

Remote working during the COVID-19 Pandemic

An Evidence Review

Library & Knowledge Service, East Cheshire NHS Trust



Keywords: #teleworking #telecommuting #remote working #virtual teams #homeworking #WFH #neuro-behavioural economics #Quality of Working Life (QWL) #COVID-19 #wellbeing #productivity #output #benefit #engagement #leadership #trust #flexibility

Tools: Utrecht Work Engagement Scale (UWES), Brief Pain Inventory (BPI), Fear Avoidance Beliefs Questionnaire (FABQ), Hospital Anxiety and Depression Scale (HADS), Microsoft Teams

Introduction

Since the COVID-19 pandemic arrived at the beginning of 2020 and the subsequent 'stay at home measures' deployed to control the virus, there has been a shift towards home working. This can mean working exclusively from home or working more flexibly to allow social distancing in the office.

East Cheshire NHS Trust have implemented a combination of these measures from the position of previously having very little experience of remote working. Reasons for this may include a managerial discomfort in providing similar levels of flexibility to front line staff and their supporting colleagues. Typically, frontline staff are unable to work remotely so therefore the equality measure is that neither can support staff. This had to change as we started reorganising to cope with COVID and to provide space workplaces. There have been anxieties over issues such as productivity, trust, communication and leadership.

This evidence review will look at research conducted specifically on remote working for the COVID-19 pandemic and will include both clinical and non-clinical staff. The aim of the review is to put a literature search into the context of the topic and arrange the articles by issue such as:

- Hints and tips
- Motivation and staff engagement
- Autonomy and trust
- Performance and productivity
- Mental health and isolation
- Physical health including musculoskeletal issues
- Flexibility and work-life balance
- Technology
- Leadership and culture
- Equality

Hints and Tips

There are numerous websites and blogs offering hints and tips on the internet ([9 Tips for Managing Remote Employees, 2021](#)) by the consultancy company Gartner and (Lopez-Leon, Forero and Ruiz-Díaz, 2020) summarise them best here:

For Managers:

- Be on the lookout for signs of distress in employees and colleagues perhaps with issues arising from COVID, changes to work patterns etc. Provide a supportive structure and communicate it well.
- Make sure staff are suitably equipped – mobiles, laptops, cameras, workstation
- Using coaching conversations to help staff with virtual communications
- Trust your employees – don't micro-manage
- Reinforce organisational values - engage employees with the big picture. This will help strengthen virtual teams
- Use objectives to create clarity and focus on outputs rather than processes.
- Increase recognition – employees desire for recognition increases by 30% - this is due to lack of visibility in the remote workplace.
- Be creative with remote teaching – use a moodle or other online platforms

For Employees:

- Create routines – don't confuse flexibility with a lack of routine.
- Prioritise. Do what you have to do before what you want to
- Have an adequate home office to separate work and home
- Use online devices to facilitate communication and networking
- Be organised – write to-do lists
- Work offline to increase productivity (not constantly checking emails etc)

Motivation and staff engagement

During the COVID-19 pandemic, many healthcare staff and others who work for the NHS have been working from home (WFH) or shielding due to various health conditions, including pregnancy. Physicians from the Glan Clwyd Hospital in Rhyl undertook a survey ([Chattopadhyay, Davies and Adhiyaman, 2020](#)) to ascertain how the healthcare workers who are shielding or WFH have been contributing to the NHS. Though the majority of those surveyed (79%) were working while staying at home, the full potential of this workforce had not been utilised due to inadequate availability or provision of resources. Despite remote working and some satisfaction that they were still able to contribute to the NHS, nearly half of the respondents felt that they were letting the NHS down by not being able to go to work. Given the wide variety of work that those WFH are undertaking during the pandemic, workplace colleagues and managers should do more so that that these individuals feel acknowledged and valued for their contribution to the NHS at these challenging times.

