More about the elements within "care in a homely setting"

Laura Rooney

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More about the elements within "care in a homely setting"

There is a huge need for remote monitoring capabilities in today's healthcare system to reduce the strain on our services and allow people to remain in their homes for longer thus reducing costs and maintaining peoples' quality of life. Policy-makers and the healthcare industry leaders must come together to find the most suitable route for which to implement these innovations. Scotland is already driving change in this area with over 100 active companies in the digital healthcare industry. The use of remote patient monitoring capabilities allows for the development of personalised care plans whereby medication/care can be adjusted based on the data collected about that person.
There are several different elements to the care in a homely setting function which I will briefly introduce:

A built environment: Modular housing is a concept which will lead to the synergy of construction and health and social care sectors. The ability of houses to be adaptable as the care needs of the inhabitant changes is an integral element of the care in a homely setting function. This includes the use of sensors.

Palliative care: For a person and their family, palliative care is understandably very difficult. If palliative care needs can be met at home, it makes the experience more comfortable for the citizen and their loved ones. This type of care includes monitoring technology that keeps track of the person's vital signs and alerts healthcare professionals when there is significant deterioration in the person's health. This includes the monitoring of clinical vital signs.

Virtual care/ communication tools: These types of digital health initiatives allow for people to contact a healthcare professional from the comfort of their home and receive medical attention remotely. This includes video conferencing techniques.
Here are some examples of remote home monitoring start-ups from across the globe:

1. Independa: This is an integrated system for monitoring a citizen at home whilst also having the ability to collect clinical data. This system is particularly useful for seniors as it monitors the person's movements through sensors and so little activity in the house for a long period of time combined with poor vital signs can escalate into a warning for caregivers.
2. InTouch: This is a robotic device which allows doctors to perform real-time video conferencing with their patients and the robot can be moved through an iPad controlled by the doctor.
3. Zio Event Card allows for continuous ECG monitoring over a 30-day period. The card is worn around the neck and records only symptomatic data. The card can be pressed whenever the

citizen begins to sense an episode. The card then records data relating to 45 seconds before the press and 15 seconds after. The data is sent to caregivers through a process over the phone.

4. Snap40: This is an app which allows caregivers to detect early signs of deterioration of their patients on the ward and escalates warnings to clinicians where appropriate. The wearable device associated with the app monitors the vital signs of the patient and sends the results via wi-fi to the doctor every 30 seconds. This ensures that the most venerable patients on the wards are seen first.
5. DanMedical: Allows for vital clinical information of patients or workers in dangerous or remote locations to be sent in real-time to caregivers. This ensures that there is suitable medical support and better patient outcomes in remote locations.

However, despite all the potential in this area, remote patient monitoring faces some big challenges. Older or digitally illiterate citizens might be unaccustomed with the technology, and people of all ages still need be persuaded to use it. Also, there is little standardization among the devices because of the number of companies currently on the market and so interoperability of these different solutions will be tough, especially here in the UK where there are legacy systems used in the NHS. Another obstacle is that regulators view some monitoring applications the same as medical devices, and so they need Food and Drug Administration (FDA) approval for use in clinical settings. This is a long process and requires a lot of investment. Providers also need to figure out how to use all the data collected. For example, how will the analysis of the data be automated to alert a nurse or doctor at the right time to act on that data, but not so often that clinicians are overrun with warnings? These challenges are diverse but with the right infrastructure, they will be overcome.

Thank you for reading and happy holidays!