both in previously healthy people and those with pre-existing

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This is a rapid review with a systematic search of literature on mental health services since the WHO declared the global outbreak of the COVID-19 pandemic on 11 March 2020.
- ⇒ This review will provide a rapid but robust collation of evidence in response to requests for timely evidence syntheses for decision-making purpose for the postpandemic period.
- ⇒ Outlining the objectives and methodology a priori will improve both transparency and quality and help reduce bias and enhance the reproducibility of the results.
- ⇒ Some limitations to the study design include studies limited to Organisation for Economic Co-operation and Development settings, exclusion of non-English studies, publication bias, quality of data, selection bias and no quality assessment in the rapid evidence review.
- ⇒ To help mitigate the limitations of the proposed study design, studies will be screened independently by two reviewers with a third reviewer consulted when there is a lack of consensus.

mental health conditions since the outbreak of COVID-19.¹⁻³ It is estimated that the pandemic will lead to new or additional mental health support for up to 10 million people in England (around 20% of the population).⁴ People with existing psychiatric diagnoses have reported increased symptoms and poorer access to services and support leading to relapse and suicidal behaviour.¹ While the increasing demand for mental health support/treatment inevitably exceeded the capacity of essential mental health services, the pandemic has significantly interrupted usual practice in the UK and worldwide. On 23 March 2020, a national lockdown was announced by the UK government with the public instructed to stay at home, socially distance and self-isolate with strict guidance about movement outside of one's household. The adaptations required to enable the delivery of mental healthcare services during this period of extended infection control

measures could have been disproportionately detrimental to those now living with mental health conditions (ie, autism,⁵ obsessive compulsive disorder,⁶ substance use disorder,⁷ etc). Difficulties attending review appointments in person and closure of support services are likely to have impacted all those in, or in need of, active treatment.⁸ The unequal impact of the pandemic and countrywide lockdown is likely to further entrench and exacerbate the existing structural inequalities in mental health among people with pre-existing mental health conditions before COVID-19. Furthermore, the mental health services provided have failed to meet the increasing demand for mental health treatment/support during the time of the COVID-19 pandemic.⁹

The UK National Health Service (NHS) has set up a long-term plan to improve mental healthcare services that are widely regarded as being under-resourced.¹⁰ However, for people with mental health conditions, there is an incomplete picture of the impact of the pandemic on the pattern of mental health services. Despite bringing current service inadequacies to the forefront, the pandemic could provide an opportunity to rethink conventional approaches to mental health services planning to meet patients' needs. For example, remote community treatment and support has long been suggested but has not previously been implemented widely because of barriers and challenges from both healthcare staff and service users. Since the onset of the pandemic, the situation has changed.¹¹ Similarly, the threshold for hospital admission for mental illness varies between individuals and requires continuous adaptation over time. Therefore, learning from health service changes throughout the pandemic, and their consequences for people's physical and mental health is vital to inform practical policy solutions for integrated service recovery and effectively plan services that reach those with the greatest need.

THE AIM OF REVIEW

The overall aim of this review is to: (1) identify changes in mental health services for adult patients in response to the pandemic and (2) understand the impact of the changes on their health outcomes in high-income countries.

METHODS AND ANALYSIS

A rapid review is defined as 'a form of knowledge synthesis that accelerates the process of conducting a traditional systematic review through streamlining or omitting various methods to produce evidence for stakeholders in a resource-efficient manner'.¹² The WHO recommends rapid review methods as an efficient approach to provide rapid but relevant and contextualised evidence to the health decision makers when there are time, resources or other logistical constraints.^{13–18} With rapid changes in service provision in response to the pandemic, a rapid review will be undertaken in a timely manner to provide an evidence base supporting the recommendation of

mental health services since COVID-19 and identify areas where the evidence base is lacking, and future research is required. The review will be guided by the Cochrane guidance for rapid reviews.¹² Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Rapid Reviews guidance¹⁹ will be followed for reporting. The review will be carried out between May 2022 and August 2022.

This protocol has been developed in advance of the review to improve the transparency and quality of the methods to help reduce bias and enhance the reproducibility of the results. This has been registered with the PROSPECT CRD42022306923.

