Investigating Transmission of COVID 19 within health and social care settings

The aim of this paper is to provide the reader with a rationale for considering the value of undertaking an investigation into the transmission of COVID 19 between staff and people within their care, both in hospital and in the community. To enable any lessons to be learned should there be a second or third spike in the virus and thus helping to preventing future harm whilst identifying good practice that can be shared.

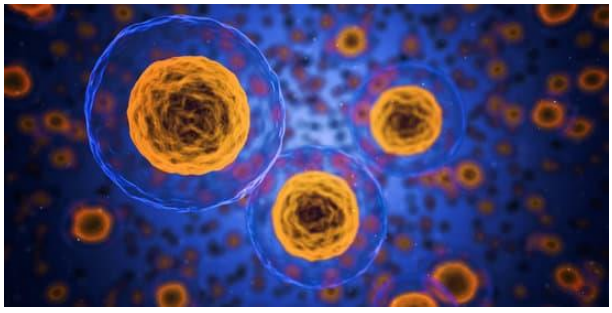
Background

In late December 2019, a new coronavirus was identified in the Wuhan province of China which caused severe respiratory disease including pneumonia and multiple deaths (Department of Health and Social Care et al 2020). The situation was declared a global pandemic on 11 March 2020 by the World Health Organisation.

As a new virus there is no human immunity and although vaccines are being worked on there is nothing available at present. Multiple drugs are being tried to see if they afford any relief of the symptoms, however as the infection is caused by a virus, antibiotics are not effective, with the current management being relief of the symptoms.

Every care sector faced the pandemic whether they were prepared or not, some teams had been party to the preparations that were undertaken for the surge of Swine Flu (H1N1) in 2009, it was anticipated but did not materialise and the time, training and supplies were rarely used. This may or may not have given those involved an advantage as some may have used this as experience to rely on, others may have seen COVID 19 as another 'flu' like illness that would come to nothing.

The UK Governments Coronavirus Action Plan (2020) indicated that initially the care of people with confirmed COVID 19 was to be undertaken in specialist infectious diseases facilities where they had the equipment and expertise to manage them, thus stopping the spread of the infection. Once the numbers were too great, the care was moved to general facilities in hospitals using the knowledge the specialist hospitals had gained to provide the best treatments available, the care was then further moved into the community.



Once the care of people suffering with the virus had moved from the specialist hospitals to general hospitals and the community it became clear that there was some health care acquired transmission of the virus. This is not to blame any care setting but to state fact and then to ask, are we missing the opportunity to learn some fast lessons that could be used if there was to be a second or third peak in this infection?

What we currently know

All areas of the health and social care setting were affected by the first wave of the virus, some teams and homes managed to avoid any cases, others were required to specifically look after COVID 19 patients and on occasions take people whose infection status was not known. All areas were asked to step up and support the NHS to help prevent it from becoming overwhelmed, this however resulted in some practices that would normally have been called into question, for example transferring older people who were from wards with COVID 19 positive patients to care homes without them first being tested or quarantined, thus potentially increasing the risk of spreading the virus.

There have been many media articles about the 'failings' in certain areas and in time there is likely to be a national inquiry into the way in which the country handled the pandemic, but this will be a long way off. With the reduction of restrictions and the changes in people's behaviours it is likely that there will be a second or even third spike in the number of cases, that will again put services under pressure. To assist with preparedness for this second or third spike, where there is documented evidence of transmission within the health and social care settings, a review of those health care acquired cases should be undertaken, not to blame but to identify learning.

There have been a few initial studies undertaken which have primarily looked at the transmission of the virus to healthcare staff (Health Service Journal 29 May 2020), the increased risk to black and ethnic minority staff and the requirement to remove those staff most at risk. These have been more about the numbers than detailed investigations.

The NHS Patient Safety Strategy Safer culture, safer systems, safer patients (2019) was due to be implemented early in 2020 but with the pandemic its implementation was put on hold (NHS 2020). The principles however reflect those of The Serious Incident Framework 2015 (revised) and build upon the safety systems and mechanisms for continued improvement in safe care. The strategy aims to improve the sharing of safe practice, empowering people both patients and staff, giving them the skills and confidence to improve patient safety.

The three strategic aims of the strategy are to improve the understanding of safety by pooling resources and intelligence from multiple sources. Equipping people, staff, service users and key partners with the skills and opportunities to use a whole systems approach to improve patient safety. Finally enabling those people to design and support programmes that deliver effective and sustainable change that improves care and brings about a safer NHS, an insight, involvement, and improvement approach.

The Serious Incident Framework states that where severe or catastrophic outcomes are caused during the provision of care, that a serious incident review should occur and that, if the organisation is unclear whether the incident is reportable that it should be openly discussed with the commissioners. It is understood that not all of the cases of transmission can be investigated as this would likely overwhelm the system but those with the greatest opportunity for learning could and

should be investigated, potentially using a thematic review to identify any lessons that could be used moving forward in the management of the pandemic.

Any investigation would need to reflect the 7 key principles including openness and being preventative, which would support the organisation should any of the cases come before Her Majesty's Coroners, who would expect that an initial investigations had been undertaken. An initial investigation and identification of learning could prevent the potential for the Coroner to issue a Prevention of Future Deaths Report to the health or social care organisation. It would also support the extremely difficult discussions with the relatives and surviving patients when looking at the legal responsibilities of the organisation under their Duty of Candour.

