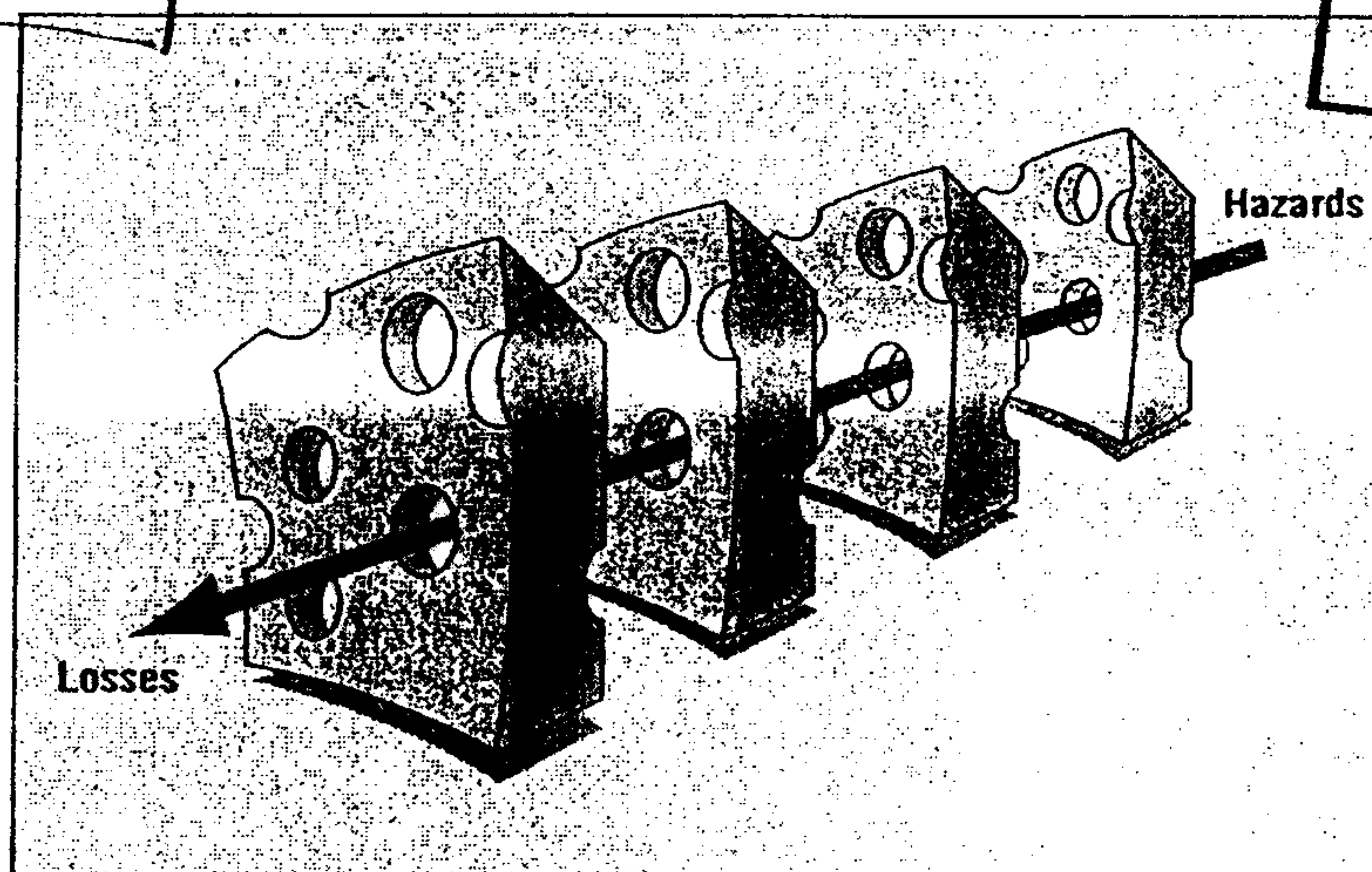


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An Audit of RBHSC Patients' Weight Records

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DHS OFFICE
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3 - MAR 2004
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Copy to
J. Hillon &
Dr. Hoshini

I think this
is useful given
our recent history.

April and May 2003

Eugene.

For your information.