ELIGIBILITY

Type of studies

Peer-reviewed quantitative, qualitative or mixed methods empirical studies aiming to investigate or describe new models of care, services, initiatives or programmes developed or evolved for patients with mental health in response to COVID-19 will be included. In addition, studies describing or comparing the setting, problems addressed, resource requirements, aim, service components, provider, method of delivery, objective and subjective effects of changes to mental health services in response to COVID-19 will be included. Studies reporting views of the general public, letter of opinion to peer-review journals, editorial or commentaries will be excluded.

Type of participants

People aged 18 years or over experiencing mental health conditions as described by NHS²⁰ who were in need of mental health support during the pandemic.

Type of health services

Interventions, services and models of care delivered in response to COVID-19 to provide support for adults with mental health conditions will be included.

Type of outcome measures

Primary outcomes are objective measures and subjective effects of changes, efficacy or use of a service by mental health patients. Secondary outcomes are changes in knowledge, attitudes or satisfaction of service users and/or professionals and health inequalities.

Type of study settings

According to level of economic development of the countries or regions under study, we will use membership of the Organisation for Economic Co-operation and Development (OECD)²¹ as a reference 'cut-off' point to include high-income countries^{22–23} to ensure a degree of similarities in the social security system, health system and socioeconomic and demographic characteristics as in the UK.

Search methods

Cochrane CENTRAL, MEDLINE, Embase and PsycInfo will be searched for from 2019 to the present. A search

strategy has been developed for MEDLINE with support from an independent information specialist, using a range of keywords and subject headings representing COVID-19, mental health and low-income and middle-income countries (see online supplemental appendix). This will be used to inform the detailed search strategy for other databases. Reference lists and citation indexes of relevant studies will also be examined. Only OECD studies published in or after 2019 and in the English language (no resource available for translation) will be searched.

Selection of studies

Studies identified from databases will be exported to EndNote X9²⁴ for deduplication. Study titles of abstracts will be screened independently according to the selection criteria. Any results that are inconclusive at the initial screen will be included and considered at full-text screening. All full-text papers will be screened independently by two researchers (GY and YF). Any discrepancies will be resolved by discussion and consensus. Where there is a disagreement between two reviewers, a third researcher (DC) will be consulted to reach a consensus.

Data extraction

A data extraction sheet will be designed to capture information relating to new models of care, services, initiatives or programmes developed or evolved for patients with mental health problems in response to the pandemic. Data extracted will include author's first name, publication date, setting, study design, sample size, mental health conditions, characteristics of participants, service components, service provider, method of delivery, resources required, outcome measures and main study results. GY will extract all the data. YF will check for accuracy and completeness through random double-extraction of 10% of included studies. Where a study appears to have multiple citations, original authors will be contacted for clarification. All information from multiple citations will be used if no replies are received.

Quality assessment and quality control

Quality assessment will not be conducted. Instead, a tabulated and narrative synthesis will be undertaken to report the results of included studies and discuss reasons for differences in this rapid review as suggested by current best practice guidance.^{13 25 26}

The following steps will be taken to ensure quality control for the searching, screening, data extraction and coding process. GY will conduct screening and data extraction following predetermined inclusion criteria and data extraction framework. For articles that are retrieved and full text saved, YF will check 10% of the coding to ensure they meet the screening criteria. Where there is a disagreement between two reviewers, a third researcher (DC) will be consulted to reach a consensus. Synthesis of each outcome will be conducted by GY and independently revised by YF.

Data synthesis and analysis

A tabulated and narrative synthesis of the results will be undertaken following current best practice^{25–27} to conduct synthesis systematically and transparently. It will focus on the mental health services, mechanisms and their impact on health outcomes. A logic model will be produced to present context, service provision and outcomes. Possible unintended adverse outcomes will also be reported. Also, a list of interventions/services/models of care delivered to people with mental health conditions will be grouped as 'Do', 'Don't' and 'Don't know' based on the strength of the evidence on effectiveness and acceptability.

If data are available, outcomes of studies will be synthesised according to characteristics of study participants, for example, deprived communities, ethnic minorities, to produce evidence on health inequalities that is likely to have been exacerbated during the pandemic.

