The weight of the matter

Final report of the LACORS National Medical Weighing Project 2008/9



LACORS
promoting quality regulation

FOREWORD



LACORS IS DELIGHTED TO PRESENT

the findings of the National Medical Weighing Project. This breakthrough initiative saw council trading standards officers visiting their local hospitals. For many, this was the first time weights and measures checks have been carried out in a medical setting. The aim of the project was to deliver demonstrable improvements in patient care, while also raising the profile of legal metrology and trading standards. Over the course of the last year, council officers have visited more than 200 hospitals across the UK, checking thousands of pieces of equipment for accuracy. They have helped healthcare professionals to understand the importance of buying the right equipment for the job and of using it correctly to get accurate results. I hope that the relationships forged between hospitals and councils will continue such that these achievements can be maintained and built upon.

CLLR GEOFFREY THEOBALD OBE | CHAIRMAN OF LACORS

ABOUT LACORS

LACORS is the Local Authorities Co-ordinators of Regulatory Services. It is the local government body responsible for overseeing the services run by councils to protect the public. These services range from checking hygiene standards in restaurants, to protecting vulnerable consumers from illegal doorstep selling. LACORS promotes quality regulation, develops policy, and issues comprehensive advice, guidance and good practice for councils. It is assisted by a network of local authority advisers and recognised experts. LACORS covers the whole of the United Kingdom and is politically neutral.

CASE STUDY: WEST YORKSHIRE JOINT SERVICES



"I'D JUST completed a project assessing the weighing machines used in doctors' surgeries when I was asked to co-ordinate West Yorkshire Joint Services' contribution to the National Medical Weighing Project"

Lead officer: **Claire Hundsdoerfer**



"We decided to visit eight hospitals in West Yorkshire, two from each of the hospital trusts. Once I'd had a meeting to explain the project's rationale, I found most hospitals would actually relish a trading standards visit, not least because it would provide them with an up-to-date inventory (many didn't know what equipment they owned). In addition, we would be able to check the work of the companies they were using to test and calibrate their scales.

"Once the first round of visits was underway, it quickly became apparent that the majority of the weighing equipment in use had been purchased before the current legislation had become relevant. In particular, I was surprised at the number that were nothing more than bathroom scales. Approximately one-third of all the instruments we tested was inappropriate for hospital applications. Each of the hospitals was provided with a report of findings and recommendations together with an inventory of what was tested.

"After the inspections, each of the hospitals set to work implementing our advice. I took calls requesting specific guidance on scales and their use in hospitals. By spring 2009, it quickly became evident that the quality and accuracy of the weighing equipment had considerably improved. We were now testing newer, more suitable scales. I also felt that healthcare professionals were realising the importance of using the correct equipment. Most of the hospitals have, with our assistance, introduced training on scales and the weighing process.

"It isn't just the hospitals we visited in West Yorkshire who are realising the importance of accurate weighing equipment. We continue to receive calls regarding medical weighing equipment from other hospitals, health centres, doctors and nurses, and scale companies. This project has set up the necessary infrastructure within each of the hospitals we visited, and I hope that the good work that has been done continues."

Images courtesy of West Yorkshire Joint Services

81%

During the second round of visits, accuracy of the equipment has risen from 66 per cent to 81 per cent

