

14/10/63

DEPARTMENT OF HEALTH,
P.O. BOX 5013,
WELLINGTON.

10 October 1963.

Clinical Services Letter No. 36

TO MEDICAL PRACTITIONERS:

(Copy to chemists for information.)

Dear Doctor,

PRESCRIPTION WRITING IN THE METRIC SYSTEM

1. The Minister of Health, acting upon the recommendation of the Board of Health, and with the concurrence of the British Medical Association and Pharmacy Board, has approved an arrangement whereby all prescriptions covered by the Social Security Act shall be dispensed using the metric system of measurement.

2. From 1 November 1963 doctors are asked to use the metric system exclusively when writing prescriptions. It will not be practicable to price prescriptions in both the apothecary and metric systems and when a prescription is written in apothecary it will be translated by the chemist into the metric quantities and doses set out in the enclosed tables.

3. Since the title (e.g., Mist. Sod. Sal. B.N.F.) will normally be used for standard formulary preparations, the main problems for the doctor concern the dose and the bottle size.

4. Table A sets out the new doses and bottle sizes.

Please note that the dose volumes are:

Metric	Apothecary
5 millilitres (ml.)	in place of 1 fluid drachm.
10 millilitres (ml.)	in place of 2 fluid drachms.
20 millilitres (ml.)	in place of $\frac{1}{2}$ fluid ounce.

5. The B.N.F. New Zealand supplement enclosed shows the metric versions of standard preparations which are not given in metric in the B.N.F. 1960 and 1963.

6. Preparations prescribed for extemporaneous dispensing should be prescribed as on next page (paras. 9, 10, and 11).

7. To convert the apothecary dose of ingredients to the metric dose refer to table B.

8. Doses by weight of less than 1 gram are expressed in milligrams (mg.). Doses by volume are expressed in millilitres (ml.).*

*"ml." is equivalent to the obsolete term "c.c.".

9. In the metric system the decimal point introduces a hazard. This is best overcome by using a long vertical line instead:

R/ Pot. Iod.	0|2
Menthol	0|008
Liquorice Liq. Ext.	1|0
Chloroform Water to	20|0

Send: 300 ml.†

Label: 20 ml. four hourly.

(Please note that with this system "G." or "ml." is not usually inserted in the body of the prescription.)

10. Prescriptions may also be written in the conventional style as follows:

R/ Pot. Iod.	200 mg.
Menthol	8 mg.
Liquorice Liq. Ext.	1 ml.
Chloroform Water	to 20 ml.

Send: 300 ml.†

Label: 20 ml. four hourly.

11. A convenient way to convert ointments written in terms of so many grains and minims per ounce is to change the prescription to percentage form and regard each grain or minim as $\frac{1}{2}$ per cent.

e.g., Calamine 10 gr.	becomes	Calamine 2.
Base to 1 oz.		Base to 100.

Send: 2 oz.

Send: 50 G.†

12. The following accepted abbreviations should be used where appropriate:

Gram	G.
Milligram	mg.
Microgram	mcg. or μ g.
Millilitre	ml.

13. To avoid confusion between gram and grain the abbreviation "G." (capital) should always be used for gram. Where a decimal fraction is not preceded by a whole number, "0" must always be placed before the decimal point.

14. It is suggested that you kindly display the enclosed public notice card in a prominent place in your consulting room or pharmacy.

15. Your cooperation is earnestly requested particularly during the introduction of the scheme.

†See table A to decide on the number of doses and total quantity required.

Yours faithfully,

A. W. S. Thompson

(A. W. S. THOMPSON)
Director.

T. L. Hayes

(T. L. HAYES)
Assistant Director.

Division of Clinical Services.

Table A
DOSE VOLUMES

5 millilitres replaces 1 fluid drachm
10 millilitres replaces 2 fluid drachms
20 millilitres replaces $\frac{1}{2}$ fluid ounce

NUMBER OF DOSES WITH NEW BOTTLE SIZES (LIQUIDS)

E.g., an 8 fl. oz. bottle containing 16 tablespoonful doses will be replaced by a 300 ml. bottle containing fifteen 20 ml. doses.

Bottle Size		Number of Doses in Bottle		
Old (Apothecary)	New (Metric)*	5 ml.	10 ml.	20 ml.
1 fl. dr.	5 ml.	..	..	..
2 fl. dr.	10 ml.	..	..	..
$\frac{1}{2}$ & 1 fl. oz.	25 ml.	5	..	..
2 fl. oz.	50 ml.	10	5	..
3 & 4 fl. oz.	100 ml.	20	10	5
6 fl. oz.	200 ml.	40	20	10
8 fl. oz.	300 ml.	60	30	15
10 fl. oz.	400 ml.	80	40	20
12 & 16 fl. oz.	500 ml.	100	50	25
40 fl. oz.	1 litre	..	..	..
80 fl. oz.	2 litres	..	..	..

*These sizes should also be used for external liquid preparations.

Apothecary sized bottles may be used, partially filled, until stocks are exhausted.

SOLID OR DRY PREPARATIONS (e.g., bulk powders, ointments)

5 G. replaces 1 and 2 dr
10 G. replaces $\frac{1}{2}$ oz
25 G. replaces 1 oz
50 G. replaces 2 oz
100 G. replaces 3 and 4 oz
250 G. replaces 8 oz
500 G. replaces 16 oz

Table B
METRIC DOSES (INGREDIENTS)

By Weight		By Volume	
Apothecary Dose	Metric Dose	Apothecary Dose	Metric Dose
120 grains	8 G.	120 minims	7 ml.
90	6	90	5.5
75	5	60	3.5
60	4	45	3.0
45	3	40	2.5
40	2.5	30	1.8
30	2.0	25	1.5
25	1.6	20	1.2
20	1.2	15	1.0
15	1.0	12 to 12½	0.8
12	800 mg.	10	0.6
10	600	8	0.5
7½	450	7½	0.45
6	400	6 to 7	0.4
5	300	5	0.3
4	250	4	0.25
3	200	3	0.2
2½	150	2½	0.15
2	125	2	0.12
1½	100	1½	0.09
1	60	1	0.06
¾	50	½	0.03
½	30	¼	0.015
⅓	25	⅛	0.008
¼	20		
⅕	15		
⅙	12		
⅛	10		
1/10	8		
1/12	6		
1/15	5		
1/16 to 1/16	4		
1/20	3		
1/25	2.5		
1/30 to 1/32	2.0		
1/40	1.5		
1/50	1.2		
1/60 to 1/64	1.0		
1/75	0.8		
1/100	0.6		
1/120 to 1/130	0.5		
1/150 to 1/160	0.4		
1/200	0.3		
1/240	0.25		
1/300 to 1/320	0.2		
1/480	0.12		
1/600	0.1		
1/1000	0.06		

This table is to be used for conversion to metric at ingredient dose level only.

Metric Abbreviations

Kilogram (kg.) = 1000 grams (G.)
 Gram (G.) = 1000 milligrams (mg.)
 Milligram (mg.) = 1000 micrograms (mcg. µg.)
 1 litre (L.) = 1000 millilitre (ml.)