

Doctor and Nurse Information

What difference does it make to me as a Doctor or Nurse?

The adoption of the EN 13826 Standard is likely to cause the most issues with Doctors and Nurses responsible for the long-term care of patients with asthma.

Three key areas need consideration:

- 1) The new patient, using a peak flow meter for the first time
- 2) The existing patient, who has already used a peak flow meter
- 3) The health professional, using PEF readings and Normal Values

Patients using a peak flow meter for the first time in 2004 will soon all be given the new EU scale meter, and be ignorant of the change from the Wright scale. However, existing asthmatic patients who require a replacement meter will notice that the meter and their readings will have changed, and without explanation from a knowledgeable healthcare professional, may be worried that their health has deteriorated, or the meters being used were, or are faulty.

Importantly, professionals caring for patients who use peak flow meters will need to note which type of meter has been used to take measurements - it is unlikely that all patients will have their old-scale meter replaced immediately, the result being that both Wright and EU scale meters will be in common use for several years after the introduction of the EN 13826 Standard in 2004.

Clement Clarke, as manufacturers of the most widely used peak flow meter, has made recommendations to Government authorities to ensure the change occurs as smoothly as possible. The following comments may be useful.

What is the difference between the two scales?

PEF readings obtained on an EU scale meter will be more accurate than those from a Wright scale meter, because changes in airflow will result in PEF readings changing uniformly for the whole range of the meter. The Wright scale has been previously noted to over-represent changes in airflow in the mid-range, and under represent changes in the low and high ranges.

Correcting these small inaccuracies results in PEF readings that are different - until the new EN 13826 Standard meters are used for all PEF measurements, it will be important to note which scale has been used to used with the patient.

How should I note the different PEF readings?

It would be sensible to record all PEF readings with a description of which scale: e.g.

550 EU or **574 Wright**

Ideally, patients and health professionals should all have the same scale meter, but this may take several years to achieve. If PEF readings have been taken using a Mini-Wright, it is possible to convert from one scale to the other, where required.

How can I tell what type of meter I have?

1. Look at the meter and its instruction leaflet. Often there is a description of the meter and who manufactured it.
2. Check its features against the information on Mini-Wright on display at www.peakflow.com
3. Ask the person who supplied your peak flow meter, what scale it is, and who manufactured it.

Note. The EN 13826 Standard requires that the meter itself carry full details of the type of meter, and the company who manufactured it. Meters that do not have this detail are not compliant with the new Standard, and therefore may not be able to monitor lung function accurately.

Are there any other differences between the two types of scale?

Yes - the new EN 13826 Standard sets minimum acceptable levels for the overall performance of peak flow meters, for such criteria as repeatability, accuracy, airflow resistance and reliability. Some manufacturers will have to modify their existing designs of peak flow meter to ensure they comply with the new standard - the poor accuracy of some meters may result in them being withdrawn from the market.

Changes to Peak Flow Measurement during 2004

What difference will I see?

The new peak flow meters will have a similar appearance to the old meters, but the scale (the part of the meter that you read the PEF value from) will have changed.

If you have a Mini-Wright, the EU scale will be a different colour - blue text printed on a yellow background. Apart from the scale, the new Mini-Wright will behave and handle as reliably as the old meter.



Old version scale
(White text on black background)

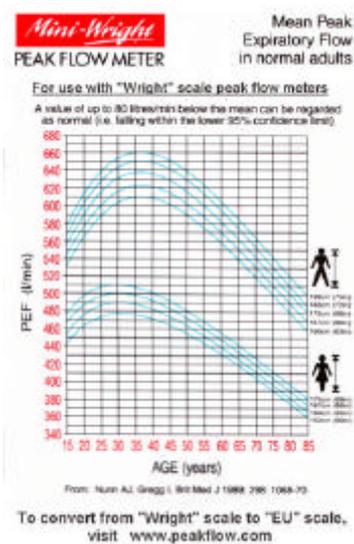


New version scale
(Blue text on yellow background)



The Mini Wright Standard Range Peak Flow Meter, showing the scale and pointer of old and new versions

Is it true that the Nunn and Gregg predictive values are no longer valid?