East Cheshire NHS Trust, along with other organisations have been thinking of engagement activities for their employees. In challenging times employee engagement is more important than ever, not only for the health and wellbeing of staff but for increased productivity needed to meeting the challenge of the pandemic. ([Chanana and Sangeeta, 2020](#)) writes that; "Many companies nowadays are developing numerous employee engagement practices



like virtual team meet-ups, virtual learning and development, conducting weekly alignment online session, webinars with industry experts, and also webinars for anxiety and stress, online team building activities, online family engagement practices, brainstorming, apology, and appreciation online session, shared content such as TED Talks, online books, online courses, live sessions for new-skill training, online communication exercise, online sharing best practices of maintaining health and hygiene, digital classrooms training modules, e-learning modules, online guidance for exercise and meditation, online recognition and acknowledgment of employees, online employee feedback, short online game session, virtual challenges and competitions, 5 minutes of informal talk, entire team gathers over video conference for lunch, online counseling sessions, and social interactions in the virtual office. These kinds of engagement practices boost the morale of the employees and employees feel motivated and committed towards the organization in this pandemic situation due to coronavirus.”

In a long and theoretical paper, [\(Degbey and Einola, 2020\)](#) looks at resilience in virtual teams focusing on team dynamics. Findings show that team members who engaged in specific reflection and action mechanisms such as self-reflective practices, regulation of emotional expression, and engagement in concrete actions promoting team inclusion, helped these teams become more robust and prepared to face new adversities.

In a survey of Radiation Oncologists, [\(Dhont et al., 2020\)](#) found that “Group comparisons found the presence of a supportive institutional program as the sole factor of statistical significance in both anxiety and depressive symptom levels.”

Autonomy and trust

In this psychological study, [\(Johannsen and Zak, 2020\)](#) investigated the mechanisms through which greater autonomy affects individual and team performance and if this had an effect on mood.

They found that increased perceived autonomy can significantly improve individual and group productivity and that this can have a salubrious impact on mood.

In his 2013 on the Chinese WFH experiment [\(Bloom et al., 2015\)](#) argues that working from home works best for jobs that are measured on output. “Most of us are in measured output jobs – I get assessed on teaching and research, for example. But a lot of people – particularly in lower-paid jobs – are measured on input – the hours visibly worked. Working from home is great for measured output jobs – who cares where you work? A manager just needs to observe your output. But for measured input jobs, it is a lot trickier.”

(Marrs, 2020) writing for Public Finance (see attached PDF) says this presents a challenge for the public sector, where many roles have less well-defined outputs than in the private sector. “You can evaluate the output of a salesperson, an engineer or a dentist reasonably easily,” [\(Bloom et al., 2015\)](#) says. “Indeed, many firms sell products or services that generate a ready measure of output in terms of sales and profits. But for the public sector there is no easy equivalent – how do you evaluate a civil servant’s advice?”

In their systematic review, Ergonomics and telework [\(de Macêdo et al., 2020\)](#) finds that “The teleworking situation reinforces the self-image of responsible, committed, independent and autonomous professionals/individuals; for the youngsters, it can also represent an opportunity for professional maturity. The reduction of direct supervision, as well as the supporting infrastructure provided by the organization result in more autonomy, increased responsibility and further opportunities to demonstrate performance and value.”



Performance and productivity

The trend for homeworking started long prior to the pandemic as there are many benefits for employers and employees. A 2017 survey conducted by HSBC revealed that 9 out of 10 employees believe flexible working is key to boosting productivity levels. A study ([HSBC, 2017](#)) of British businesses and employees found that nine in ten employees surveyed (89%) consider flexible working to be a key motivator to their productivity levels within the workplace – a view shared equally among male and female employees (87% and 90% respectively) – and more so than financial incentives (77%). Alongside this, 81% of workers who can work remotely believe this opportunity helps them to improve their productivity, making a clear link between flexible working cultures and increased business productivity levels.

In his article “How to make homeworking a success” ([Hall, 2019](#)) says that “Flexible working is one of the most sought-after employee benefits, as it allows employees to fit work around other responsibilities. About 90% of UK workers believe that flexible working would boost their productivity, and 58% say it would improve their motivation levels.” And “Offering flexible packages also provides a strong competitive edge in the battle for fresh talent. This is particularly beneficial now, when there are record levels of employment and a shortage of skilled workers.”

