

Malnutrition and Dehydration

Overview of data

The data are for admitted patient episodes of care in Queensland public acute hospitals, where a diagnosis of malnutrition or dehydration was reported and the patient subsequently died in hospital during that episode. The data are restricted to episodes between 1 January 2012 and 31 May 2015.

The tables show the broad ICD10-AM principal diagnosis categories (e.g. neoplasms, diseases of the respiratory system) for these episodes of care. These tables also show whether the malnutrition and/or dehydration were present on admission (i.e. whether or not the patient presented to hospital with those conditions, or the malnutrition and/or dehydration were hospital-acquired).

Malnutrition:

1. There were 3,819 patients admitted into public acute hospitals in Queensland who died in hospital between 1 January 2012 and 31 May 2015 and had a diagnosis of malnutrition (as a principal or secondary diagnosis). Of these patients, 96% (n=3,652) were admitted to hospital with malnutrition present on admission.
2. Of the 3,819 patients who died in hospital, 27 of these (1.0%) reported malnutrition as the **principal** diagnosis. All 27 patients reported malnutrition as being present on admission, i.e. **none of these 27 instances were from hospital-acquired malnutrition.**

Dehydration:

3. There were 3,980 patients admitted into public acute hospitals in Queensland who died in hospital between 1 January 2012 and 31 May 2015 and had a diagnosis of dehydration (as a principal or secondary diagnosis). Of these patients, 79% (n=3,153) were admitted to hospital with dehydration present on admission.
4. Of the 3,980 patients who died in hospital, 55 of these (1.0%) reported dehydration as the **principal** diagnosis. All 55 patients reported dehydration as being present on admission, i.e. **none of these 55 instances were from hospital-acquired dehydration.**

Background

Malnutrition refers to protein-energy malnutrition or under nutrition. It has serious implications for health and recovery from illness and surgery, and impacts on length of hospital stay, convalescence, healthcare costs, readmission rates and mortality.

Queensland Health funded a 2-year project to improve nutrition care practices in all public hospitals through identifying, preventing and managing patients admitted as malnourished and those at risk of becoming malnourished. As a result, Queensland Health has developed prevention resources to assist front line clinicians. The project also developed online education for the Queensland Health workforce which are continually updated.

Admitted Patient Episodes of Care for Diagnosis of Malnutrition or Dehydration for Patients who Died in Hospital by Principal Diagnosis, Public Acute Hospitals, Queensland, January 2012 to June 2015 by Financial Years.

Notes:

1. p. Preliminary data, subject to change
2. Excludes unqualified newborns, posthumous organ procurements and boarders
3. Principal or other diagnosis (ICD10AM) exists for:
Malnutrition - E40-E46
Dehydration - E86
5. Discharge status of '05' = 'Died in hospital'
6. The data show admitted patients who died in hospital where malnutrition and/or dehydration were reported in their medical record but the principal diagnosis was a major condition such as cancer (neoplasms), disease of the respiratory system, or disease of the circulatory system. Can not draw any conclusion that these patients died of malnutrition or dehydration.

Source: Queensland Hospital Admitted Patient Data Collection (QHAPDC), Health Statistics Unit, Department of Health

Prepared by: Statistical Reporting and Coordination, Health Statistics Unit, Department of Health