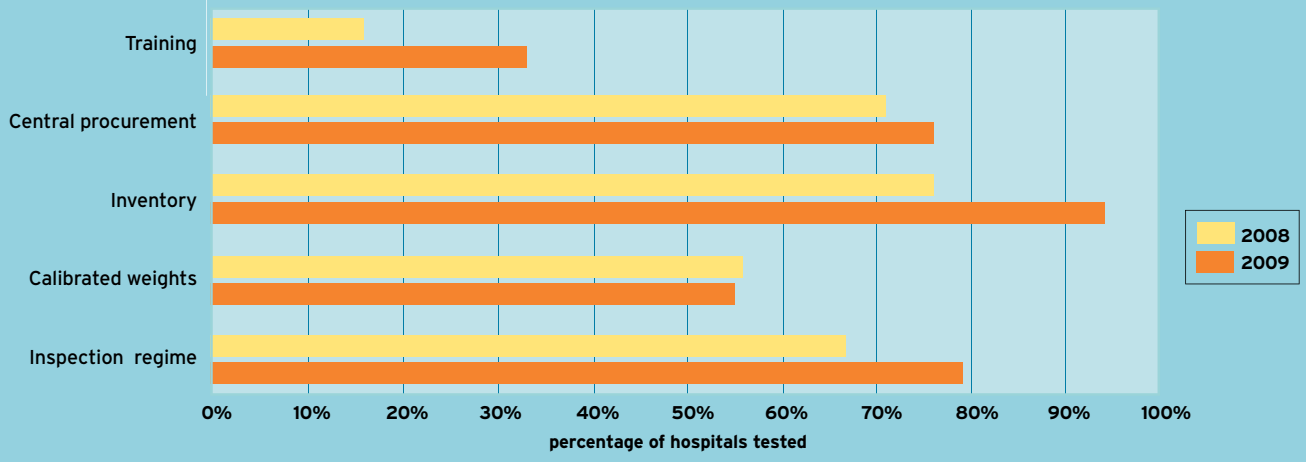
SUMMARY

Standards have improved in all key areas. This is due to old and inaccurate equipment having been removed from service, together with the programme of upgrades instigated since the first report. Many of the 'quick wins' have now been achieved; much equipment has been replaced, and some systems have been made more robust. However, there is still work to do, particularly in terms of training. In addition, more robust inspection regimes (using calibrated weights) will need to be adopted by those hospitals that have not already done so.

A note on the results

This project was commissioned in 2007 and consisted of two inspections of hospital weighing equipment: one in 2008 and one in 2009. In 2008, 93 councils took part. In 2009, 68 councils took part. The figures represent a GB-wide cross section of hospitals, with one in three councils involved. In the 2009 inspection, 5,343 individual weighing machines were tested. The figures compare the totals of both inspections, but do not 'track' individual scales. As such, they should be used as a guide only.

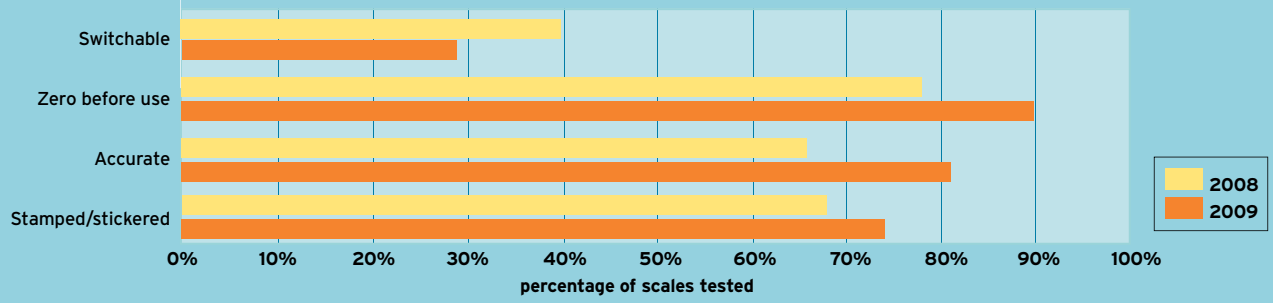
QUALITY MANAGEMENT SYSTEMS



› The first round of inspections confirmed that there were a number of problems with hospital quality systems. In particular, **training** was lacking in all but 15% of hospitals. While there remain some problem areas, the number of hospitals now training their staff in the correct use of weighing equipment has doubled.

› There has been an increase in the number of hospitals **procuring equipment centrally**, and those who have a regular testing programme are also up considerably from 2008 to 2009. Almost every hospital now maintains a fully itemised **inventory** of all the weighing equipment it has on site.

EQUIPMENT FUNCTIONALITY

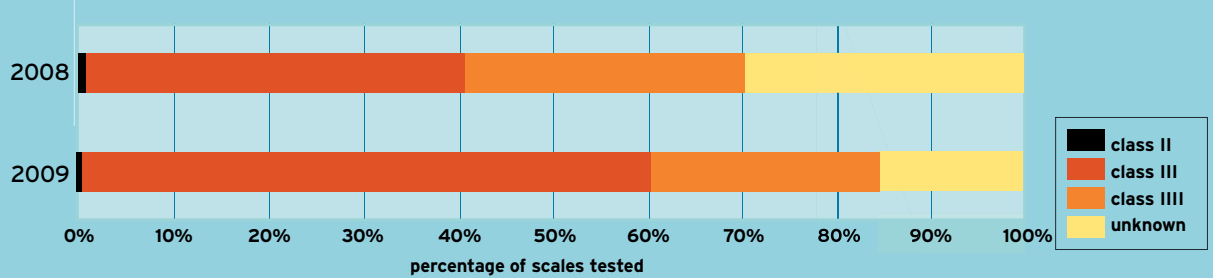


› The primary concern we had about equipment functionality was **accuracy.** During the second round of inspections, accuracy has risen from 66% to 81%.