Patient and public involvement

This study has been designed and developed in consultation with two public members (one with lived experience) to ensure their input on the study design. They both read and commented on the review summary, search strategies, eligibility and plans to synthesise data and dissemination strategies. They valued the potential impact of this review on NHS plans for mental health postpandemic. It has been agreed that the process of this rapid review will be presented to both members for their further comments.

ETHICS AND DISSEMINATION

As this rapid review will only consider published literature, no ethics approval is needed. Dissemination will be led by the research team and supported by the public member and the wider project advisory group. Results of this review will contribute to reports that will be produced and shared with the National Institute for Health and Care Research (NIHR) Three Research Schools and NIHR Applied Research Collaboration North East and North Cumbria. The findings will be published in peer-reviewed journals, and a plain study summary will be disseminated to people receiving mental healthcare, groups and forum that the project public members, practitioners and commissioners are connected. An abstract will be prepared for academic conferences such as the Society for Academic Primary Care Annual Conference.

Contributors GY and YF conceived the study idea and design. GY drafted the initial manuscript, and GY, YF, and DC reviewed the manuscript and provided input to the final version.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

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REFERENCES

- Moreno C, Wykes T, Galderisi S, *et al*. How mental health care should change as a consequence of the COVID-19 pandemic. *Lancet Psychiatry* 2020;7:813–24.
- Pierce M, Hope H, Ford T, *et al*. Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. *Lancet Psychiatry* 2020;7:883–92.
- Banks J, Xu X. The mental health effects of the first two months of lockdown during the COVID-19 pandemic in the UK. *Fisc Stud* 2020;41:685–708.
- O'Shea N. *Covid-19 and the nation's mental health: forecasting needs and risks in the UK*, 2020.
- Halstead EJ, Sullivan EC, Dimitriou D. The impact of COVID-19 on sleep in autistic adults: longitudinal comparisons pre and during Lockdown. *Front Psychiatry* 2021;12:708339.
- Qiu J, Shen B, Zhao M, *et al*. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *Gen Psychiatr* 2020;33:e100213.
- Xiang Y-T, Yang Y, Li W, *et al*. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry* 2020;7:228–9.
- Anderson G, Frank JW, Naylor CD, *et al*. Using socioeconomic to counter health disparities arising from the covid-19 pandemic. *BMJ* 2020;369:m2149.
- Bambra C, Riordan R, Ford J, *et al*. The COVID-19 pandemic and health inequalities. *J Epidemiol Community Health* 2020;121:jech-2020-214401.
- Alderwick H, Dixon J. The NHS long term plan. *BMJ* 2019;364:l84.
- Shore JH, Schneck CD, Mishkind MC. Telepsychiatry and the coronavirus disease 2019 pandemic—current and future outcomes of the rapid Virtualization of psychiatric care. *JAMA Psychiatry* 2020;77:1211–2.
- Garrity C, Gartlehner G, Nussbaumer-Streit B, *et al*. Cochrane rapid reviews methods group offers evidence-informed guidance to conduct rapid reviews. *J Clin Epidemiol* 2021;130:13–22.
- Tricco AC, Langlois E, Straus SE. *Rapid reviews to strengthen health policy and systems: a practical guide*. World Health Organization, 2017.
- McIntosh HM, Calvert J, Macpherson KJ, *et al*. The healthcare improvement Scotland evidence note rapid review process: providing timely, reliable evidence to inform imperative decisions on healthcare. *Int J Evid Based Healthc* 2016;14:95–101.
- Tricco AC, Antony J, Zarin W, *et al*. A scoping review of rapid review methods. *BMC Med* 2015;13:1–15.
- Polisena J, Garrity C, Kamel C, *et al*. Rapid review programs to support health care and policy decision making: a descriptive analysis of processes and methods. *Syst Rev* 2015;4:1–7.
- Featherstone RM, Dryden DM, Foisy M, *et al*. Advancing knowledge of rapid reviews: an analysis of results, conclusions and recommendations from published review articles examining rapid reviews. *Syst Rev* 2015;4:1–8.
- Grant MJ, Booth A. A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Info Libr J* 2009;26:91–108.
- Page MJ, McKenzie JE, Bossuyt PM, *et al*. Updating guidance for reporting systematic reviews: development of the PRISMA 2020 statement. *J Clin Epidemiol* 2021;134:103–12.
- NHS. Mental health conditions, 2022. Available: <https://www.nhs.uk/mental-health/conditions/> [Accessed 8 Feb 2022].
- Reibling N, Ariaans M, Wendt C. Worlds of healthcare: a healthcare system typology of OECD countries. *Health Policy* 2019;123:611–20.
- Brunier A, Drysdale C. COVID-19 disrupting mental health services in most countries, WHO survey. *World Heal Organ* 2020.
- Byrne A, Barber R, Lim CH. Impact of the COVID -19 pandemic – a mental health service perspective. *Prog Neurol Psychiatry* 2021;25:27–33.
- EndNote [program]. *Endnote X9 version*. Philadelphia, PA: Clarivate, 2013.
- Campbell M, Katikireddi SV, Sowden A, *et al*. Improving conduct and reporting of narrative synthesis of quantitative data (ICONS-Quant): protocol for a mixed methods study to develop a reporting guideline. *BMJ Open* 2018;8:e020064.
- Popay J, Roberts H, Sowden A. Guidance on the conduct of narrative synthesis in systematic reviews, a product from the ESRC methods programme version 2006;1:b92.
- Campbell M, McKenzie JE, Sowden A, *et al*. Synthesis without meta-analysis (SWiM) in systematic reviews: reporting guideline. *BMJ* 2020;368:16890.

