

POINT OF VIEW

Need for Insulin Stewardship Programmes

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Indoor patients often present with severe community acquired infections, and are at high risk of nosocomial infections as well. This creates challenges for health care professionals who deal with such patients. Antibiotic policies and antimicrobial stewardship programmes have been created to manage such situations, and are now accepted as

Table 1: Sample insulin policy**Insulin availability**

- Short acting
 - Trade name
 - Strength
 - Delivery device
- Long acting
 - Trade name
 - Strength delivery device

Division of responsibility

- Pre-injection counselling
- Insulin prescription
 - Name of insulin
 - Strength
 - Delivery device
 - Dose
- Glucose monitoring
 - Frequency
 - Record
 - Dose titration
- Insulin administration
 - Staff-administered
 - Self-supervised
- Insulin technique checklist
 - Site choice/rotation method
 - Site preparation
 - Quality of insulin check/Re-suspension
 - Dose check
 - Injection technique
- Health care provider safety
 - Avoidance of re-use
 - Proper sharps disposal
 - Reporting policy for needle sticks injury
- Insulin Education policy
 - Patient education
 - Caregiver education
- Storage and Disposal policy
 - Insulin storage
 - Sharps disposal: ward level
 - Biomedical waste disposal: hospital level

integral parts of intensive care and in-hospital medicine.^{1,2} These have helped improve efficiency of antibiotic use, and reduce antimicrobial resistance in hospital settings.

Similar challenges are faced in diabetes care in such settings. The diabetes epidemic means that a large number of hospitalized patients have comorbid diabetes, which needs to be treated. There is a high load of hyperglycemia in intensive care settings,³ which may be exacerbated by stress and by certain drugs used in intensive care therapy. This adds to the complexity of in-hospital management, and creates challenges for both patients and health care professional. Insulin injections for example,⁴ may be a health hazard for nursing care professionals, who run the risk of needle stick injuries (NSI).⁵ At the same time, the ever-increasing number of insulin regimes, preparations and delivery devices increases the chances of errors, in prescription dispensing and administration. This may compromise patient safety and well-being.

The Solution

There is, therefore, an urgent need to address these obstacles to patient and health care provider health.⁶ Creation of an insulin policy, specific for each intensive care unit (ICU) or ward, can help improve quality of indoor glycemic control, while mitigating professional hazards associated with insulin injection. A comprehensive insulin stewardship programme should address all aspects of safe and rational insulin use. Such a policy should lay down standard operating procedures which govern choice of insulin regimes, preparations and delivery devices. This will minimize the possibility of inappropriate prescription and administration. For example, suggesting

only intravenous insulin regimes in an intensive care unit will obviate the need for, and the potential complications associated with, keeping premixed and basal insulin vials or pens in the premises. Listing a specific insulin preparation, with one concentration (e.g., 40 IU/ml or 100 IU/ml) reduces the risk of mismatch between vial and needle.

The points to be covered in a comprehensive sample are listed in Table 1. These include descriptions of the insulins available in the ICU or ward, their strengths and delivery devices; appropriate insulin technique;⁷ methods of reducing risk of NSI; and environment-friendly methods of disposal of sharps.⁸ Such a policy should also delineate responsibilities and duties of various staff, prescribe modes of patient, care-giver and hospital staff education, and factor in regular audits to ensure quality check and improvement. Pragmatic choice of insulin therapy, dose initiation, titration and intensification, should also form part of a complete insulin stewardship programme.

One may build upon comprehensive national and international guidelines^{5,9} to initiate insulin stewardship programmes in hospitals, wards and intensive care units. Revision of stewardship guidance, based upon objective and subjective feedback from all stakeholders, at regular intervals, will help improve the quality and relevance of such documents. Best practice sharing, facilitated by interdisciplinary and inter-institutional contact, will help expand the reach and utility of insulin stewardship programmes.

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