How can we improve inpatient care for people with diabetes?

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People with diabetes are twice as likely to be admitted to hospital as the general population (Sampson et al, 2007). The last two National Diabetes Inpatient Audits of England and Wales (NHS Digital, 2016; 2017) revealed that people with diabetes currently occupy around 17% of acute hospital beds, an increase since the previous audit in 2013. This is already proving very difficult for existing, overstretched inpatient diabetes teams, especially as resources to support inpatient diabetes services are diminishing.

In 2015, 31.1% of acute hospital sites had no diabetes inpatient specialist nurses (DISNs) and 9.2% of sites did not have any consultant time for diabetes inpatient care (NHS Digital, 2016). These factors contributed to a rate of inpatient diabetes medication errors of 38.3%, a significant increase from 37.0% in 2013. This was mainly driven by an increase in medication management errors for insulin or oral hypoglycaemic agents.

Another area of inpatient diabetes care that is underused and not making the headlines is education. Various initiatives have been introduced, including e-learning modules on the safe use of insulin (both subcutaneous injection and intravenous infusion), but these have not resulted in reductions in insulin prescription and management errors as would have been expected. There are hundreds of local education programmes specific to inpatient diabetes nursing, but these too have poor uptake owing to national staffing shortages and the fact that they are not considered essential by some clinical management teams. There should be a move to make training in the safe use of insulin essential, and other Trusts are now starting to do so. This has been an integral recommendation from the National Patient Safety Agency's (2010) Rapid Response Report:

"A training programme should be put in place for all healthcare staff expected to prescribe, prepare and administer insulin."

This recommendation is now, slowly, becoming a reality.

Reasons to be cheerful?

Errors both in the management of inpatients with diabetes and in the prescription of glucose-lowering medications, especially insulin, have compounding effects on patient experience as well as length of stay. Numerous challenges to diabetes inpatient care have contributed to the increasing trends in these errors. However, the NHS Operating Planning and Contracting Guidance 2017–2019 (NHS England, 2016) has promised additional national funding for approximately £40 million to include plans of improving access to specialist inpatient support. This initiative to make available financial resources to reverse the lack of diabetes inpatient specialist teams is a welcome change. It could revolutionise and reinvigorate the ailing hospital diabetes services, and that can only mean one thing: improvement of the inpatient journey for people with diabetes.

In addition to this, the Joint British Diabetes Societies for Inpatient Care (JBDS-IP) are working tirelessly to develop national guidance on the management of inpatient diabetes and standards of care within secondary care organisations. They have been instrumental to the introduction of guidelines including the management of hypoglycaemia, diabetic ketoacidosis (DKA), hyperosmolar hyperglycaemic state (HHS), glycaemic management during enteral feeding in stroke, management of adults with diabetes undergoing surgery, self-management of diabetes in hospital and variable-rate insulin infusions for medical

inpatients with diabetes, amongst others. And they are still working to develop relevant guidance on other aspects of inpatient diabetes care.

The JBDS-IP have also been active in identifying best practice. In 2014 and 2015, they hosted competitions to find the best UK insulin chart and best hypoglycaemia avoidance initiatives (Dashora et al, 2015; Sampson, 2016). Additionally, in 2016, they launched a competition to recognise the best joint pharmacy and diabetes team initiative to improve insulin and prescribing safety in hospital.

Stimulating new ways of thinking

It can be said that inpatient diabetes nursing is both challenging and rewarding. People with diabetes may require specialist support for a range of illnesses and complications, from acute diabetes complications (e.g. DKA, HHS, hypoglycaemia) to chronic complications (e.g. foot ulceration, nephropathy) and conditions which trigger hyperglycaemia (e.g. steroid treatment, artificial nutrition). This is no easy feat and can be very challenging, especially as there is no "one-size-fits-all" approach. All patients are individuals, and the management plan should reflect this individuality. However, to witness the improvement in the condition of these patients through effective, safe and coordinated care brings immense professional rewards.

Therefore, it is with great pleasure that I introduce three articles for this special section on diabetes inpatient care. The section will cover some of the challenges we face in managing diabetes in the hospital, as well as some strategies to promote safe and effective self-management.

In their commentary, Dawn Hardy and Debbie Stanisstreet review their Trust's experience recruiting Diabetes Clinical Assistants to supplement its DISN posts. This move has not been without controversy, but it has had positive feedback from patients and other staff, and fears of an erosion in DISN numbers and skills have so far been unfounded. We would be interested to hear readers' thoughts on this initiative.

In their article, Paula Johnston and Philip Newland-Jones provide another novel approach to ensure that inpatients can safely self-administer insulin. By following this simple algorithm to assess individual patients' ability to self-administer insulin and documenting all decisions and prescriptions electronically, it is hoped that they will be able to improve patient satisfaction, ensure that patients receive insulin at the appropriate times and doses, and reduce demands on nursing staff. The process is being rolled out across their entire Trust, and we look forward to hearing about the results.

Finally, in our article on the management of patients with diabetes receiving artificial nutrition, Sarah Jones and my colleagues from East Sussex Healthcare NHS Trust discuss the implications of artificial nutrition in diabetes and our approach to managing the resulting hyperglycaemia. Case studies are also included to highlight some strategies utilised in managing this cohort of patients. The use of biphasic insulin in this group of patients has been recommended and, in our experience, using caloric provision in the dose calculation has been found to be more efficacious than using the amount of carbohydrate. However, this approach cannot be applied to all, and each patient needs to be assessed, treated and continually reassessed on an individual basis. Such a statement could surely be made about all aspects of inpatient care for people with diabetes. ■

Dashora U, Sampson M, Castro E et al (2015) Rowan Hillson Insulin Safety Award "best in class" insulin prescription chart competition. *Br J Diabetes Vasc Dis* **15**: 135–8

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Sampson M (2016) *The Rowan Hillson Insulin Safety Award (2015): Winner of the Best UK Inpatient Hypoglycaemia Avoidance Initiative (Joint British Diabetes Societies for Inpatient Care).* Available at: https://is.gd/yDZq47 (accessed 11.05.17)

Sampson MJ, Dozio N, Ferguson B, Dhatariya K (2007) Total and excess bed occupancy by age, specialty and insulin use for nearly one million diabetes patients discharged from all English acute hospitals. *Diabetes Res Clin Pract* **77**: 92–8

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Read more online

Evaluation of the effectiveness of DSNs attending A&E/EDU: Do DSNs facilitate safe and early discharge?

Helen Atkins assesses the impact of having the DSN team attend the emergency department on discharge times and hospital admissions.

Journal of Diabetes Nursing **20**: 322–6

Available at: **https://is.gd/atkinsjdn**

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