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Appendix: Search Strategy

PubMed/Medline

	PubMed/Ovid Medline (2018 to May 27, 2022)
COVID-19	<p>1 SARS-CoV-2/ or Coronavirus Infections/ or COVID-19/ or Pandemics/ or Coronavirus/</p> <p>2 (2019 ncov or 2019ncov or coronavirus or coronaviruses or corona viruse or corona virus).tw.</p> <p>3 (COVID or COVID19 or nCov 2019 or SARS-CoV2 or SARS CoV-2 or SARSCoV2 or SARSCoV-2).tw.</p> <p>4 or/1-3</p>
MENTAL HEALTH	<p>5 EATING DISORDERS/ or ANOREXIA NERVOSA/ or BINGE-EATING DISORDER/ or BULIMIA NERVOSA/ or FEMALE ATHLETE TRIAD SYNDROME/ or PICA/ or HYPERPHAGIA/ or BULIMIA/ or SELF-INJURIOUS BEHAVIOR/ or SELF MUTILATION/ or SUICIDE/ or SUICIDAL IDEATION/ or SUICIDE, ATTEMPTED/ or MOOD DISORDERS/ or AFFECTIVE DISORDERS, PSYCHOTIC/ or BIPOLAR DISORDER/ or CYCLOTHYMIC DISORDER/ or DEPRESSIVE DISORDER/ or DEPRESSIVE DISORDER, MAJOR/ or DEPRESSIVE DISORDER, TREATMENT-RESISTANT/ or DYSTHYMIC DISORDER/ or SEASONAL AFFECTIVE DISORDER/ or NEUROTIC DISORDERS/ or DEPRESSION/ or ADJUSTMENT DISORDERS/ or ANXIETY DISORDERS/ or AGORAPHOBIA/ or NEUROCIRCULATORY ASTHENIA/ or OBSESSIVE-COMPULSIVE DISORDER/ or OBSESSIVE HOARDING/ or PANIC DISORDER/ or PHOBIC DISORDERS/ or STRESS DISORDERS, TRAUMATIC/ or COMBAT DISORDERS/ or STRESS DISORDERS, POST-TRAUMATIC/ or STRESS DISORDERS, TRAUMATIC, ACUTE/ or ANXIETY/ or ANXIETY, CASTRATION/ or KORO/ or ANXIETY, SEPARATION/ or PANIC/ or SOMATOFORM DISORDERS/ or BODY DYSMORPHIC DISORDERS/ or CONVERSION DISORDER/ or HYPOCHONDRIASIS/ or NEURASTHENIA/ or HYSTERIA/ or MUNCHAUSEN SYNDROME BY PROXY/ or MUNCHAUSEN SYNDROME/ or FATIGUE SYNDROME, CHRONIC/ or OBSESSIVE BEHAVIOR/ or COMPULSIVE BEHAVIOR/ or BEHAVIOR, ADDICTIVE/ or IMPULSE CONTROL DISORDERS/ or FIRESETTING BEHAVIOR/ or GAMBLING/ or TRICHOTILLOMANIA/ or STRESS, PSYCHOLOGICAL/ or SEXUAL DYSFUNCTIONS, PSYCHOLOGICAL/ or VAGINISMUS/ or ANHEDONIA/ or AFFECTIVE SYMPTOMS/ or Psychological Distress/ or mental disorderes/ or Mental Health/</p> <p>6 exp ANTI-ANXIETY AGENTS/</p> <p>7 exp ANTIDEPRESSIVE AGENTS/</p> <p>8 (eating disorder* or anorexia nervosa or bulimi* or binge eat* or (self adj (injur* or mutilat*)) or suicide* or suicidal or parasuicid* or mood disorder* or affective disorder* or bipolar i or bipolar ii or (bipolar and (affective or disorder*)) or mania or manic or cyclothymic* or depression or depressive or dysthymi* or neurotic or neurosis or adjustment disorder* or antidepress* or anxiety disorder* or mental disorder* or emotional distress or psychological distress or</p>

