

## Audit to determine the appropriateness of referrals to District Nurses in the Community for administration of Tinzaparin

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This project was undertaken in the community setting.

### Background

Many patients within the community rely on district nurses (DNs) to administer injectable medicines (e.g. tinzaparin) at home. Tinzaparin referral forms should be used to refer patients to DN teams, thereby transferring information between care settings. It is the responsibility of the healthcare professionals involved in the patient's care to complete the forms. If this information is inaccurate/incomplete, it may lead to a medication error. Tinzaparin administration contributes substantially to the workload of DN teams. Internal audit has shown that 11% of patients could self-administer after initial support from the DN team (1). Therefore, they may have been inappropriately referred.

### Audit standard

100% of patients referred to the DN service have a tinzaparin referral form as per the Low Molecular Weight Heparin and Unfractionated Heparin in Adults guideline (2).

### Objectives

- To determine if tinzaparin referral forms are received by DN teams, during a defined time period.
- To identify if a patient could self-administer, or a carer/family member could administer, following initial support from the DN during a defined time period.

### Method

A questionnaire was designed and sent to each DN team within Northumbria Healthcare NHS Foundation Trust. The study was conducted from 25th January–26th February 2021. One survey response was required for each patient requiring DN support with tinzaparin administration. Additional data collected from a search of electronic records of tinzaparin administration from 1<sup>st</sup> August 2020 – 1<sup>st</sup> February 2021 was used to calculate the average amount of time the DN would spend with each patient per visit, in order to determine an approximate time saving. This clinical audit did not require ethical approval.

### Results

32 patients were included in the data collection. 31 patients (97%) receiving prophylactic/treatment tinzaparin were aged over 60 (Fig.1). 17 patients (53%) referred to the DN teams had a tinzaparin referral form (Fig.2). The most common reason for referral was the inability to self-administer due to dexterity issues (Fig.3). 25 patients (78%) were identified as unsuitable for self-administration and a carer/family member couldn't administer either. 3 patients (9%) could have self-administered tinzaparin and 4 patients (13%) had family members which could have been taught to administer (Fig.4). Therefore, 7 patients (22%) were identified as either being able to self-administer, or having a family member that could be trained. Over 6 months, the average contact time per visit by the DN was 17.6 minutes (Fig.5). As a result, if the 7 patients identified, within this study, no longer required the DN to administer their prophylactic or treatment dose tinzaparin, this would result in a time saving of 2.1 hours over 4 weeks. The annual time saving would be 27.3 hours (Table 1).

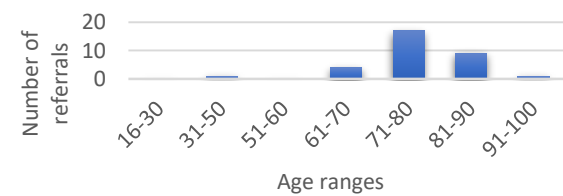


Figure 1. Age range of patients referred for support with administration of Tinzaparin.

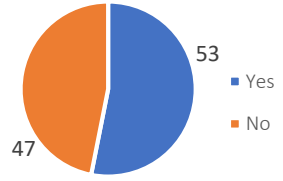


Figure 2. Percentage of cases where "Tinzaparin Discharge Form" was received.

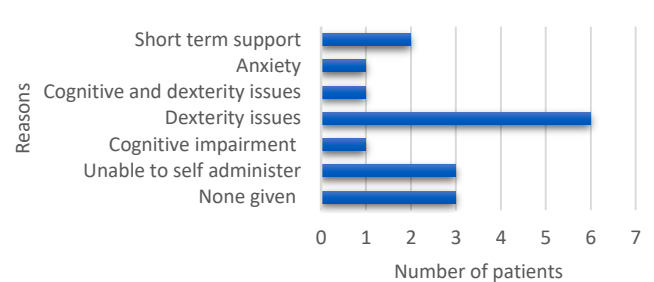


Figure 3. Reasons for referral on the Tinzaparin Discharge Form.

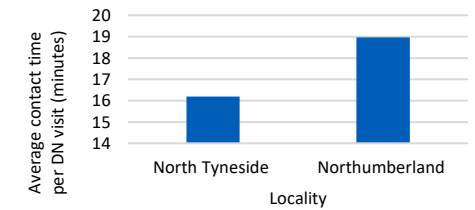


Figure 5. Average contact time per DN visit within North Tyneside and Northumberland.

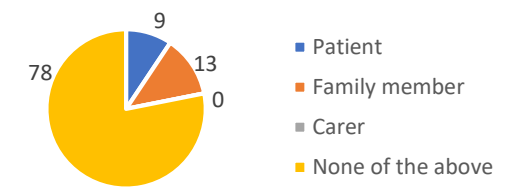


Figure 4. Percentage of patients which could administer Tinzaparin themselves or a family member or carer could administer, in DN's opinion.

Table 1. Table showing the potential time savings for DNs, in 4 weeks and annually, if the patients/family members identified within this study administered Tinzaparin

Time saving in 4 weeks (minutes)	123.2
Time saving in 4 weeks (hours)	2.1
Time saving annually (hours)	27.3

### Conclusions

Only half of the patients had a tinzaparin referral form completed. Therefore, the audit standard was not met. This increases the risk of errors occurring on transfer between different healthcare settings.

This study highlights that most of the patients are over 60 years old and the majority of referrals for DN provision are appropriate. However, there remains a small but significant cohort of patients who could either self-administer or have a family member trained to do so. If these patients hadn't been referred, significant time could have been saved and reinvested to support other patients.

Future research will explore; factors influencing the non-completion of the form, barriers to self-administration or that by a family member/carers, potential training and education for staff and patients, and collaborative work with other Trusts, with a re-audit planned for later in 2021.

At the time of this study, the DN teams were extensively involved in administering COVID-19 vaccinations. This impacted their time and ability to complete the survey, which was the main limitation noted.

### References

- [1] Ballantyne J, Collins C, Tucker C. *Audit of Tinzaparin Injections administered by District Nurses within the Community Services Business Unit.* Northumbria Healthcare NHS Foundation Trust; 2018.
- [2] Barbieri P, Bomken C. *Low Molecular Weight Heparin and Unfractionated Heparin in Adults: Guidelines for the use of.* Northumbria Healthcare NHS Foundation Trust; 2019.