

**COUNTING THE NUMBER OF  
DIAGNOSIS-SPECIFIC ADMISSIONS –  
FULL REPORT**

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**National Centre for Health Outcomes Development**

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**UNIT OF HEALTH-CARE EPIDEMIOLOGY**

**UNIVERSITY OF OXFORD**

**REPORT MR9**



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<b>Emergency admissions:</b>	
Fractured neck of femur	6
Stroke	8
Acute myocardial infarction	10
Asthma	12
Diabetes	14
<b>Elective admissions:</b>	
Fractured neck of femur	16
Stroke	18
Acute myocardial infarction	20
Asthma	22
Diabetes	24

## AIM AND SUMMARY OF RECOMMENDATIONS

### **Aim**

The aim of the study was to advise on the specification of indicators for condition-specific admissions when there are continuous in-patient spells (CIPS) with multiple finished consultant episodes (FCE). Five diagnoses were used as exemplars:

- acute myocardial infarction (AMI)
- asthma
- diabetes mellitus
- fractured neck of femur
- stroke.

### **Data**

Analyses were done on the new national linked file for the years 1998/1999 and 1999/2000.

### **Recommendations**

#### *Continuous in-patient spell*

The basic unit of analysis for counting the number of condition-specific admissions should be the CIPS as it:

- is a more clinically relevant measure than FCEs
- obviates having to handle transfers between FCEs in an analysis.

The majority of CIPS for all the diagnoses studied had one FCE (see Table 2) and this varied by diagnosis from 62% of emergency admissions for stroke to 99% of elective admissions for asthma.

#### *Emergency and elective admissions*

Emergency and elective admissions should be analysed separately. Table 1 shows the proportions of elective and emergency admissions that occurred for the five diagnoses when the diagnosis was present anywhere on the record.

**Table 1: Proportions of emergency and elective admissions**

Diagnosis	Total CIPS	Emergency CIPS	Elective CIPS
	No	No (%)	No (%)
Femur	105,614	102,820 (97)	2,794 (3)
AMI	178,259	173,197 (97)	5,062 (3)
Stroke	195,063	183,996 (94)	11,067 (6)
Asthma	564,775	358,019 (63)	206,756 (37)
Diabetes	741,627	439,846 (59)	301,781 (41)

Table 2 shows the major differences between the emergency and elective admissions, for the five diagnoses occurring anywhere on the record, with respect to the proportion of CIPS with:

- only one FCE
- at least one FCE in the CIPS with the diagnosis recorded as the main one.

**Table 2: Differences between emergency and elective admissions**

Diagnosis	% with one FCE		% with diagnosis as main	
	Emergency	Elective	Emergency	Elective
Femur	76	86	97	68
Stroke	62	88	86	54
AMI	70	76	89	43
Asthma	83	99	37	2
Diabetes	71	98	14	21

*Diagnosis anywhere on the record or ‘main diagnosis’*

In analyses of condition-specific admissions a decision has to be made about including:

- All admissions with the diagnosis coded anywhere on the record (regardless of which FCE or position in the FCE).
- Only admissions in which the diagnosis is coded as the main diagnosis on:
  - last or only FCE in the CIPS ( standard practice)
  - first or only FCE in the CIPS.

Table 3 shows the proportion of CIPS for each group of admissions that had the diagnosis recorded as the main one in:

- FCE other than the first or last
- first (or only) FCE
- last (or only) FCE.

**Table 3: CIPS with a main diagnosis in a particular FCE expressed as a proportion of all CIPS with at least one FCE with the diagnosis as the main one**

<b>Main diagnosis</b>	<b>Femur</b>	<b>Stroke</b>	<b>AMI</b>	<b>Asthma</b>	<b>Diabetes</b>
<b>Emergency admissions</b>					
% not in first or last FCE	1	0.4	0.2	<0.1	0.6
% in first FCE	97	94	96	99	96
% in last FCE	89	94	98	99	97
<b>Elective admissions</b>					
% not in first or last FCE	5	0.7	6	0.1	0.1
% in first FCE	87	91	72	99	99.6
% in last FCE	92	98	93	99	99.7

It is rare for a diagnosis to be only recorded as the main one in a FCE that is not the first or last in a CIPS. As Table 3 shows, the range is from <0.1% of emergency admissions for asthma to 6% of elective admissions for AMI.

Using the standard practice, of defining the main diagnosis in a CIPS as the main one in the last FCE, identifies the great majority of the CIPS that have at least one FCE with the diagnosis recorded as the main one. As Table 3 shows, the range is from 89% of emergency admissions for fractured neck of femur to 99.6% of elective admissions for diabetes.