Within social care there is limited infrastructure to undertake the larger scale investigations however under Regulation 16 any death of a resident should be reported to the CQC and Regulation 18 requires any incident pertaining to the Health and Safety or Welfare of the residents must be notified to them. The CQC and the home managers would then decide how an investigation would be taken forward if felt appropriate and any lessons identified. The CQC's Fundamental standards of Safety and Duty of Candour apply within social care as well as any health facility therefore reviews and investigations into untoward incidents are required to be investigated and lessons learned.

Key Considerations

Personal Protective Equipment

Everyone is acutely aware of the issues that most people have had regarding Personal Protective Equipment (PPE), its acquisition, availability, and changes to its use, throughout the pandemic. There were also issues of whose responsibility it was to source and provide PPE for the different areas of health and social care, who was included in the initial surge plans of the Government and who was not, and what provision was made for those who weren't included. What training was in place for the correct use of PPE? There is anecdotal evidence that some health and social care providers were searching and using unreliable internet resources to provide the training for their staff and that some providers, because of a lack of supplies from their normal suppliers were using PPE from unregulated suppliers, putting both staff and service users at risk as potentially the equipment did not meet the required standards.

Some areas, particularly the private health and social care providers had issues with obtaining, as the public did, normal cleaning products and particularly chlorine-based cleaners. Where adequate cleaning products were not available what impact did this have on the care provided and did it lead to a potential for the virus to spread?

Training

The provision of training across all elements of COVID 19 would have provided staff with the skills and knowledge that they needed to be able to help prevent the spread of the virus. This should have included Infection Prevention and Control (IPC) to include the Standard Infection Control Precautions as well as Transmission Based Precautions. It is understood that the basic IPC training provided to unregistered carers does not regularly provide the advanced level of training that the pandemic warranted and particularly the transmission-based training.

Included within the IPC training should also have been:

- Donning and doffing PPE, the safe and correct way to put on and take off PPE to prevent cross contamination
- Hand hygiene and how to care for the hands at a time when they were being constantly cleansed
- Fit testing for the FFP3 masks and how to care for the skin on the face to prevent pressure ulcers developing
- IPC changes to procedures including cardiopulmonary resuscitation, where changes to practice and PPE was required
- Training in how, when and why to isolate a person positive with COVID 19, symptomatic or not, this should include specifics for the care setting and how to isolate those people who cannot be maintained within their own room, for example those with dementia and at risk of self-harm

Roles of specialist environments

Away from IPC there have been issues identified with the understanding of the limitations of some care providers and the role they could and should have been expected to play in support of the pandemic. Whilst Mental Health and Learning Disability services may have registered nurses caring for their service users they are unlikely to have the skill set required to care for an acutely unwell person with COVID 19, or be able to isolate someone who is acutely unwell mentally but who also happens to have COVID 19.

Staffing

Other issues to be considered are staffing, were there suitable and sufficiently trained staff for the area of care? Safe staffing levels needed to be maintained but each team would have, within their staff, people who were required to shield themselves, self-isolate, who were off sick with COVID 19 and who were, in some cases, too afraid to work. If transmission occurred in a care setting between patients and staff, did it occur at a time of low staffing numbers or when there was a lack of suitably trained staff or senior leadership? All will play a role in the provision of safe care.

Testing for COVID 19

Maintaining safe staffing levels could have been supported if there was adequate and reliable testing for staff, especially those who had returned from hot-spots abroad and those who had potentially been in contact with positive cases. As it was not available other than in hospitals initially it was not able to be used to support staffing or as a tool to guide clinical care in the community. Care homes may have been better protected if the people transferred to them had been tested with the results known prior to discharge. Testing now being widely available it is no longer the issue it was initially.

External Pressures

As previously stated, there was pressure placed on community services to take people from the acute setting to support the NHS. It can be questioned whether there was adequate testing before transfer, whether the vulnerability of the other residents or people being cared for was considered, were the staff suitably trained and equipped to undertake the tasks asked of them? Consideration of these points could help to write protocols and care pathways for use in the future, should wave two and three of the pandemic be realised.

Conclusions

As with any investigation especially Serious Incident investigations there is a requirement that it must not seek to blame, but to identify systematically lessons that can be learned to improve patient care in the future.

Throughout this pandemic staff have gone over and above what is expected of them in their role and this should be acknowledged.

There is the opportunity to identify best practice to share this locally and nationally to help support others who may have had a different experience.

Ultimately staff can carry on firefighting the virus, or now that the first peak has past, reflect on what can be learnt to help prevent the second and potentially third waves from becoming a means that the virus can spread within health and social care.

The Serious Incident Framework and the NHS Patient Safety Strategy seek to support the NHS in ensuring that robust systems are in place for reporting, investigating and responding to serious incidents, to enable lessons to be learned and to ensure that appropriate action can be taken to prevent future harm. This is also true of all social care settings and similar reviews would be welcomed by their commissioners and the CQC.

If systems and protocols can be drawn up as a result of a systematic review of the virus's transmission, the care pathways will become safer for both the service users and the staff.

Lesley Underwood RGN, Dip HE (Mental Health), BA (Hons), MSc (Public Health), 10 June 2020.

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