	<p>agoraphobia or obsess* or compulsi* or panic or phobi* or ptsd or posttrauma* or post trauma* or combat or somatoform or somati#ation or medical* unexplained or body dysmorphi* or conversion disorder or hypochondria* or neurastheni* or hysteria or munchausen or chronic fatigue* or gambling or trichotillomania or vaginismus or anhedoni* or affective symptoms or mental health).tw.</p> <p>9 or/5-8</p> <p>10 Mental Health Services/</p> <p>11 Health Services Accessibility/</p> <p>12 Help-Seeking Behavior/</p> <p>13 ((health adj2 service\$) or healthcare or (health adj2 care)).tw.</p> <p>14 (access\$ adj4 ((health adj2 service\$) or healthcare or (health adj2 care))).tw.</p> <p>15 "Delivery of Health Care"/</p> <p>16 ("use" adj4 ((health adj2 service\$) or healthcare or (health adj2 care))).tw.</p> <p>17 (utili#ation adj4 ((health adj2 service\$) or healthcare or (health adj2 care))).tw.</p> <p>18 Remote Consultation/</p> <p>19 Telemedicine/</p> <p>20 or/10-19</p>
LOW AND MIDDLE INCOME COUNTRIES	<p>21 (afghanistan or albania or algeria or american samoa or angola or "antigua and barbuda" or antigua or barbuda or argentina or armenia or armenian or aruba or azerbaijan or bahrain or bangladesh or barbados or republic of belarus or belarus or byelarus or belORussia or byelORussian or belize or british honduras or benin or dahomey or bhutan or bolivia or "bosnia and herzegovina" or bosnia or herzegovina or botswana or bechuanaland or brazil or brasil or bulgaria or burkina faso or burkina fasso or upper volta or burundi or urundi or cabo verde or cape verde or cambodia or kampuchea or khmer republic or cameroon or cameron or cameroun or central african republic or ubangi shari or chad or chile or china or colombia or comORos or comORo islands or iles comORes or mayotte or democratic republic of the congo or democratic republic congo or congo or zaire or costa rica or "cote d'ivoire" or "cote d' ivoire" or cote divoire or cote d ivoire or ivORY coast or croatia or cuba or cyprus or czech republic or czechoslovakia or djibouti or french somaliland or dominica or dominican republic or ecuadOR or egypt or united arab republic or el salvadOR or equatORial guinea or spanish guinea or eritrea or estonia or eswatini or swaziland or ethiopia or fiji or gabon or gabonese republic or gambia or "geORgia (republic)" or geORgian or ghana or gold coast or gibraltar or greece or grenada or guam or guatemala or guinea or guinea bissau or guyana or british guiana or haiti or hispaniola or honduras or hungary or india or indonesia or timOR or iran or iraq or isle of man or jamaica or jORdan or kazakhstan or kazakh or kenya or "democratic people's republic of kORea" or republic of kORea or nORth kORea or south kORea or kORea or kosovo or kyrgyzstan or kirghizia or kirgizstan or kyrgyz republic or kirghiz or laos or lao pdr or "lao people's democratic republic" or latvia or lebanon or lebanese republic or lesotho or basutoland or liberia or libya or libyan arab jamahiriya or lithuania or macau or macao or</p>