If the main diagnosis for a CIPS was to be defined as the main one in the first FCE, the great majority of CIPS that have at least one FCE with the diagnosis recorded as the main one would be identified. As Table 3 shows, the range is from 72% of elective admissions for AMI to 99.6% of elective admissions for diabetes.

If the main diagnosis of the last FCE is used instead of that from the first FCE:

- Admissions for which there was little difference were:
  - stroke emergency
  - asthma emergency
  - asthma elective
  - diabetes elective.
- Admissions that had fewer CIPS included were:
  - fractured neck of femur emergency.
- Conditions that had more CIPS included were:
  - AMI emergency
  - diabetes emergency
  - fractured neck of femur elective
  - stroke elective
  - AMI elective.

From this analysis it is clear that the specification of condition-specific denominators will depend on the clinical condition and the purpose for which the analysis is to be used and no hard and fast rules can be laid down. Before specifying an indicator, it is essential that the analyses done in this study are carried out so that the requisite information to make the decision is available.

## **FRACTURED NECK OF FEMUR: EMERGENCY ADMISSIONS**

### **Basic facts**

Only patients aged over 65 were included. The diagnostic codes included in this analysis were:

- S72.0
- S72.1
- S72.2
- S72.9.

The key totals in the analysis were:

- 102,820 continuous in-patient spells (CIPS)
- 122,222 recordings of a relevant diagnostic code.

### **CIPS: Number of FCEs**

There were 102,820 CIPS of which:

- 78,626 (76%) contained one FCE
- 18,445 (18%) contained two FCEs
- 3,773 (4%) contained three FCEs
- 1,976 (2%) contained four or more FCEs.

### **CIPS: Main diagnosis**

In the 102,820 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 99,380 (97%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis is attributed to the first FCE, then 96,796 CIPS contained a first or only FCE with the diagnosis as follows:

- 76,196 in single FCE CIPS
- 10,422 in first but not last FCE when multiple FCEs in a CIPS
- 10,178 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis is attributed to the last FCE then 88,061 CIPS contained a last or only FCE with the diagnosis as follows:

- 76,196 in single FCE CIPS
- 1,687 in last but not first FCE when multiple FCEs in a CIPS
- 10,178 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 99,380 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 897 (1%) were recorded neither in the first or last FCE.
- 96,796 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 97% of CIPS in which a FCE has the diagnosis as the main one.
- 88,061 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 89% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 18,445 CIPS containing two FCEs:
  - 7,824 (42%) code in one FCE
  - 10,621 (58%) code in both FCEs.
- 3,773 CIPS containing three FCEs:
  - 932 (25%) coded in one FCE
  - 1,198 (32%) coded in two FCEs
  - 1643 (43%) coded in all three FCEs.

### **CIPS: Other main diagnoses**

When fractured femur was not coded as the main diagnosis in at least one FCE, the diagnoses that were coded as the main diagnosis on the last or only FCE in a CIPS (on more than 200 occasions) were:

- Z50. 957
- J18. 546
- I50. 347.
- I64. 338
- J44. 219

## **STROKE: EMERGENCY ADMISSIONS**

### **Basic facts**

The diagnostic codes included in this analysis were:

- I61
- I62
- I63
- I64.

The key totals in the analysis were:

- 183,996 continuous in-patient spells (CIPS)
- 255,531 recordings of a relevant diagnostic code.

### **CIPS: Number of FCEs**

There were 183,996 CIPS of which:

- 114,635 (62%) contained one FCE
- 51,588 (28%) contained two FCEs
- 12,605 (7%) contained three FCEs
- 5,168 (3%) contained four or more FCEs.

### **CIPS: Main diagnosis**

In the 183,996 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 157,830 (86%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis is attributed to the first FCE, then 148,263 CIPS contained a first or only FCE with the diagnosis as follows:

- 96,747 in single FCE CIPS
- 9,405 in first but not last FCE when multiple FCEs in a CIPS
- 42,111 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis is attributed to the last FCE then 147,818 CIPS contained a last or only FCE with the diagnosis as follows:

- 96,747 in single FCE CIPS
- 8,960 in last but not first FCE when multiple FCEs in a CIPS
- 42,111 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 157,830 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 607 (0.4%) were recorded neither in the first or last FCE.
- 148,263 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 94% of CIPS in which a FCE has the diagnosis as the main one.
- 147,818 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 94% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 51,588 CIPS containing two FCEs:
  - 13,064 (25%) code in one FCE
  - 38,524 (75%) code in both FCEs.
- 12,605 CIPS containing three FCEs:
  - 2,332 (19%) coded in one FCE
  - 2,548 (20%) coded in two FCEs
  - 7,725 (61%) coded in all three FCEs.