Date: 26 August 2015

| Diagnosis | Principal Diagnosis (ICD10AM) | 2012 | | | | 2013 | | | | 2014 | | | | 2015 (Jan-Jun) | | | | |
|---|---|---|-------------|---------|-------|---------|-------------|---------|-------|---------|-------------|---------|-------|----------------|-------------|---------|-------|-----|
| | | Present | Not Present | Unknown | Total | Present | Not Present | Unknown | Total | Present | Not Present | Unknown | Total | Present | Not Present | Unknown | Total | |
| Dehydration | Chapter 1 - Certain infectious and parasitic diseases (A00-B99) | 99 | 10 | - | 109 | 105 | 9 | - | 114 | 80 | 17 | 1 | 98 | 62 | 8 | - | 70 | |
| | Chapter 2 - Neoplasms (C00-D48) | 221 | 45 | 1 | 267 | 189 | 38 | 2 | 229 | 195 | 37 | - | 232 | 97 | 24 | - | 121 | |
| | Chapter 3 - Dis. of blood & blood-forming organs & certain disord. invol immune mechanism (D50-D89) | 6 | 1 | - | 7 | 5 | 3 | - | 8 | 6 | - | - | 6 | 1 | 4 | - | 5 | |
| | Chapter 4 - Endocrine, nutritional & metabolic diseases (E00-E89) | 34 | 2 | - | 36 | 43 | 4 | - | 47 | 30 | 6 | 1 | 37 | 15 | 2 | - | 17 | |
| | Chapter 5 - Mental, behavioural disorders (F00-F99) | 12 | 4 | - | 16 | 17 | 5 | - | 22 | 15 | 7 | - | 22 | 10 | 1 | - | 11 | |
| | Chapter 6 - Diseases of the nervous system (G00-G99) | 16 | 2 | - | 18 | 13 | 6 | - | 19 | 7 | 5 | - | 12 | 5 | 2 | - | 7 | |
| | Chapter 8 - Diseases of the ear and mastoid process (H60-H95) | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - | - | - | - | |
| | Chapter 9 - Diseases of the circulatory system (I00-I99) | 103 | 28 | 1 | 132 | 112 | 36 | 2 | 150 | 99 | 42 | - | 141 | 53 | 14 | - | 67 | |
| | Chapter 10 - Diseases of the respiratory system (J00-J99) | 161 | 27 | - | 188 | 163 | 28 | 1 | 192 | 136 | 40 | 1 | 177 | 85 | 10 | - | 95 | |
| | Chapter 11 - Diseases of the digestive system (K00-K93) | 88 | 27 | 2 | 117 | 103 | 32 | 1 | 136 | 112 | 39 | - | 151 | 52 | 12 | - | 64 | |
| | Chapter 12 - Diseases of the skin and subcutaneous tissue (L00-L99) | 7 | 2 | - | 9 | 8 | 2 | 1 | 11 | 11 | 4 | - | 15 | 3 | 1 | - | 4 | |
| | Chapter 13 - Diseases of the musculoskeletal system & connective tissue (M00-M99) | 9 | 11 | - | 20 | 8 | 6 | - | 14 | 10 | 6 | - | 16 | 6 | - | - | 6 | |
| | Chapter 14 - Diseases of the genitourinary system (N00-N99) | 104 | 10 | - | 114 | 117 | 7 | - | 124 | 76 | 8 | 1 | 85 | 36 | 4 | - | 40 | |
| | Chapter 15 - Pregnancy, childbirth and the puerperium (O00-O99) | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | |
| | Chapter 16 - Certain conditions originating in the perinatal period (P00-P96) | 1 | 1 | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Chapter 17 - Congen. malformations, deformations & chromosomal abnorm. (Q00-Q99) | 1 | - | - | 1 | - | 2 | - | 2 | - | - | - | - | - | - | - | - | |
| | Chapter 18 - Symptoms, signs & abnormal clinical & lab findings, nec (R00-R99) | 18 | 7 | - | 25 | 24 | 7 | - | 31 | 23 | 2 | - | 25 | 16 | - | - | 16 | |
| | Chapter 19 - Injury, poisoning & certain other consequences of ext causes (S00-T98) | 50 | 30 | - | 80 | 37 | 39 | 2 | 78 | 46 | 37 | 2 | 85 | 22 | 24 | - | 46 | |
| | Chapter 21 - Factors influenc. health status & contact w. health services (Z00-Z99) | 17 | 18 | - | 35 | 7 | 8 | - | 15 | 19 | 10 | - | 29 | 3 | 5 | - | 8 | |
| | Dehydration total | | 947 | 225 | 4 | 1,176 | 951 | 232 | 9 | 1,192 | 865 | 261 | 6 | 1,132 | 466 | 112 | - | 578 |
| | Malnutrition | Chapter 1 - Certain infectious and parasitic diseases (A00-B99) | 51 | 3 | 2 | 56 | 45 | 1 | - | 46 | 65 | - | - | 65 | 38 | 3 | - | 41 |
| Chapter 2 - Neoplasms (C00-D48) | | 290 | 4 | 3 | 297 | 306 | 7 | 2 | 315 | 360 | 9 | - | 369 | 180 | 3 | - | 182 | |
| Chapter 3 - Dis. of blood & blood-forming organs & certain disord. invol immune mechanism (D50-D89) | | 6 | 1 | 1 | 8 | 3 | 1 | - | 4 | 10 | 1 | - | 11 | 2 | - | - | 2 | |
| Chapter 4 - Endocrine, nutritional & metabolic diseases (E00-E89) | | 16 | 1 | - | 17 | 38 | 1 | - | 39 | 23 | 1 | - | 24 | 10 | - | - | 10 | |
| Chapter 5 - Mental, behavioural disorders (F00-F99) | | 12 | - | - | 12 | 9 | - | 1 | 10 | 35 | 1 | - | 36 | 7 | - | - | 7 | |
| Chapter 6 - Diseases of the nervous system (G00-G99) | | 15 | - | - | 15 | 16 | - | - | 16 | 30 | - | - | 30 | 8 | - | - | 8 | |
| Chapter 9 - Diseases of the circulatory system (I00-I99) | | 121 | 3 | 2 | 126 | 118 | 6 | 1 | 125 | 117 | 13 | - | 130 | 59 | 1 | - | 60 | |
| Chapter 10 - Diseases of the respiratory system (J00-J99) | | 211 | 6 | 1 | 218 | 178 | 5 | 1 | 184 | 225 | 11 | 1 | 237 | 114 | 1 | - | 115 | |
| Chapter 11 - Diseases of the digestive system (K00-K93) | | 87 | 5 | 2 | 94 | 102 | 3 | - | 105 | 107 | 7 | 1 | 115 | 58 | 4 | - | 62 | |
| Chapter 12 - Diseases of the skin and subcutaneous tissue (L00-L99) | | 3 | - | - | 3 | 6 | 1 | - | 7 | 3 | 3 | - | 6 | 5 | - | - | 5 | |
| Chapter 13 - Diseases of the musculoskeletal system & connective tissue (M00-M99) | | 9 | 1 | 1 | 11 | 11 | 3 | - | 14 | 17 | - | - | 17 | 11 | - | - | 11 | |
| Chapter 14 - Diseases of the genitourinary system (N00-N99) | | 42 | 2 | 1 | 45 | 44 | 3 | 1 | 48 | 40 | 4 | - | 44 | 25 | - | - | 25 | |
| Chapter 16 - Certain conditions originating in the perinatal period (P00-P96) | | 1 | 1 | - | 2 | - | - | - | - | - | - | - | - | 1 | - | - | 1 | |
| Chapter 17 - Congen. malformations, deformations & chromosomal abnorm. (Q00-Q99) | | - | - | - | - | 1 | 1 | - | 2 | - | 1 | - | 1 | 2 | 1 | - | 3 | |
| Chapter 18 - Symptoms, signs & abnormal clinical & lab findings, nec (R00-R99) | | 12 | - | - | 12 | 27 | - | - | 27 | 21 | 1 | - | 22 | 14 | 1 | - | 15 | |
| Chapter 19 - Injury, poisoning & certain other consequences of ext causes (S00-T98) | | 51 | 5 | - | 56 | 58 | 5 | 2 | 64 | 74 | 5 | - | 79 | 34 | 1 | - | 35 | |
| Chapter 21 - Factors influenc. health status & contact w. health services (Z00-Z99) | | 52 | 2 | - | 54 | 48 | 3 | - | 51 | 52 | - | - | 52 | 25 | 2 | - | 27 | |
| Malnutrition total | | | 979 | 34 | 13 | 1,026 | 1,010 | 40 | 8 | 1,057 | 1,179 | 57 | 2 | 1,238 | 593 | 17 | - | 609 |

