A simple tool for implementation of Infection Control Program in Setting of Limited Resources

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BACKGROUND

Infection control (IC) is a necessary element for providing appropriate healthcare service. In settings of limited resources special programs are to be tailored. Surveillance is the initial step of an IC program and nosocomial infection (NI) surveillance is the widely used system. However, in developing countries this system may be biased due to many factors. IC practice surveillance can be an acceptable alternative. It is then necessary to develop a convenient and easily applicable surveillance tool.

OBJECTIVES

To develop ranked IC audit check- lists for surveillance of IC practice and to assess their value for tailoring applicable IC programs.

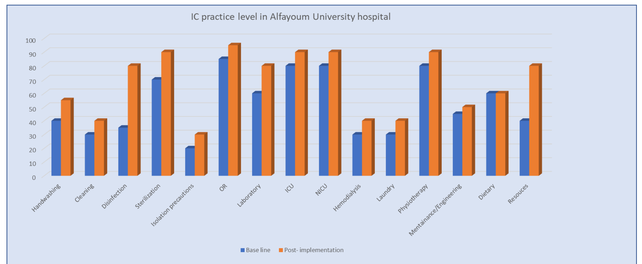
MATERIALS & METHODS

The check- lists were developed in Arabic. They addressed two components; first IC basics and departmental procedures and second is resources required to implement procedures. The check- lists were rendered measurable: 1) each key measure and the resource section were given a percentage score, 2) each procedure (listed under each key measure) or resource element was given one or zero. The sum of percentage score for individual check- list is 100%. Check- lists were then presented to the IC committee in two university hospitals; Zagazig and El-Fayoum and recommended modification were done. The key measure or resource section which had less than half the assigned percentage was considered a problematic area.

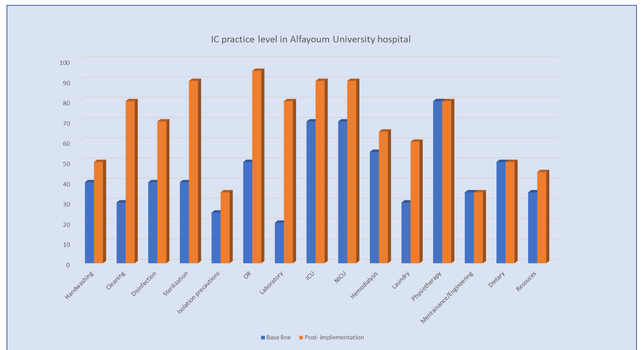
Check- lists were implemented twice. Primarily to capture a base- line level and to determine area of problems, so needed IC program was tailored. The second was for monitoring and evaluation after the custom- made IC interventions.

RESULTS

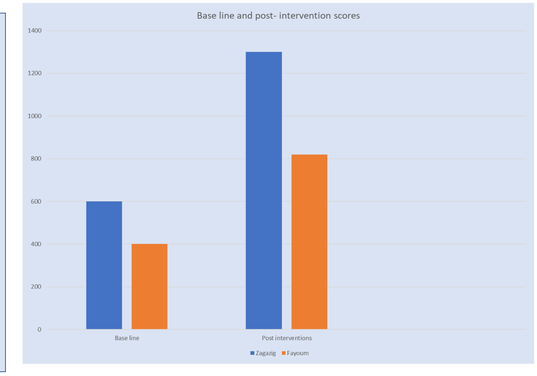
The set of ranked IC audit check- lists developed and implemented consisted of fourteen check- lists covering IC basics; handwashing, cleaning, disinfection, sterilization and isolation precautions) and control of infection in the operation room (OR), laboratory, intensive care unit (ICU), neonatal intensive care unit (NICU), hemodialysis unit, laundry, physiotherapy department and maintenance/engineering department .



Non- Significant improvement before and after implementation except for disinfection service and resources (P < 0.001)



Significant improvements in cleaning, disinfection, sterilization, OR and laboratory (P <0.oo1)



First implementation

- Many key measures and procedures constituted problems which differed between the two hospitals. Resources were deficient or available but poorly distributed in both hospitals
- Two IC programs were tailored

Second implementation

- Tackled problems which responded to improvement activities indicated by elevated score and those which needed further interventions were identified.
- Results were presented to IC committees of the two hospitals to get feedback.

SUMMARY

IC practice surveillance was chosen as a practical alternative to NI surveillance. Ranked IC- audit check- lists were the surveillance tools. Their development addressed two components; the first was IC procedures and second was resources required. They were rendered measurable through a simple scoring system. The use of ranked IC- audit check- lists in two university hospitals showed that they can be a convenient surveillance tool, particularly at an early stage of IC implementation. They are flexible and easily applicable. Moreover, they provide an education tool because they are detailed and in the native language. Their use primarily can pave the way for conducting NI surveillance.

CONCLUSIONS

NI surveillance is met with many difficulties in low- resource settings. IC practice surveillance is a practical alternative because it can be on- site conducted through direct observation, it is more acceptable due to identification of issues before evolving into NI and finally if practice is upgraded an impact on NI is ascertained.

Since IC practice includes both basic and specific departmental procedures and since objectives of the program can best be achieved if all problems are tackled synchronously, ranked IC audit check- lists were developed for both procedures. Identifying resources necessary for IC program is crucial.

Ranked IC audit check- lists provide a flexible tool for assessing the exact need of facilities with disparate resources, environment, patient population and services provided. Their importance however, is related to comparative purposes between starting (base line) and post IC program implementation but they are unsuitable for inter- hospital comparison.

Through their development and implementation, ranked IC audit check- lists provided a learning experience

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