## **Appendix 4.** Prevalence and composition of diagnostic clusters in women aged 45-64 years (n= 217,823).

| Cluster<br>order<br>number,<br>n | Prevalence<br>1 (%)* | Prevalenc<br>e 2 (%)† | Blocks of diagnoses  | Prevalence in group‡, % | Prevalence<br>in cluster,<br>% | Most prevalent diagnoses of the block                         | AU p-value**     |
|----------------------------------|----------------------|-----------------------|--|-------------------------|--------------------------------|---|------------------|
| WC1^                             | 82.1                 | 52.9                  | M50-M54:Other dorsopathies   | 35.8                    | 43.5                           | M54 Dorsalgia   | 0.79 (0.74-0.85) |
| 178,849                          |                      |                       | F40-F48:Neurotic, stress-related and somatoform disorders                                    | 27.3                    | 33.2                           | F41 Other anxiety disorders                                   |                  |
|                                  |                      |                       | M70-M79:Other soft tissue disorders  | 27.0                    | 32.8                           | M79 Other soft tissue disorders, not elsewhere classified     |                  |
|                                  |                      |                       | N80-N98:Noninflammatory disorders of female genital tract                                    | 24.2                    | 29.5                           | N95 Menopausal and other perimenopausal disorders             |                  |
|                                  |                      |                       | M20-M25:Other joint disorders  | 18.6                    | 22.6                           | M25 Other joint disorders, not elsewhere classified           |                  |
|                                  |                      |                       | I80-I89:Diseases of veins,<br>lymphatic vessels and lymph<br>nodes, not elsewhere classified | 18.3                    | 22.2                           | 183 Varicose veins of lower extremities                       |                  |
|                                  |                      |                       | D10-D36:Benign neoplasms   | 16.2                    | 19.7                           | D25 Leiomyoma of uterus                                       |                  |
|                                  |                      |                       | M15-M19:Arthrosis  | 15.7                    | 19.1                           | M17 Gonarthrosis [arthrosis of knee]                          |                  |
| <b>WC2</b> 121,564               | 55.8                 | 23.0                  | E70-E90:Metabolic disorders  | 35.4                    | 63.4                           | E78 Disorders of lipoprotein metabolism and other lipidaemias | 0.93 (0.86-1.00) |
|                                  |                      |                       | I10-I15:Hypertensive diseases  | 25.6                    | 45.8                           | I10 Essential (primary) hypertension                          |                  |
|                                  |                      |                       | E65-E68:Obesity and other hyperalimentation  | 19.0                    | 34.0                           | E66 Obesity   |                  |
|                                  |                      |                       | E10-E14:Diabetes mellitus  | 7.7                     | 13.7                           | E11 Non-insulin-  |                  |