In 2013, Stanford University ([Bloom et al., 2015](#)) reported the results of a ‘working from home’ experiment at CTrip a 16,000- employee, NASDAQ-listed Chinese travel agency. ([Marrs, 2020](#)) explains that “Call center employees who volunteered to WFH were randomly assigned to work from home or in the office for 9 months. Home working led to a 13% performance increase, of which about 9% was from working more minutes per shift (fewer breaks and sick-days) and 4% from more calls per minute (attributed to a quieter working environment). Home workers also reported improved work satisfaction and experienced less turnover, but their promotion rate conditional on performance fell. Due to the success of the experiment, CTrip rolled-out the option to WFH to the whole firm and allowed the experimental employees to re-select between the home or office. Interestingly, over half of them switched, which led to the gains from WFH almost doubling to 22%. This highlights the benefits of learning and selection effects when adopting modern management practices like WFH”

Conversely ([van der Lippe and Lippényi, 2020](#)) found that the absence that colleagues left whilst working from home had a negative effect on their key workers which made them less productive.

They conclude with “Given the possibilities now available because of IT for both employees and managers, we are not inclined to suggest that employers should encourage employees to work from the office instead of from home and that employees should not work from home anymore. Society has to deal with new technological possibilities, and governments should think about (informal) rules to accommodate both employees and employers. This is all the more important given that a social-economic divide is looming regarding new technologies. Not everybody is able to profit from working from home and other flexible work arrangements. With respect to employees, we advise to take into account what their colleagues are doing. Working together is also a social event and an optimum needs to find how much working from home is desirable and possible given both positive and negative outcomes. Training might be a helpful tool to learn how to deal with colleagues working from home. We advise organisations to focus on improving cooperation among team members when many employees work from home. Interaction with colleagues, whether or not someone is working from home, is the key to cooperation and efficiency, and it is a challenge to construct teams in which teleworkers work efficiently”



Mental Health

While there are clearly many benefits to working from home, such as increased productivity and improved employee wellbeing, studies show that this isn't always the case and working from home for prolonged periods can impact negatively on an employee's mental health.

An online survey of Radiation Oncologists ([Dhont et al., 2020](#)) was conducted between March 27th and April 5th, 2020. The first part contained 14 questions intended to capture an overview of the specific aspects related to research while in isolation. The second (optional) part of the questionnaire was the validated Hospital Anxiety and Depression Scale (HADS), a self-reported measure used to assess levels of anxiety and depressive symptoms. Results: From 543 survey participants, 48.8% reported to work full-time from home. The impact on perceived productivity, with 71.2% of participants feeling less productive, caused 58% of participants to feel some level of guilt.

In a paper titled 'Mindfulness and the challenges of working from home in a crisis' ([Toniolo-Barrios and Pitt, 2020](#)) found that as many staff were thrown into home working, this blurred the lines between career and personal life. This was blamed on un-designated home office space, home schooling etc resulting in "lower work productivity, lessened motivation, increased stress, and poorer mental health". They suggested that one approach that may help employees going through the challenges associated with working from home is mindfulness. Mindfulness may be particularly beneficial as it can (1) help employees mentally disconnect from work when they need to; (2) improve individuals' attention to work tasks and thereby improve their performance; and (3) allow workers to better manage screen fatigue. In this installment of Work/Life Balance, they elaborate on how mindfulness may help employees deal with these work issues, explain how mindfulness can be cultivated, and provide a list of mindfulness techniques."

A study in Germany ([Rohwer et al., 2020](#)) was also concerned with the lack of boundary between home and work. It found that successful psychological detachment from work was positively related to sleep quality and a higher degree of virtuality coincided with higher levels of boundarylessness.

[\(Dongarwar et al., 2020\)](#) discusses how "Long-term home confinement can have negative consequences upon physical and mental health, which in turn can reduce productivity among those working remotely. Physical and mental well-being are intertwined and are strongly correlated to high productivity at workplace. By integrating the factors of neuro-behavioral economics into the work culture, companies can alleviate work-related stress leading to improved mental and physical functioning; thus leading to increased productivity.