This is not entirely true.

The PEF normal values offered by the Nunn and Gregg analysis remain a highly regarded source of predictive values, but the readings they reported were from peak flow meters calibrated to the Wright scale.

Without conversion to the equivalent reading on an EU scale meter, they are misleading. However, it is possible to convert them, using the formulae developed by Clement Clarke.

Are there predictive values for the EU Scale PEF meter?

Some data sets are available, but as yet there is no consensus as to which ones should be used routinely. As soon as there is, Clement Clarke will issue them on www.peakflow.com.

My patients keep a peak flow diary, and have been given a new meter - do they have to start again?

Not necessarily. As long as they identify which PEF readings came from which meter, then you can convert from the "old" scale into the "new" by using our online converter.

What should I tell patients who will be getting a replacement PEF meter?

Those patient who have used a peak flow meter before will need to know that the way peak flow is measured has been improved, and their PEF readings may have changed - even though their asthma may not have.

If a patient knows what their normal reading is when they are well (e.g. their personal best), then advise them what reading they could expect on a new EU scale meter by converting the Wright reading.

Do I need to replace the old-scale meters immediately?

No. The Mini-Wright is one of the most reliable medical instruments available, but meters that are older than three years, or ones that have been damaged in any way should be replaced with a new "EU" scale Mini-Wright to ensure lung function is monitored accurately.

In the U.K., Wright scale P.E.F. meters will no longer be reimbursed after 2004 - EU-scale meters will be replacing them from September 1st 2004.

Healthcare practitioners who have their own PEF meter should obtain a new EU scale meter to facilitate PEF measurement using either meter. UK Health Professionals can order a new Standard Range EU Scale Meter from NHS Logistics by quoting FDD609 on their order.

The opportunity to replace a PEF meter should be taken the next time a patient attends for a review - meters older than three years, and those with obvious signs of damage should be replaced at the earliest opportunity.

Our office / clinic has many peak flow meters- should we replace them all at once?

Depending on when your own country introduces the new EU scale meters, it would be sensible for all professionals working together to start using the new scale PEF readings from the same date.

Disposing of all Wright scale meters and replacing them with new EU scale meters will help standardise all readings taken by healthcare professionals, and it is likely that quantity discounts can be negotiated from suppliers (contact Clement Clarke for details).

I prefer using low range meters with those with severe airflow limitations- are they covered by the "EN 13826" Standard?



The authors of the new standard for peak flow meters believed that if the "standard range" peak flow meter could be made more accurate, there would be no need for a "low range" meter. Therefore, unfortunately, any "low range" peak flow meter is technically unable to meet every test in the standard - in the case of Mini-Wright Low Range, the only test that the meter would fail is its ability to measure right up to 800 L/min!

As the Mini-Wright Low Range meter only measures between 30 and 400 l/min, this meter cannot officially be marked as "EN 13826 compliant", but it will display the "EU" symbol to help with recognition.

A concession by the U.K. Government's authorities will ensure that health professionals can still prescribe a low range meter for children, the elderly and those with severe asthma. The situation in other countries in Europe remains unclear, but Clement Clarke will make the Low Range Mini-Wright meter available to all who request it.

The new EU Scale Mini-Wright Low Range will conform to the EN 13826 Standard for the 30 to 400-l/min range that it covers

Are there any special considerations for me as a Dispensing Doctor?

Yes - if you are reimbursed for providing peak flow meters to patients directly, or via a prescription, the ability to claim reimbursement for the meter may change. In the U.K., Dispensing Doctors are unlikely to be reimbursed if they claim for Wright-scale peak flow meters once they have been removed from the Drug Tariff. It is therefore important that you check your stock levels before the introduction of the new "EU" scale meters in September. The new meters will be available from wholesalers from July 2004.

What other information is available?

Further information is available from our website www.peakflow.com. This includes an online scale reading converter and a guide to the different types of Mini-Wright peak flow meter currently available.