There was a lot of
debate at the meeting re
the accuracy of weighing children
with a few nurses claiming
these significant errors.

Perhaps we can discuss at our
next meeting & consider this issue
at the review of next best things

Tracey Boyce, Medicines Governance Pharmacist

Anne Burns, Senior Clinical Pharmacist

Rhona Fair, Clinical Pharmacy Co-ordinator

Background

Medication doses in children are routinely calculated using their age, their weight, their body-surface area or a combination of these factors. Therefore knowing the accurate weight of a patient is vital to the safe and effective use of medicines in children. This audit was carried out as a result of several reports of medication incidents involving inaccurate paediatric weight records received by the Trusts incident reporting scheme during the last twelve months. Two examples of these incidents are summarised below:

- A child admitted with possible meningitis/encephalitis was estimated to weigh 30kg. This weight was used to calculate the doses of medication required by the patient. Following a transfer to PICU the patient was weighed and found to be 40.9kg; hence the medication doses were 27% less than required.
- A weight of 16.1kgs was recorded in the notes and on the Kardex of a 4.5-month-old child. A member of staff felt that this weight was not appropriate and had it rechecked. The child actually weighed 7.3kg. On investigation it was found that the original weight had been in pounds and ounces but had been written up in kilograms by mistake. The medicines on the Kardex had been calculated using a weight of 16.1kg, resulting in overdoses in the magnitude of 120%.

Measures of Quality

Evidence of Quality	Standard	Exception
The patients weight is recorded on the Kardex.	100%	None
The weight is recorded in kg	100%	None
The Kardex weight is dated.	100%	None
The Kardex weight is signed.	100%	None
The patient has been weighed within the last seven days *	100%	None
There are no discrepancies between recorded weights	100%	None

*Certain patient groups need to be weighed more frequently than this standard.

Method

The audit involved clinical pharmacists examining patients' Kardex on the 11 wards of the RBHSC. The audit was carried out over two time periods, separated by four weeks and beginning in March 2003.

The Kardex were examined to determine if a weight had been entered for that patient, whether the weight had been signed and dated and whether there was a discrepancy with any weights recorded in either the nursing or medical notes. The number of days since the patient was last weighed was also recorded. The units used to record the patients weight was also recorded.