In case you haven't heard (['In Case You Haven't Heard...', 2020](#)) Microsoft embedded Teams with a series of "wellness" tools to address the mental health crisis, and it is pitching the product to employers as a means of boosting worker productivity. "Personal wellbeing experiences," announced at the Microsoft Ignite conference last month, will arrive on Teams early next year, Business Insider reported the "experiences" include "emotional check-ins" that prompt users to select an emoji expressing how they felt about the workday, a "virtual commute" intended to give people time to reflect before and after workdays, and guided meditation sessions through a partnership with Headspace. Microsoft suggests that it is important for employers to track and encourage these behaviors if they want to squeeze the most productivity out of employees without causing burnout. For instance, Microsoft cited a study showing that reflections typically performed during commutes can increase productivity by 15%, and another that found that four sessions on the Headspace app could reduce burnout by 14%. With the Teams update, the data from the emotional check-in tools will be used as an input to gauge employees' capacity for productivity, integrated within Microsoft's Workplace Analytics productivity tracking platform.



Physical Health (inc. MSK)

[\(Moretti et al., 2020\)](#) surveyed workers and found that a poor home work environment equated to poorer physical health, “low back pain (LBP) was referred by 41.2% of home workers and neck pain by 23.5% of them. Home workers with MSK pain reported a lower job satisfaction. They concluded that “the home environment seems to be not adequate in the mobile worker population, with an increased risk for mental health and MSK problems, particularly affecting the spine. Addressing these issues can significantly reduce risks for health, thus, improving job productivity and satisfaction and reducing cost.”

In advising on how to make homeworking a success [\(Hall, 2019\)](#) says that if employees aren't given the same ergonomic set up that they are afforded in the office then it could be storing up physical health problems for the future. “This lack of care and attention could have serious consequences for the physical health of homeworkers, storing up a potential epidemic of musculoskeletal issues - 37% of the homeworkers we surveyed reported experiencing new back pain since working from home.” “Wellbeing initiatives are often constrained by the boundaries of an office, and don't extend to remote workers. Employers should be taking on board the ways in which their employees are working, and where from. By taking the time to assess and monitor employees' homeworking arrangements, employers could prevent long-term problems and reduce absenteeism rates related to the musculoskeletal health of their remote workers.”

Flexibility and work-life balance

Even before COVID, remote working was gaining popularity as a way for companies to offer their employees a better work/life balance. In a recent survey [\(Hunter, 2019\)](#) of nearly 10,000 people working in Australia, Canada, France, Germany, the Netherlands, Scandinavia, Spain, the UK and USA found that 89% think that flexible working should become normal, and 54% would move jobs to obtain a better work/life balance. Research from the CIPD (Chartered Institute of Personnel and Development) spanning five leading European countries corroborated anecdotal reports of improved productivity through flexible working and also indicated longer-term health benefits through reduced stress.”

A recent systematic review [\(de Macêdo et al., 2020\)](#) Found that telecommuting can be a valuable tool for balancing professional and family life which helps to improve the wellbeing of workers. “Flexible working hours and the possibility of avoiding commuting have a positive influence on the balance between family and work life. The results of our review show that work intensified, but this is done in a more pleasant environment, which helps to increase productivity”.

The aim of the study by [\(Brauner, Wöhrmann and Michel, 2020\)](#) was to investigate the role of fit and misfit between actual and preferred working time arrangements (length of working hours, control over the beginning and end of workdays, and workplace segmentation) for employees' satisfaction with work-life balance. Overall, analyses did not reveal congruence effects. Thus, a perfect match between employees' preferences and the working time arrangements provided by the workplace does not seem to be a requirement for successfully balancing work and private life. More importantly, for a good work-life balance, working hours should not be longer than preferred. In addition, employees should be given sufficient control over the beginning and end of their workday and possibilities to segment work and private life. These aspects should be incorporated into the organization of working time to help employees reconcile work and private life.

In an article in People Management [\(Half working from home during lockdown are unhappy with work-life balance, survey finds, 2020\)](#) A poll of 500 workers, conducted by the Institute for Employment Studies (IES) over the last two



weeks, found 50 per cent of respondents were not happy with their current work-life balance, with 48 per cent putting in longer and more irregular hours than they would under normal circumstances. A third (33 per cent) reported feeling isolated, while increased concerns over matters such as job security and the health of family members were causing sleep loss for 64 per cent of respondents – a problem compounded by irregular hours, according to the IES.