› There has been a small but significant increase in the number of scales which are **stamped / stickered** correctly, and those which were set to **zero before use.**

› The area with the most room for improvement (and potential to cause harm) is scales capable of showing metric and imperial units. While numbers have decreased, nearly one third of all scales in use are **switchable**. A staggering one in ten of these was set to imperial at the time of testing, despite no medicines or treatments having doses calculated in imperial units.

INSTRUMENT CLASS



› **Instrument class** remains one of the most important aspects of this assessment, and also the hardest to explain to non-technical staff.

› Class IIII equipment has scale divisions that are too wide apart for medical weighing. Regulations state that these scales should only be used for weighing things like sand, ballast and other bulk aggregates.

› In the 2009 audit, the number of Class III (preferred) scales has risen by 50%.

› There has been a commensurate drop in the number of Class IIII scales, and those which were unclassified.

CASE STUDY: HAMPSHIRE TRADING STANDARDS



"This project involved visiting very different premises from those where we traditionally have an involvement."
Lead officer: **Dave May**



"Fortunately, the project protocol was built on the experiences of colleagues around the country who had carried out some initial inspections of patient-weighing equipment in hospitals. The reaction to our officers' visits varied from trust to trust and from hospital to hospital – not surprising when one looks at the size of the NHS. Overall, health professionals were helpful, as long as we rightly respected the pressures they were working under.

"Initial visits revealed a significant proportion of scales showing weights outside the permissible errors. In some cases, domestic bathroom scales were in use. All hospitals were sent a report of our tests, and subsequent visits have shown an improvement in equipment accuracy. In the case of Lymington Hospital, due to a programme of rectification and replacement, 100 per cent of machines are now compliant.

"Looking to the future, we plan to inspect equipment at hospitals not previously visited. We are also continuing to advise and deal with queries raised as a result of our initial visits."

Images courtesy of Hampshire County Council and Lymington Hospital/Stella Eldrige at NHS Creative.

RECOMMENDATIONS

In October 2008, LACORS made a series of recommendations to hospital trusts. These were:

1. Each hospital or trust should procure all weighing equipment centrally (rather than on a ward-by-ward basis), ideally by the department responsible for maintaining the equipment.
2. Each trust should instigate a programme of testing for their equipment.
3. Basic training in the use of weighing equipment should be given to all necessary staff.
4. Any inaccurate equipment should be removed from service pending replacement or repair.
5. All scales used for medical applications should be accuracy Class III or higher.
6. All scales used for medical applications should only display metric units.

Following the survey, the Department of Health issued guidance endorsing these recommendations. The results of the survey indicate that standards have since improved, which is very welcome. In addition, qualitative responses from inspectors show that 80 per cent of them feel standards have improved, and only four per cent of respondents felt standards had decreased. Based on the results of the inspections, it is LACORS' continued view that all six recommendations remain necessary. In particular, there is much work to be done on the first three, such that hospitals' quality systems become more robust. This is necessary not only for patient care, but also to prove due diligence if a negligence claim were to be brought, for example.

NEXT STEPS

This project has focused exclusively on NHS hospitals, in order to keep it manageable and because this was considered to be the area with the most potential for improvement. While councils are free to choose their own local enforcement priorities, it is recommended that scales in all medical settings should be considered in future work programmes. Such settings include:

- GPs' surgeries
- Community health visitors
- School nurses
- Private hospitals
- Military hospitals

In addition, other medical equipment was identified as part of this project that could benefit from inspection by trading standards officers. These were blood pressure monitors, thermometers and height measures. The first two would need some specialist equipment, but the third is very simple to test and was found to be wrongly installed in many hospitals visited.



Acknowledgements

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Several departments at the Department of Health, the Medicines & Healthcare Products Regulatory Agency, and the National Patient Safety Agency

And finally, Lacors' delivery partners

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