|                    |      |      |  |      |      | dependent diabetes mellitus                                |                  |
|--------------------|------|------|--|------|------|--|------------------|
| <b>WC3</b> 103,147 | 47.4 | 10.8 | F10-F19:Mental and behavioural disorders due to psychoactive substance use | 18.6 | 39.4 | F17 Mental and behavioural disorders due to use of tobacco | 0.78 (0.73-0.84) |
|                    |      |      | E00-E07:Disorders of thyroid gland   | 14.9 | 31.4 | E03 Other hypothyroidism                                   |                  |
|                    |      |      | F30-F39:Mood [affective] disorders   | 14.6 | 30.8 | F32 Depressive episode                                     |                  |
|                    |      |      | M80-M85:Disorders of bone density and structure                            | 11.3 | 23.9 | M81 Osteoporosis without pathological fracture             |                  |
| <b>WC4</b> 70,294  | 32.3 | 6.4  | J00-J06:Acute upper respiratory infections                                 | 12.6 | 39.1 | J00 Acute nasopharyngitis [common cold]                    | 0.71 (0.66-0.77) |
|                    |      |      | K00-K14:Diseases of oral cavity, salivary glands and jaws                  | 12.1 | 37.3 | K02 Dental caries  |                  |
|                    |      |      | L20-L30:Dermatitis and eczema  | 9.3  | 28.8 | L29 Pruritus   |                  |
|                    |      |      | B35-B49:Mycoses  | 5.7  | 17.8 | B35 Dermatophytosis  |                  |
| <b>WC5</b> 63,792  | 29.3 | 6.0  | K20-K31:Diseases of oesophagus, stomach and duodenum                       | 11.4 | 38.9 | K30 Dyspepsia  | 0.71 (0.66-0.76) |
|                    |      |      | G40-G47:Episodic and paroxysmal disorders                                  | 10.5 | 36.0 | G43 Migraine   |                  |
|                    |      |      | K55-K63:Other diseases of intestines                                       | 8.6  | 29.2 | K59 Other functional intestinal disorders                  |                  |
|                    |      |      | K40-K46:Hernia   | 5.7  | 19.4 | K44 Diaphragmatic hernia                                   |                  |
| <b>WC6</b> 34,707  | 15.9 | 1.6  | J30-J39:Other diseases of upper respiratory tract                          | 9.4  | 59.0 | J30 Vasomotor and allergic rhinitis                        | 1.00             |
|                    |      |      | J40-J47:Chronic lower respiratory diseases                                 | 8.2  | 51.2 | J45 Asthma   |                  |
| <b>WC7</b> 32,674  | 15.0 | 0.8  | D50-D53:Nutritional anaemias   | 8.3  | 55.2 | D50 Iron deficiency anaemia                                | 1.00             |
|                    |      |      | N60-N64:Disorders of breast  | 7.5  | 50.1 | N60 Benign mammary   |                  |

|                     |      |     |   |     |       | dysplasia  |                  |
|---------------------|------|-----|---|-----|-------|--|------------------|
| <b>WC8</b> 27,150   | 12.5 | 0.8 | G50-G59:Nerve, nerve root and plexus disorders  | 8.5 | 68.6  | G56 Mononeuropathies of upper limb                   | 0.91 (0.88-0.94) |
|                     |      |     | M65-M68:Disorders of synovium and tendon  | 4.7 | 37.5  | M65 Synovitis and tenosynovitis                      |                  |
| <b>WC9</b> 19,199   | 8.8  | 0.4 | N30-N39:Other diseases of urinary system  | 5.9 | 66.7  | N39 Other disorders of urinary system                | 0.69 (0.62-0.75) |
| 10,100              |      |     | N20-N23:Urolithiasis  | 3.4 | 38.3  | N20 Calculus of kidney and ureter                    |                  |
| WC10                | 8.5  | 0.4 | H90-H95:Other disorders of ear  | 6.3 | 75.0  | H91 Other hearing loss                               | 0.75 (0.70-0.80) |
| 18,439              |      |     | H65-H75:Diseases of middle ear and mastoid  | 2.5 | 30.1  | H65 Nonsuppurative otitis media                      |                  |
| WC11                | 7.6  | 0.6 | M45-M49:Spondylopathies   | 4.3 | 57.1  | M47 Spondylosis                                      | 1.00             |
| 16,535              |      |     | M40-M43:Deforming dorsopathies  | 3.8 | 50.4  | M41 Scoliosis  |                  |
| <b>WC12</b> 14, 335 | 6.6  | 0.4 | K80-K87:Disorders of gallbladder, biliary tract and pancreas                                  | 4.0 | 60.9  | K80 Cholelithiasis                                   | 0.83*            |
|                     |      |     | K70-K77:Diseases of liver   | 2.9 | 44.7  | K76 Other diseases of liver                          |                  |
| <b>WC13</b> 12,320  | 5.7  | 0.0 | F50-F59:Behavioural syndromes associated with physiological disturbances and physical factors | 5.7 | 100.0 | F51 Nonorganic sleep disorders                       |                  |
| <b>WC14</b> 10,357  | 4.8  | 0.0 | L60-L75:Disorders of skin appendages  | 4.8 | 100.0 | L72 Follicular cysts of skin and subcutaneous tissue |                  |
| <b>WC15</b> 9,555   | 4.4  | 0.0 | H53-H54:Visual disturbances and blindness   | 4.4 | 100.0 | H54 Blindness and low vision                         |                  |
| <b>WC16</b> 9,521   | 4.4  | 0.0 | I30-I52:Other forms of heart disease  | 4.4 | 100.0 | I34 Nonrheumatic mitral valve disorders              |                  |
| <b>WC17</b> 9,442   | 4.3  | 0.0 | B00-B09:Viral infections characterized by skin and mucous membrane lesions                    | 4.3 | 100.0 | B07 Viral warts                                      |                  |
| <b>WC18</b> 8,541   | 3.9  | 0.0 | T08-T14:Injuries to unspecified part of trunk, limb or body region                            | 3.9 | 100.0 | T14 Injury of unspecified body region                |                  |