A paper entitled “Let me go to the office!” ([Palumbo, 2020](#)) found that “Home-based telecommuting negatively affected the work-life balance of public servants. Employees who remotely worked from home suffered from increased work-to-life and life-to-work conflicts. Telecommuting from home triggered greater work-related fatigue, which worsened the perceived work-life balance. Work engagement positively mediated the negative effects of working from home on work-life balance.”

Technology

COVID has forced our hand when it comes to technology and there have been some considerable upsides to working remotely online. There was a brutal and immediate need for digital upskilling in a high percentage of NHS workers, especially in the field of online conferencing and collaboration. For example ([Aulakh, Duggal and Sutton, 2020](#)) say that online and virtual clubs are flourishing at Bradford Teaching Hospitals, where physical distance and time spent travelling were once a barrier to participation in such events, these barriers have been removed. There are an array of advantages and they are looking to move their teaching towards a virtual medium.

At the beginning of the pandemic NHS Digital announced the provision of Microsoft Teams which really forced many of us to upskill rather swiftly. At the Royal Free Hospital in London ([Mehta et al., 2020](#)) it was decided that an agile, decentralised innovation management approach was best to empower staff to be local implementors. “Overall, this has been a radical approach to digital implementation in healthcare, and has so far proved effective in delivering a cost minimal, rapid communication tool at scale in the midst of a global pandemic”.

MS Teams, love it or hate it, we have really become reliant on it to communicate *face to face* with our colleagues. In Another paper ([Henderson et al., 2020](#)) referring to the work done at The Royal Free Hospital in London,” the provision of relevant teaching and training was immediately identified as a priority, particularly for staff due to work outside their regular medical specialty. Rather than deliver face-to-face teaching, doctors at the Trust utilised Microsoft Teams, an online communications and collaboration platform, to deliver a multi-disciplinary Trust-wide education programme responsive to the needs of surveyed medical staff. To date members of 18 departments across the Trust have delivered 51 virtual teaching sessions which have been viewed 3,814 times. During this pandemic the virtual education programme has facilitated rapid dissemination of new information and provided a platform for discussion and unity amongst colleagues with overwhelmingly positive feedback from both learners and teachers.

The BMJ did a national cross-sectional survey ([Dost et al., 2020](#)) of 2721 UK medical students to assess their perceptions towards online teaching. It was acknowledged that online teaching had enabled the continuation of medical education it was suggested that in order to maximise the benefits of both face-to-face and online teaching and to improve the efficacy of medical education in the future, we suggest medical schools resort to teaching formats such as team-based/problem-based learning. This uses online teaching platforms allowing students to digest information in their own time but also allows students to then constructively discuss this material with peers. It has also been shown to be effective in terms of achieving learning outcomes

In an online survey ([McBeath, du Plock and Bager-Charleson, 2020](#)) completed by 335 psychotherapists, the A majority of therapists felt challenged by remote working, with reduced interpersonal cues, feelings of isolation and



fatigue, and technical issues frequently cited concerns. At the same time, most therapists considered that remote working had been effective and that clients were comfortable with the process. Two-thirds of therapists indicated that remote working would now become core business for them. The great majority of therapists thought that remote working skills should be part of formal therapy trainings.

While the medical field has been slower than many professional areas to catch on to working from home, many trusts are already moving towards telephone or video outpatient appointments during COVID-19 this has been enabled by necessity during the pandemic, in a rapid report ([Hayes, 2020](#)) talks about what is required from home to enable Trusts to practice more online appointments conducted by staff who are shielding or WFH. Virtual clinics have also caught on during the pandemic ([Gilbert et al., 2020](#)) The Royal National Orthopaedic Hospital (RNOH) sees on average 11 200 face-to-face consultations a month. On average 7% of these are delivered virtually via telephone. In response to the COVID-19 crisis, the RNOH set a target of reducing face-to-face consultations to 20% of all outpatient attendances. It demonstrates that virtual consultations can be rapidly implemented in response to COVID-19 and that they are largely acceptable

An article in the European Journal of Plastic Surgery ([Khincha, Chauhan and Ekwobi, 2020](#)) review the various platforms for sustaining healthcare team communication looking at Microsoft Teams, Cisco WebEx, Zoom, Google Hangouts Meet, GoToMeeting and Slack.

