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UK frontline workers in the prevention, treatment and recovery from Covid-19.

**Methods:** The JSP Management group was formed in March 2020. A selective review was conducted of available English and Chinese language sources describing the diagnosis and treatment of COVID-19. Data on herbs, formulae and approaches to management were extracted, formulated into statements, and circulated to an international group of expert practitioners. Agreement on these were rated on a 7 point Likert scale and aggregated to generate a broad consensus on good practice resulting in preventative and acute treatment guidelines. Forty-eight CHM practitioners were recruited to work voluntarily on the project and trained in the use of the guidelines. Funds were raised to enable provision of free herbs. Practitioner networks and social media were used to publicise the project.

**Results:** Currently the JSP has 140 patients registered for treatment (74 for prevention, 6 for acute infection, and 60 for recovery). Recruitment has been primarily by word-of-mouth and includes a geographically and ethnically diverse population with a wide range of occupations from bus driver to surgeon. Data are being collected quantitatively using a modified MYMOP outcome measure and via in-depth qualitative interviews. Preliminary data suggests that CHM may have a useful role in assisting in the recovery from chronic COVID-19 related disease.

**Conclusion:** The JSP is an example of a practitioner led initiative to provide accessible integrative care to a vulnerable population at a time of great need. It has generated treatment guidelines, created a network of trained practitioners, and provided free herbal treatment to a diverse group of CHM naive people. Preliminary data suggest further research into the role of CHM to assist recovery from chronic COVID-19 infection is warranted

**Keywords:** Chinese herbal medicine; COVID-19; Integrative care; Prevention; Treatment

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**Lifestyle changes during the first wave of the COVID-19 pandemic: a cross-sectional survey in the Netherlands**

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**Introduction:** During the Covid-19 pandemic the Dutch government implemented its so-called 'intelligent lockdown' in which people were urged to stay at home. This life changing event may have caused changes in lifestyle-behavior.

**Methods:** Life-style related changes were studied among a random representative sample of adults in the Netherlands using an on-line survey (22-27 May 2020). Differences in COVID-19-related lifestyle changes between Complementary and Alternative Medicine (CAM) users and non-CAM users were determined. The survey included a modified version of the I-CAM-Q and 26 questions on lifestyle-related-measures and changes since the COVID-19-outbreak.

**Results:** 1004 respondents were included in the study, aged between 18 and 88 years (50.7% females). Changes to a healthier lifestyle were observed in 19.3% of the population, mainly due to a change in diet habits, physical activity and relaxation, of whom 56.2% reported to be motivated to maintain this in a post-COVID-19 era. Fewer respondents (12.3%) changed into an unhealthy lifestyle. Multivariable logistic regression analyses revealed that changing into a healthier lifestyle was positively significantly associated with the variables

'Worried/Anxious getting COVID-19' (OR:1.56, 95% C.I. 1.26-1.93), 'CAM use' (OR:2.04, 95% C.I. 1.38-3.02) and 'stress in relation to financial situation' (OR:1.89, 95% C.I. 1.30-2.74). 'Age' (OR18-25:1.00, OR25-40:0.55, 95% C.I. 0.31-0.96, OR40-55:0.50 95% C.I. 0.28-0.87 OR55+:0.1095% C.I. 0.10-0.33), 'stress in relation to health' (OR:2.52, 95% C.I. 1.64-3.86) and 'stress in relation to the balance work and home' (OR:1.69, 95% C.I. 1.11-2.57) were found predicting the change into a more unhealthy direction.

**Conclusion:** These findings suggest that the coronavirus crisis results in a healthier-lifestyle in one part and, to a lesser extent, in an unhealthy-lifestyle in another part of the Dutch population. Further studies are warranted to see whether this behavioral change is maintained over time, and how different lifestyle factors can affect the susceptibility for and the course of COVID-19.

**Keywords:** COVID-19, Life-style, CAM, Integrative Medicine

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**Zinc for the prevention and treatment of SARS-CoV-2 and other acute viral respiratory infections – a living rapid review and meta-analysis**

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**Introduction:** This living rapid review aims to systematically update evidence from randomised controlled trials (RCTs) on the efficacy and safety of any zinc formulation or dose compared to any control, for preventing or treating SARS-CoV-2 and other acute viral respiratory tract infections (RTIs) in adults.

**Methods:** Protocol registration was 27-April-2020 (PROSPERO: CRD42020182044). Eight databases (one Chinese), four clinical trial registries (one Chinese) and two pre-print servers were then searched with no language or date restrictions. Post-protocol/pre-data extraction, the inclusion criteria was restricted to adults. Meta-analysis used weighted, random-effects models. Cochrane RoB 2.0 tool and GRADE were used to appraise evidence certainty. Searches for COVID-19 evidence are updated 6-monthly.