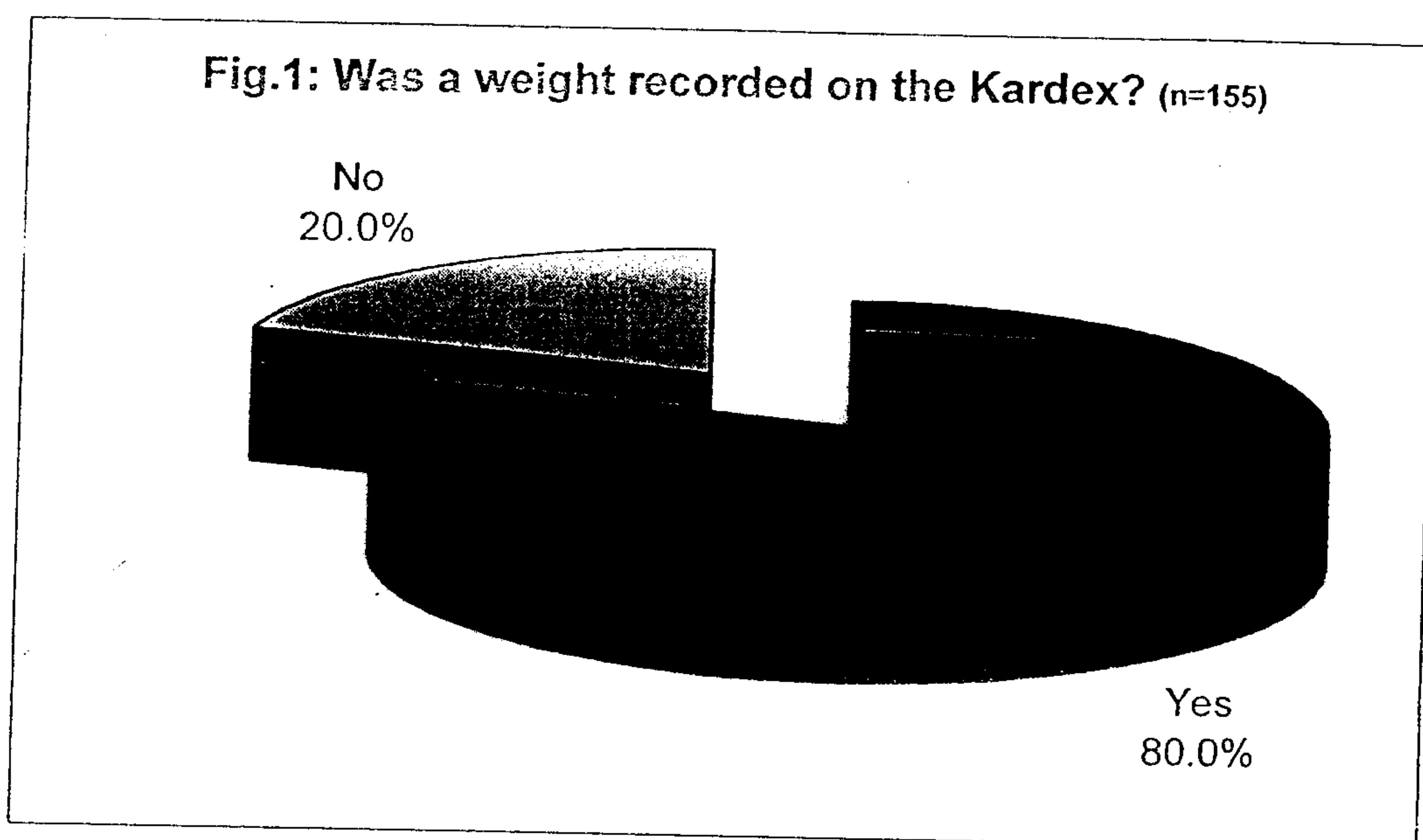
The scales available on each ward were also checked for their ability to weigh in either kilograms or pounds and ounces.

The number of clinical interventions made by pharmacists that involved paediatric discharge prescriptions with no patient weight was also obtained from the pharmacy department clinical intervention data base, for the period 1st January to 31st May 2003.

Results

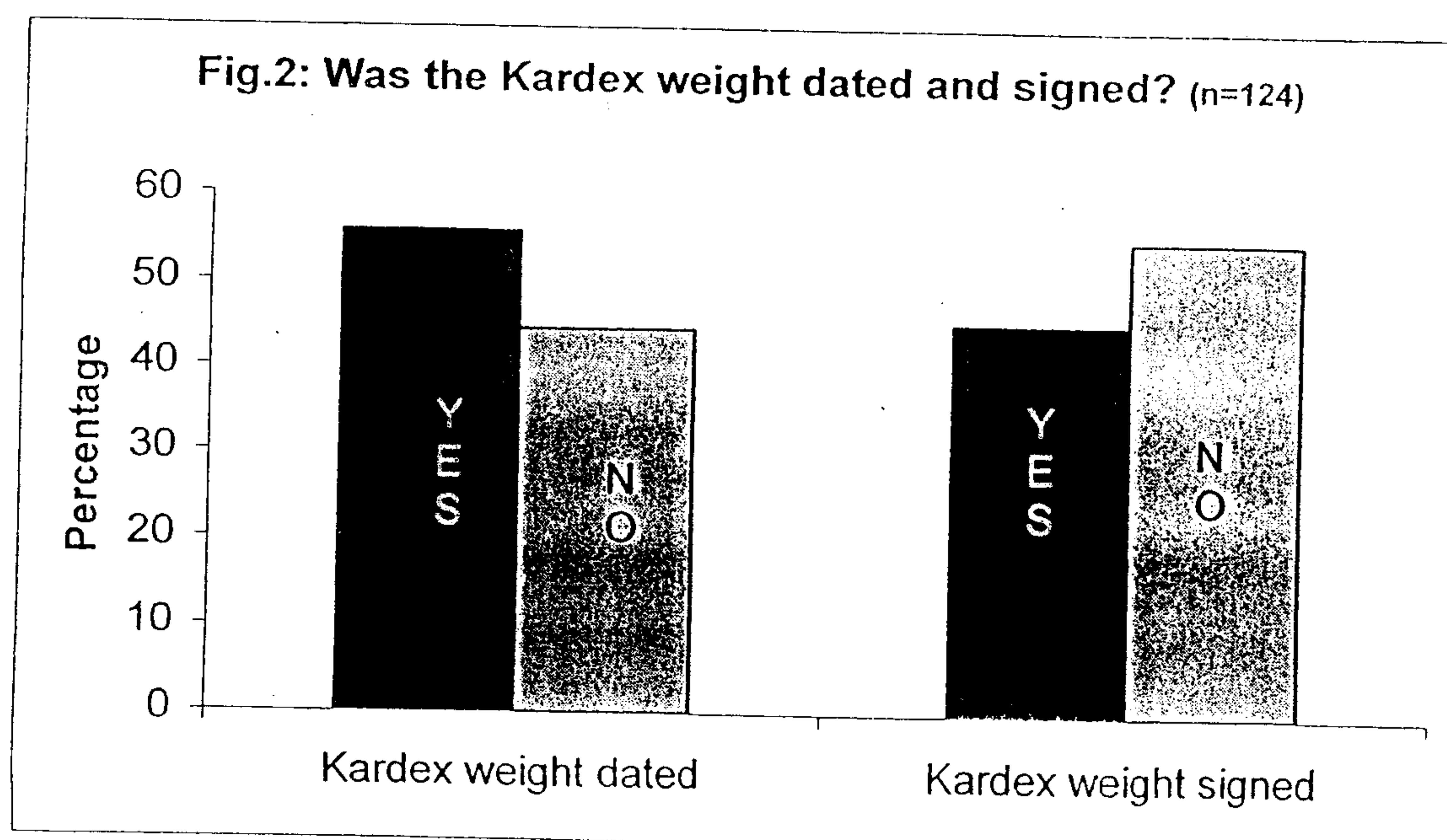
A total of 155 Kardex were examined during the two data collection periods.