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Admitted Patient Episodes of Care for Selected Principal Diagnoses, for Patients who Died in Hospital, Public Acute Hospitals, Queensland, January 2012 to June 2015 by calendar years.

| Principal Diagnosis (ICD10AM) | Condition Present on Admission | Agegroup | 2012 | | 2013 | | 2014 | | 2015 (Jan-June) | |
|-------------------------------|--------------------------------|-------------|-----------|--|-----------|--|-----------|--|-----------------|--|
| | | | No. | % of Total patients who died in hospital | No. | % of Total patients who died in hospital | No. | % of Total patients who died in hospital | No. | % of Total patients who died in hospital |
| Malnutrition (E40-E46) | Present | <65 | 1 | 0.01 | 1 | 0.01 | - | - | 1 | 0.02 |
| | | 65 and over | 6 | 0.06 | 10 | 0.10 | 5 | 0.05 | 4 | 0.07 |
| | Present Total | | 7 | 0.07 | 11 | 0.11 | 5 | 0.05 | 5 | 0.09 |
| | Not present | | - | - | - | - | - | - | - | - |
| | Total | | 7 | 0.07 | 11 | 0.11 | 5 | 0.05 | 5 | 0.09 |
| Dehydration (E86) | Present | <65 | 1 | 0.01 | 2 | 0.02 | 1 | 0.01 | - | - |
| | | 65 and over | 16 | 0.15 | 18 | 0.17 | 16 | 0.15 | 1 | 0.02 |
| | Present Total | | 17 | 0.16 | 20 | 0.19 | 17 | 0.16 | 1 | 0.02 |
| | Not present | | - | - | - | - | - | - | - | - |
| | Total | | 17 | 0.16 | 20 | 0.19 | 17 | 0.16 | 1 | 0.02 |

Notes:

p. Preliminary data, subject to change

Excludes unqualified newborns, posthumous organ procurements and boarders

Source: Queensland Hospital Admitted Patient Data Collection (QHAPDC), Health Statistics Branch, Department of Health

Prepared by: Statistical Reporting and Coordination, Health Statistics Branch, Department of Health

Date: 26 August 2015

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