

## Self-Reported Medications

<b>Age Cohort</b>	Older
<b>Survey</b>	4
<b>Derived Variable</b>	Name
<b>Definition</b>	Brand/generic name for a medication
<b>Source Items (Index Numbers)</b>	Q69 (MEDH-318)
<b>Statistical form</b>	Character variable
<b>Index Number</b>	MEDH-319
<b>Derived Variable</b>	ATC_String
<b>Definition</b>	String of all ATC codes related to any medication.
<b>Source Items (Index Numbers)</b>	Q69 (MEDH-318)
<b>Statistical form</b>	Character variable
<b>Index Number</b>	MEDH-320
<b>Derived Variable</b>	ATC_Count
<b>Definition</b>	Total number of ATC codes related to any the medication
<b>Source Items (Index Numbers)</b>	ATC_String (MEDH-320)
<b>Statistical form</b>	Numeric
<b>Index Number</b>	MEDH-321
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<b>Date</b>	18 January 2007

## Source Items

**Q69 Please write down the names of all your medications prescribed by a doctor. Where possible, copy names from the packets, or obtain a list from your regular pharmacist and return it with your survey.**

Participants recorded medications in open-ended text format.

## Data Management and Coding

The majority of participants reported more than one medication and many reported non-prescription items as well as those prescribed by doctors. These non-prescription items included over-the-counter medications, herbal medications and non-medical products.

The details reported by participants were entered into a database with four descriptive fields Medications\_Name, Dosage, Frequency and ExtraInfo. This information was used as an intermediate between self-report and standard naming and coding schemes for pharmaceuticals. Each medication that was reported was assigned a value for the variables:

Medications_name:	Name as reported by the participant
Name:	The pharmaceutical generic/brand name (see below)
ATC_String:	A concatenation all the ATC codes (see below) for drugs with the same pharmaceutical name, with consecutive ATC codes separated by the '\$' symbol
ATC_Count	The total number of ATC codes that refer to this drug

The pharmaceutical name was taken from The Australian Statistics on Medicines (ASM) which is produced by the Drug Utilisation Sub-Committee (DUSC) of the Pharmaceutical Benefits Advisory Committee the Australian (PSAC).<sup>1</sup>

WHO Collaborating Centre for Drug Statistics<sup>2</sup> has developed and now maintains the ATC/DDD (Defined Daily Dose) system. Data users are encouraged to consult the web site for further details.

The ATC code itself is a structured, 7-digit, alpha-numeric code with 5 levels.

1. Anatomical main group: the organ or system on which the drug acts; there are 14 such groups.
2. Therapeutic main group
3. Therapeutic subgroup
4. Chemical subgroup
5. Chemical substance

The 14 anatomical main groups and their codes are:

A	Alimentary tract and metabolism
B	Blood and blood forming organs
C	Cardiovascular system
D	Dermatologicals
G	Genitourinary system and sex hormones
H	Systemic hormonal preparations, excluding sex hormones
J	General anti-infectives for systemic use
L	Anti-neoplastic and immunomodulating agents
M	Musculo-skeletal system
N	Nervous system
P	Anti-parasitic products, insecticides and repellents
R	Respiratory system
S	Sensory organs
V	Various

The complete classification of metformin (below) illustrates the structure.

Level	Description	Description for Metformin	ATC code
1 <sup>st</sup> level	Anatomical main group	Alimentary tract and metabolism	A
2 <sup>nd</sup> level	Therapeutic subgroup	Drugs used in diabetes	A10
3 <sup>rd</sup> level	Pharmacological subgroup	Oral blood glucose lowering drugs	A10B
4 <sup>th</sup> level	Chemical subgroup	Biguanides	A10BA
5 <sup>th</sup> level	Chemical substance	Metformin	A10BA02

The principles for classification with the ATC system are described by WHO as:

“Medicinal products are classified according to the main therapeutic use of the main active ingredient, on the basic principle of only one ATC code for each pharmaceutical formulation (i.e. similar ingredients, strength and pharmaceutical form).

A medicinal product can be given more than one ATC code if it is available in two or more strengths or formulations with clearly different therapeutic uses.

A medicinal product may be used for two or more equally important indications, and the main therapeutic use of a drug may differ from one country to another. This will often give several classification alternatives. Such drugs are usually only given one code, the main indication being decided on the basis of the available literature. Problems are discussed in the WHO International Working Group for Drug Statistics Methodology where the final classification is decided. Cross-references will be given in the guidelines to indicate the various uses of such drugs.

The ATC system is not strictly a therapeutic classification system. At all ATC levels, ATC codes can be assigned according to the pharmacology of the product. Subdivision on the mechanism of action will, however, often be rather broad, since a too detailed classification according to mode of action often will result in having one substance per subgroup which as far as possible is avoided. Some ATC groups are subdivided in both chemical and pharmacological groups. If a new substance fits in both a chemical and pharmacological 4th level, the pharmacological group should normally be chosen.

Substances classified in the same ATC 4th level cannot be considered pharmacotherapeutically equivalent since their mode of action, therapeutic effect, drug interactions and adverse drug reaction profile may differ. “

In addition to the formal ATC codes that are concatenated in *ATC\_string*, six (6) codes have been developed for non-prescription items that were reported.

Code	Definition	Example
PROBIOT	Probiotics	Acidophilus
NON- MED	Soaps and lotions	
SUPLEMT	Dietary supplements not included in the ATC system, such as some vitamins and minerals	
NON- CLA	Products not for medical/herbal uses	
AOTC <sup>a</sup>	Non-prescription pharmaceuticals, commonly known as over-the-counter (OTC) drugs	
AHERBAL <sup>a</sup>	Herbal medications/remedies	

<sup>a</sup> The first character for these 2 codes is the first level in the ATC code (anatomical main group). For example CHERBAL codes for herbal medications for treatment of a cardiovascular condition

An example of coded data for one participant in the ALSWH, as it appears in the Older 4 Medications file is:

As reported by the participant	Pharmaceutical or brand name	ATC String	ATC_Count
Ventolin	Ventolin	R03AC02\$ R03CC02\$ V07AY\$	3
xalatan eye drops	Xalatan	S01EE01\$	1
fish oil	fish oil	MHERBAL\$	1
folic acid	Folic Acid	B03BB01\$	1

## References

1. Australian Statistics on Medicines 2001-2002 available at: <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pbs-general-pubs-asm.htm>
2. The ATC/DDD system, available at <http://www.whocc.no/atcddd/>