Figure 1 shows the results of the question – “Had a weight been recorded on the Kardex?”



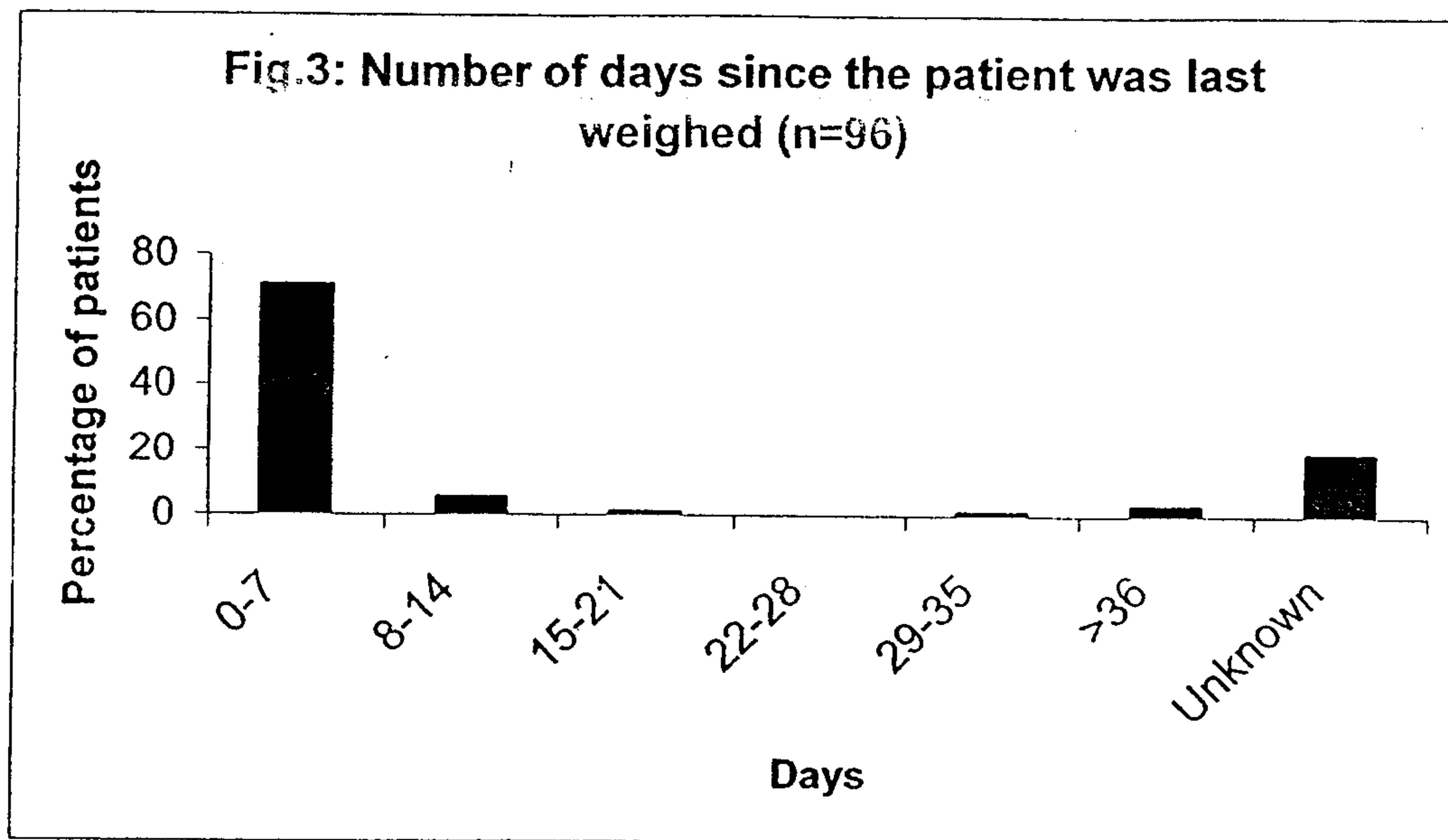
Twenty percent of the Kardex did not record a weight for the patient.