| WC19              | 3.8 | 0.0 | H10-H13:Disorders of conjunctiva  | 3.8 | 100.0 | H10 Conjunctivitis  |
|-------------------|-----|-----|---|-----|-------|---|
| 8,268             |     |     |   |     |       |   |
| <b>WC20</b> 7,866 | 3.6 | 0.0 | H60-H62:Diseases of external ear  | 3.6 | 100.0 | H61 Other disorders of external ear                                     |
| <b>WC21</b> 7,714 | 3.5 | 0.0 | H49-H52:Disorders of ocular muscles, binocular movement, accommodation and refraction | 3.5 | 100.0 | H52 Disorders of refraction and accommodation                           |
| <b>WC22</b> 7,512 | 3.4 | 0.0 | L50-L54:Urticaria and erythema  | 3.4 | 100.0 | L50 Urticaria   |
| <b>WC23</b> 7,298 | 3.4 | 0.0 | J20-J22:Other acute lower respiratory infections                                      | 3.4 | 100.0 | J20 Acute bronchitis  |
| <b>WC24</b> 7,251 | 3.3 | 0.0 | L80-L99:Other disorders of the skin and subcutaneous tissue                           | 3.3 | 100.0 | L82 Seborrhoeic keratosis   |
| <b>WC25</b> 6,178 | 2.8 | 0.0 | H00-H06:Disorders of eyelid, lacrimal system and orbit                                | 2.8 | 100.0 | H04 Disorders of lachrymal system                                       |
| <b>WC26</b> 5,993 | 2.8 | 0.0 | H40-H42:Glaucoma  | 2.8 | 100.0 | H40 Glaucoma  |
| <b>WC27</b> 5,986 | 2.7 | 0.0 | A00-A09:Intestinal infectious diseases  | 2.7 | 100.0 | A09 Diarrhoea and gastro-<br>enteritis of presumed<br>infectious origin |
| <b>WC28</b> 5,890 | 2.7 | 0.0 | M05-M14:Inflammatory polyarthropathies  | 2.7 | 100.0 | M13 Other arthritis   |
| <b>WC29</b> 5,548 | 2.5 | 0.0 | S80-S89:Injuries to the knee and lower leg  | 2.5 | 100.0 | S83 Dislocation, sprain and strain of joints and ligaments of knee      |
| <b>WC30</b> 5,416 | 2.5 | 0.0 | C50-C50:Malignant neoplasm of breast  | 2.5 | 100.0 | C50 Malignant neoplasm of breast  |
| <b>WC31</b> 5,372 | 2.5 | 0.0 | L40-L45:Papulosquamous disorders  | 2.5 | 100.0 | L40 Psoriasis   |
| <b>WC32</b> 5,336 | 2.4 | 0.0 | H80-H83:Diseases of inner ear   | 2.4 | 100.0 | H81 Disorders of vestibular function                                    |
| WC33              | 2.0 | 0.0 | S90-S99:Injuries to the ankle and   | 2.0 | 100.0 | S93 Dislocation, sprain   |