Leadership and culture

In a telephone survey of 13 virtual leaders ([Efimov, Harth and Mache, 2020](#)) found that “virtual leaders ascribed great value of health and showed great awareness in health-oriented self- and employee leadership. Physical activity and boundary management were particularly mentioned as health-oriented self-leadership behaviors. The majority of leaders described communication, building trust, support in boundary management and implementation of personal meetings as health-oriented employee leadership behaviors.”

In this Forbes article ([Westfall, 2020](#)), Laurel Farrer, the CEO of the Work From Home Association says that “most companies are allowing work from home out of necessity. But allowing is not the same as embracing. Creating a sustainable work-from-home workforce requires a cultural shift from business leaders today. Here’s how to embrace the remote workforce in powerful ways, and enable the cultural shift that’s a sign of the times.” The article continues to discuss issues such as control and micromanagement and why the latter reflects badly on leadership skills.

In their article for Organizational Dynamics ([Newman and Ford, 2020](#)) acknowledge that managing virtual teams is different than managing employees in a face to face environment. They talk in detail about the 5 steps required to make it successful:

- Step 1: Establish and explain the new reality
- Step 2: Sustain the corporate culture and reinforce the perception of leader trustworthiness
- Step 3: Upgrade leadership communication practices and techniques to better inform virtual employees
- Step 4: Encourage shared leadership among team members
- Step 5: Create and periodically perform alignment audits to ensure virtual employees are aligned with the organisation’s cultural values including its commitment to mission



Equality

There is a divide when it comes to flexibility in work, with knowledge workers (and usually higher paid workers) being able to work from home where manual workers or in the case of the NHS, front line workers have less flexibility ([Kramer and Kramer, 2020](#)) discuss “increased segmentation of the labor market which allocate workers to "good jobs" and "bad jobs" and the contribution of occupational segmentation to inequality.”

In an very readable article written by (Marrs, 2020) for Public Finance he says that “Some areas of the public sector are likely to find it more difficult to embrace homeworking than others... But changes in flexibility could still be extended to them... “Clearly, many frontline keyworkers in the public sector will not be able to work remotely, but employers could accommodate some greater flexibility to them by offering different shift patterns or staggered start and finish times,”

Bloom ([Bloom et al., 2015](#)) argues that working from home works best for jobs that are measured on output. “Most of us are in measured output jobs – I get assessed on teaching and research, for example. But a lot of people – particularly in lower-paid jobs – are measured on input – the hours visibly worked. Working from home is great for measured output jobs – who cares where you work? A manager just needs to observe your output. But for measured input jobs, it is a lot trickier.”

On workers with disabilities, ([Schur, Ameri and Kruse, 2020](#)) say that the move towards remote working “may ultimately have a silver lining for some workers with disabilities if it makes work from home easier and more acceptable. In addition, the pandemic is shaking up traditional workplace structures and causing employers to rethink how essential tasks can be done, which may broaden their views of workplace accommodations.” & “Workers with disabilities are currently more likely to work from home and many may benefit from expanded work-at-home opportunities, but the types of jobs they hold constrain this potential”

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Search Strategy

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"((((("home working" OR home-working OR homeworking).ti,ab OR ("working from home").ti,ab OR ("remote working" OR remote-working OR "working remotely").ti,ab OR (tele-work* OR telework*).ti,ab OR (tele-commut* OR telecommut* OR "tele commut*").ti,ab OR ("virtual* ADJ1 working").ti,ab OR (virtual team*).ti,ab) AND ((productivity).ti,ab OR (outcome* OR Output OR Achievement OR success OR benefit* OR effectiveness OR innovation).ti,ab)) AND (engagement OR relationship* OR trust OR flexib* OR distress* OR concern* OR support OR recognition).ti,ab) [DT 2020-2020]"
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Databases

CINHAL, Medline, Embase, HMIC and a targeted internet search.