	<p>republic of nORth macedonia or macedonia or madagascar or malagasy republic or malawi or nyasaland or malaysia or malay federation or malaya federation or maldives or indian ocean islands or indian ocean or mali or malta or micronesia or federated states of micronesia or kiribati or marshall islands or nauru or nORthern mariana islands or palau or tuvalu or mauritania or mauritius or mexico or moldova or moldovian or mongolia or montenegro or mORocco or ifni or mozambique or pORTuguese east africa or myanmar or burma or namibia or nepal or netherlands antilles or nicaragua or niger or nigeria or oman or muscat or pakistan or panama or papua new guinea or new guinea or paraguay or peru or philippines or philipines or philippines or philippines or poland or "polish people's republic" or pORtugal or pORTuguese republic or puerto rico or romania or russia or russian federation or ussr or soviet union or union of soviet socialist republics or rwanda or ruanda or samoa or pacific islands or polynesia or samoan islands or navigatOR island or navigatOR islands or "sao tome and principe" or saudi arabia or senegal or serbia or seychelles or sierra leone or slovakia or slovak republic or slovenia or melanesia or solomon island or solomon islands or nORfolk island or nORfolk islands or somalia or south africa or south sudan or sri lanka or ceylon or "saint kitts and nevis" or "st. kitts and nevis" or saint lucia or "st. lucia" or "saint vincent and the grenadines" or saint vincent or "st. vincent" or grenadines or sudan or suriname or surinam or dutch guiana or netherlands guiana or syria or syrian arab republic or tajikistan or tadjikistan or tadjikistan or tadjik or tanzania or tanganyika or thailand or siam or timOR leste or east timOR or togo or togolese republic or tonga or "trinidad and tobago" or trinidad or tobago or tunisia or turkey or turkmenistan or turkmen or uganda or ukraine or uruguay or uzbekistan or uzbek or vanuatu or new hebrides or venezuela or vietnam or viet nam or middle east or west bank or gaza or palestine or yemen or yugoslavia or zambia or zimbabwe or nORthern rhodesia or global south or africa south of the sahara or sub-saharan africa or subsaharan africa or africa, central or central africa or africa, nORthern or nORth africa or nORthern africa or magreb or maghrib or sahara or africa, southern or southern africa or africa, eastern or east africa or eastern africa or africa, western or west africa or western africa or west indies or indian ocean islands or caribbean or central america or latin america or "south and central america" or south america or asia, central or central asia or asia, nORthern or nORth asia or nORthern asia or asia, southeastern or southeastern asia or south eastern asia or southeast asia or south east asia or asia, western or western asia or europe, eastern or east europe or eastern europe or developing country or developing countries or developing nation? or developing population? or developing wORld or less developed countr* or less developed nation? or less developed population? or less developed wORld or lesser developed countr* or lesser developed nation? or lesser developed population? or lesser developed wORld or under developed countr* or under developed nation? or under developed population? or under developed wORld or underdeveloped countr* or underdeveloped nation? or underdeveloped population? or underdeveloped wORld or middle</p>
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	income countr* or middle income nation? or middle income population? or low income countr* or low income nation? or low income population? or lower income countr* or lower income nation? or lower income population? or underserved countr* or underserved nation? or underserved population? or underserved wORLD or under served countr* or under served nation? or under served population? or under served wORLD or deprived countr* or deprived nation? or deprived population? or deprived wORLD or poOR countr* or poOR nation? or poOR population? or poOR wORLD or poORer countr* or poORer nation? or poORer population? or poORer wORLD or developing econom* or less developed econom* or lesser developed econom* or under developed econom* or underdeveloped econom* or middle income econom* or low income econom* or lower income econom* or low gdp or low gnp or low gross domestic or low gross national or lower gdp or lower gnp or lower gross domestic or lower gross national or lmic or lmics or third wORLD or lami countr* or transitional countr* or emerging economies or emerging nation?).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
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Notes	[pt=publication type; ab=abstract; ti=title; fs=floating subheading; sh=subject heading; mp=title, original title, abstract, name of substance word, subject heading word, unique identifier]