Of the 80% of Kardex that recorded the patient weight, how many of these were also dated and signed? Figure 2 shows the results of these questions.



55.6% of the Kardex weights were dated and 45.2% were signed.

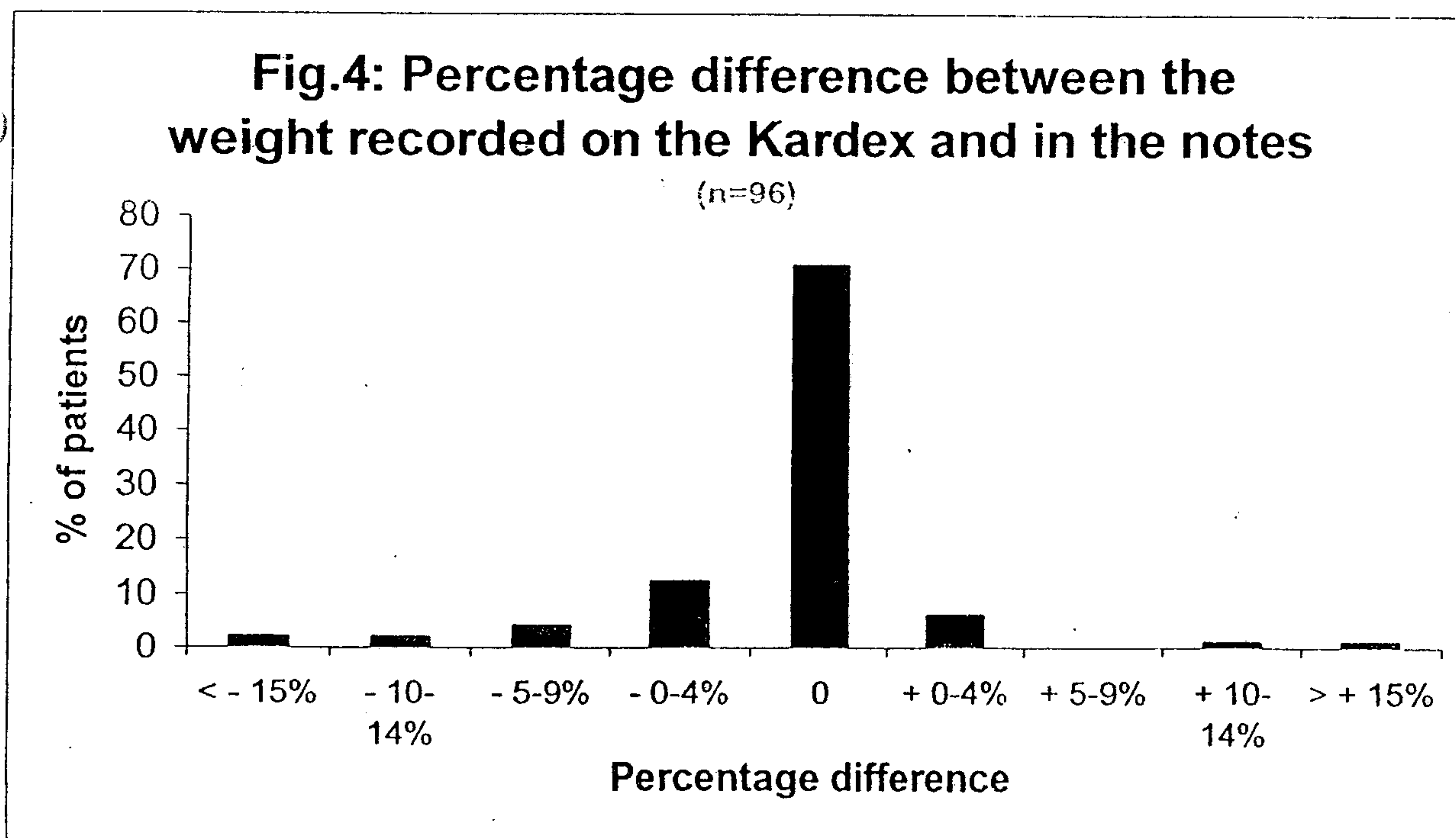
The number of days since the patient was last weighed was also calculated from the audit data collected – figure 3.