**Results:** As of Oct-2020, 1,907 articles and protocols were screened, and 28 RCTs involving 5,403 participants (none with SARS-CoV-2 infections) were included. Compared to placebo, oral or intranasal zinc prevented 5 RTIs/100 person-months (95%CI: 1-9, NNT=20) in adults without zinc deficiency (moderate-certainty), but not pre/post exposure prevention following human rhinovirus inoculation (RR 0.96, 95%CI: 0.77-1.21, moderate-certainty). There was low-certainty evidence of clinically important RTI treatment outcomes. Compared to placebo, sublingual or intranasal zinc improved day-3 symptom severity (MD 1.2 points lower, 95%CI: 0.7-1.7) and reduced symptom duration (MD 2 days shorter, 95%CI: 0.2-3.5; HR 0.55 over 7-days, 95% CI: 0.32-0.91, NNT=5). There was an increased risk of non-serious adverse events (e.g. nausea, or mouth or nasal irritation) (ARR 14/100 adults, 95%CI: 4-16, NNH=7). In the 25 RCTs that reported adverse events, none were serious, including copper deficiency or anosmia. The April-2021 update

search identified, four COVID-19 RCTs with 572 participants and 7 registered RCTs. These results will be included in the next update.

**Conclusion:** Preliminary evidence suggests there may be a role for zinc in the COVID-19 pandemic. Further research and regular updating of the evidence is warranted.

**Keywords:** Zinc, Complementary medicine, Common cold, Respiratory infections, Viral infections, COVID-19

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### Add-on Chinese Medicine for Coronavirus Disease 2019 (COVID-19): A Retrospective Cohort

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**Introduction:** Previous studies showed that the effect of antivirals for COVID-19 was promising but varied across patient population, and was modest among severe cases. Chinese Medicine (CM) was extensively used to treat COVID-19 in China. We aimed to evaluate the real-world effectiveness of add-on semi-individualized CM during the outbreak.

**Methods:** A retrospective total sampling cohort of 1788 adult confirmed COVID-19 patients were recruited from all 2235 consecutive records retrieved from 5 hospitals in Wuhan during 15 January to 13 March 2020. Consultation notes, laboratory/imaging investigations, pharmacy and prognosis records were linked by an electronic medical record system and verified by at least 2 researchers independently. The mortality of add-on semi-individualized CM users and non-users was compared by inverse probability weighted hazard ratio (HR) and by propensity score matching. Change of biomarkers was compared between groups and the frequency of CMs used was analysed. Subgroup analysis was performed to stratify disease severity and dose of CM exposure. Sensitivity analyses were conducted to test the robustness. Change of key biomarkers and the prescription were analysed.

**Results:** The crude mortality was 3.8% in the semi-individualized CM user group and 17.0% among the non-users. Add-on CM was associated with a mortality reduction of 58% (HR=0.42, 95% CI: 0.23 to 0.77) among all COVID-19 cases and 66% (HR=0.34, 95% CI: 0.15 to 0.76) among severe/critical COVID-19 cases demonstrating dose-dependent response, after inversely weighted with propensity score. The result was robust in various stratified, weighted, matched, adjusted and sensitivity analyses. Severe/critical patients received add-on CM had a trend of stabilized D-dimer level after 3-7 days of admission when compared to baseline. Anti-inflammatory, immunomodulating and anti-asthmatic CMs were most used.

**Conclusion:** Add-on semi-individualized CM was associated with significantly reduced mortality demonstrating dose-dependent response, especially among severe/critical COVID-19 patients. Chinese medicine should be considered as an add-on regimen for trial use.

**Keywords:** COVID-19; Chinese Medicine; Retrospective Cohort; mortality;

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### Chinese Herbal Medicine Telehealth Outcomes for Symptoms Possibly Related to COVID-19

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**Introduction:** Given the seriousness of Coronavirus Disease (COVID-19) and long-term sequelae, effective therapies are urgently needed. We are conducting an observational cohort study to describe Chinese herbal medicine (CHM) therapy, outcomes, and safety.

**Methods:** In this prospective, longitudinal, descriptive cohort study, we will observe participants with symptoms related to COVID-19 who consent to participate in telehealth visits and receive individualized CHM. All participants are asked to obtain a COVID-19 test. Licensed practitioners with at least 20 years' CHM practice experience will determine the number of telehealth consultations necessary for each participant. All participants are prescribed individualized CHM dispensed either as raw herbs to be decocted at home or granules. Follow-up at 24- and 48-hours after each telehealth visit will provide clinicians with information to determine if an additional telehealth consultation is necessary. Follow-up is at 3, 6, and 12 months.

**Results:** The study is registered ClinicalTrials.gov NCT04380870 and currently enrolling. Fifty-six participants have enrolled to date: 35 (63%) are female and 21 (37%) male; 45.83 average age (range 22-69). In total, 191 consultations were administered with an average of 3.35 per participant (range 1-9). In the acute phase of illness, the primary symptom reported was fever/chills (23%), fatigue (16%), and sore throat (13%). All but one participant with acute symptoms (n=48) did not progress to long-haul COVID. All long-haul COVID participants (n=7) recovered. No adverse events occurred related to the intervention. One patient was referred to the emergency room out of caution when symptoms did not adequately improve after the initial consult for evaluation.

**Conclusion:** Describing individualized CHM treatment as a potential COVID-19 therapy will provide vital preliminary feasibility, acceptability, tolerability, effectiveness, and safety data. Findings from our study will inform future controlled trials of individualized CHM therapy for symptoms possibly related to COVID-19.

**Keywords:** Adverse events, COVID-19, Chinese herbal medicine, Telehealth; Cohort study

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### Retrospective Survey of Treatment and Outcomes of COVID-19 in the community

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**Introduction:** The global COVID-19 pandemic has been associated with high mortality, particularly among the elderly and patients with chronic comorbidities, but the vast majority of affected people are asymptomatic or have only mild symptoms. The aim was to explore as-