An educational e-learning intervention on blood borne viruses (BBV) for a haemodialysis unit to reduce patient harm: A quality improvement project.

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Introduction:-

There are reported outbreaks of BBV infections in haemodialysis units worldwide caused by lapses in high standards of infection control. These rare events have adverse consequences on patients and haemodialysis units. Current standards are set to minimise the risk of BBV transmission and simplify complexities of managing infected patients as well as aiming to prevent other patients and staff from becoming infected. Following a Hepatitis C transmission in a large haemodialysis unit in the Midlands, It was identified that there was a lack of training for Registered Nurses (RN), multidisciplinary team and a lack of knowledge regarding BBV management. It was identified that there was a need to develop a bespoke training programme.

Method:-

In 2018 a BBV education pilot programme was trialled for haemodialysis staff. It consisted of a presentation on theories of BBVs and practical considerations for dialysis patients followed by an assessment of knowledge. The training was delivered to Health Care Assistants (HCA) and RN by the Clinical Nurse Specialist for haemodialysis. A total of 20 training sessions were delivered and 92% (n=73) of staff were trained during the pilot programme.
In 2019, this was adapted and formatted into a Moodle e-learning module where 95% (n=64) of staff underwent training. It consisted of part 1: the theory of BBVs and part 2: The practical considerations for dialysis patients and was followed by an assessment of knowledge. We measured risks in the haemodialysis unit by auditing on line Datix retrospectively for 2016 - 2019. The number of BBV transmissions, incidents, adverse events and near misses were analysed.

Results:-

The pilot study showed an average score of achievement 80% (n=14) in RN's following assessment and an average score of achievement 65% (n=11) in HCA's. There was also an increase in the uptake of training from 92% to 95% once it had been adapted into an e-learning module.
The percentage of reported BBV incidences of non-adherence to standards policy/procedure at our haemodialysis unit had decreased from 3% (n=4) in 2016 to 0% (n=0) in 2019.

Discussion:-

Management of BBVs in a haemodialysis unit is a complex area however when all aspects of BBV were structured, simplified, standardised and brought together on one platform, the uptake of training increased and as a result, the knowledge and confidence of staff increased when it came to interpreting BBV results and deciding which pathways to follow.

E-learning is not everyone's choice of learning style however for this trial it was successful as the uptake of training increased without the need for extra resources and it enabled the Clinical Nurse Specialist more time to work in the clinical unit with patients and staff. Any future package should consider other learning methods such as group discussions, problem solving, scenarios and work station simulations. The programme will be rolled out to all Nursing and Medical staff at 3 other sites with pre and post knowledge test to follow.

There had been no further reported BBV incidences of non-adherence to standards policy/procedures after the training package was delivered in 2019 suggesting the e-learning package has minimised risks.