For 19.4% of patients included in the audit, it was not possible to determine when they had been last weighed. 70.8% of patients had been weighed within the last seven days and 5.2% between eight and fourteen days earlier.

Approximately 4.2% of patients' weights were more than 15 days old, with 3.1% being over 36 days old.

When the weight recorded on the Kardex differed from the weight recorded in either the medical or nursing notes, the discrepancy between the two values was calculated – figure 4.



In 71% of the Kardex, the weights matched those recorded in the patients' notes. A total of 23% of patients had up to a 10% difference in their recorded weights and a total of six percent had a difference of 10% or more.

The largest discrepancy in recorded weight was 179% - the patients weight was recorded on the Kardex as 3.0kg and in the nursing notes as 8.36kg. An 85% difference was also recorded for a patient whose Kardex weight was 23.0kg, but was recorded in the nursing notes as being 42.7kg.

100% of the recorded weights observed during the audit period were recorded in kgs.

Of the weights that had been recorded on the Kardex 12.1% were estimated weights. One of these weights also included the patient's hip splints.

Scales in use

Examination of the 29 sets of scales available on the wards found that there were eight different makes in use. 13.4% could only weighing in kilograms, 3.4% in pounds and ounces only and the remaining 86.2% could be set to weigh in either kilograms or pounds.

Pharmacists' interventions

The data base of pharmacists' interventions showed that 185 paediatric discharge prescriptions were queried by the pharmacy department during the five month period, 1st January and 31st of May 2003. Sixty-two of these prescriptions (33.5%) were queried because they did not state the patient's weight.

During the same time period, the clinical pharmacists attached to paediatric wards recorded 79 medication incidents. Twenty-six of these were related to the recording of the patient's weight.

Conclusions

Twenty percent of the Kardex examined during the audit did not record a weight for the patient.

Of the Kardex recording a weight, 43% were not dated and 55% were not signed, making it difficult to determine if the weight was a current one.

Discrepancies between the weights recorded on the Kardex and in the patient medical and nursing notes were discovered. The majority of these discrepancies were under 10% of a difference. However in approximately two percent of these Kardex's a large discrepancy was noted.

All the observed weights were recorded in kilograms.

The majority of patients had been weighed within the last seven days. 4.2% of observed weights were more than 14 days old and in 19.4% of cases it was not possible to determine when the patient had last been weighed.