| 4,374             |     |     | foot  |     |       | and strain of joints and ligaments at ankle and foot level                   |
|-------------------|-----|-----|---|-----|-------|--|
| WC34<br>3,882     | 1.8 | 0.0 | B15-B19:Viral hepatitis   | 1.8 | 100.0 | B18 Chronic viral hepatitis  |
| <b>WC35</b> 3,758 | 1.7 | 0.0 | H25-H28:Disorders of lens   | 1.7 | 100.0 | H25 Senile cataract  |
| <b>WC36</b> 3,744 | 1.7 | 0.0 | K50-K52:Noninfective enteritis and colitis  | 1.7 | 100.0 | K52 Other non-infective gastro-enteritis and colitis                         |
| <b>WC37</b> 3,689 | 1.7 | 0.0 | N70-N77:Inflammatory diseases of female pelvic organs   | 1.7 | 100.0 | N76 Other inflammation of vagina and vulva                                   |
| <b>WC38</b> 3,646 | 1.7 | 0.0 | J09-J18:Influenza and pneumonia   | 1.7 | 100.0 | J11 Influenza, virus not identified  |
| <b>WC39</b> 3,399 | 1.6 | 0.0 | L00-L08:Infections of the skin and subcutaneous tissue  | 1.6 | 100.0 | L03 Cellulitis   |
| <b>WC40</b> 3,284 | 1.5 | 0.0 | Q38-Q45:Other congenital malformations of the digestive system                                  | 1.5 | 100.0 | Q40 Other congenital malformations of upper alimentary tract                 |
| <b>WC41</b> 3,180 | 1.5 | 0.0 | D60-D64:Aplastic and other anaemias   | 1.5 | 100.0 | D64 Other anaemias   |
| <b>WC42</b> 3,055 | 1.4 | 0.0 | W50-W64:Exposure to animate mechanical forces   | 1.4 | 100.0 | W57 Bitten or stung by non-venomous insect and other non-venomous arthropods |
| <b>WC43</b> 2,926 | 1.3 | 0.0 | Y40-Y59:Drugs, medicaments and biological substances causing adverse effects in therapeutic use | 1.3 | 100.0 | Y52 Agents primarily affecting the cardiovascular system                     |
| <b>WC44</b> 2,884 | 1.3 | 0.0 | B25-B34:Other viral diseases  | 1.3 | 100.0 | B34 Viral infection of unspecified site                                      |
| <b>WC45</b> 2,788 | 1.3 | 0.0 | E20-E35:Disorders of other endocrine glands   | 1.3 | 100.0 | E28 Ovarian dysfunction  |
| <b>WC46</b> 2,765 | 1.3 | 0.0 | S60-S69:Injuries to the wrist and hand  | 1.3 | 100.0 | S61 Open wound of wrist and hand   |

| <b>WC47</b> 2,645 | 1.2  | 0.0 | H55-H59:Other disorders of eye and adnexa                             | 1.2 | 100.0 | H57 Other disorders of eye and adnexa                |
|-------------------|------|-----|---|-----|-------|--|
| <b>WC48</b> 2,612 | 1.2  | 0.0 | M60-M63:Disorders of muscles  | 1.2 | 100.0 | M62 Other disorders of muscle                        |
| <b>WC49</b> 2,600 | 1.2  | 0.0 | H30-H36:Disorders of choroid and retina                               | 1.2 | 100.0 | H35 Other retinal disorders                          |
| <b>WC50</b> 2,584 | 1.2  | 0.0 | D70-D77:Other diseases of blood and blood-forming organs              | 1.2 | 100.0 | D72 Other disorders of white blood cells             |
| <b>WC51</b> 2,508 | 1.2  | 0.0 | T51-T65:Toxic effects of substances chiefly nonmedicinal as to source | 1.2 | 100.0 | T65 Toxic effect of other and unspecified substances |
| <b>WC52</b> 2,309 | 1.1  | 0.0 | I70-I79:Diseases of arteries, arterioles and capillaries              | 1.1 | 100.0 | I73 Other peripheral vascular diseases               |
| <b>WC53</b> 2,241 | 1.03 | 0.0 | I20-I25:Ischaemic heart diseases                                      | 1.0 | 100.0 | I25 Chronic ischaemic heart disease                  |

<sup>\*</sup> Standard error to large

\*\*Approximately unbiased (AU) probability-value

^ Abbreviation of sex, method and number (WC1: Women Cluster 1)