### **CIPS: Other main diagnoses**

When stroke was not coded as the main diagnosis in at least one FCE, the diagnoses that were coded as the main diagnosis on the last or only FCE in a CIPS (on more than 1,000 occasions) were:

- J18. 4,464
- I21. 2,024
- Z50.1,872
- S72.1,557
- I50. 1,458
- J22. 1,125.

## ACUTE MYOCARDIAL INFARCTION: EMERGENCY ADMISSIONS

### Basic facts

The diagnostic codes included in this analysis were:

- I21
- I22.

The key totals in the analysis were:

- 173,197 continuous in-patient spells (CIPS)
- 229,547 recordings of a relevant diagnostic code.

### CIPS: Number of FCEs

There were 173,197 CIPS of which:

- 119,358 (70%) contained one FCE
- 44,050 (25%) contained two FCEs
- 7,366 (4%) contained three FCEs
- 2,423 (1%) contained four or more FCEs.

### CIPS: Main diagnosis

In the 173,197 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 154,435 (89%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis is attributed to the first FCE, then 147,620 CIPS contained a first or only FCE with the diagnosis as follows:

- 106,554 in single FCE CIPS
- 2,601 in first but not last FCE when multiple FCEs in a CIPS
- 38,465 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis is attributed to the last FCE then 151,462 CIPS contained a last or only FCE with the diagnosis as follows:

- 106,554 in single FCE CIPS
- 6,443 in last but not first FCE when multiple FCEs in a CIPS
- 38,465 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 154,435 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 382 (0.2%) were recorded neither in the first or last FCE.
- 147,620 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 96% of CIPS in which a FCE has the diagnosis as the main one.
- 151,462 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 98% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 44,050 CIPS containing two FCEs:
  - 7,292 (17%) code in one FCE
  - 36,758 (83%) code in both FCEs.
- 7,366 CIPS containing three FCEs:
  - 1,012 (14%) coded in one FCE
  - 1,121 (15%) coded in two FCEs
  - 5,233 (71%) coded in all three FCEs.

### **CIPS: Other main diagnoses**

When acute myocardial infarction was not coded as the main diagnosis in at least one FCE, the diagnoses that were coded as the main diagnosis on the last or only FCE in a CIPS (on more than 1,000 occasions) were:

- I50. 4,163
- I20. 1,906
- I25. 1,671
- J18. 1,179
- S72. 1,084
- I64. 1,076.

## **ASTHMA: EMERGENCY ADMISSIONS**

### **Basic facts**

The diagnostic codes included in this analysis were:

- J45
- J46.

The key totals in the analysis were:

- 358,019 continuous in-patient spells (CIPS)
- 422,758 recordings of a relevant diagnostic code.

### **CIPS: Number of FCEs**

There were 358,019 CIPS of which:

- 297,025 (83%) contained one FCE
- 51,570 (14%) contained two FCEs
- 7,100 (2%) contained three FCEs
- 2,319 (1%) contained four or more FCEs.

### **CIPS: Main diagnosis**

In the 358,019 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 133,046 (37%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis is attributed to the first FCE, then 131,800 CIPS contained a first or only FCE with the diagnosis as follows:

- 114,709 in single FCE CIPS
- 951 in first but not last FCE when multiple FCEs in a CIPS
- 16,140 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis is attributed to the last FCE then 132,058 CIPS contained a last or only FCE with the diagnosis as follows:

- 114,709 in single FCE CIPS
- 1,209 in last but not first FCE when multiple FCEs in a CIPS
- 16,140 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 133,046 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 37 were recorded neither in the first or last FCE.
- 131,800 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 99% of CIPS in which a FCE has the diagnosis as the main one.
- 132,058 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 99% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 51,570 CIPS containing two FCEs:
  - 6,482 (13%) code in one FCE
  - 45,088 (87%) code in both FCEs.
- 7,100 CIPS containing three FCEs:
  - 759 (11%) coded in one FCE
  - 1,028 (14%) coded in two FCEs
  - 5,313 (75%) coded in all three FCEs.

### **CIPS: Other main diagnoses**

When asthma was not coded as the main diagnosis in at least one FCE, the diagnoses that were coded as the main diagnosis on the last or only FCE in a CIPS (on more than 5,000 occasions) were:

- J22. 21,365
- R07.13,785
- R10. 12,762
- I20. 10,557
- J18. 9,047
- J44. 8,574
- J06. 7,391
- I50. 6,018

## **DIABETES: EMERGENCY ADMISSIONS**

### **Basic facts**

The diagnostic codes included in this analysis were:

- E10
- E11
- E12
- E13
- E14.

The key totals in the analysis were:

- 439,846 continuous in-patient spells (CIPS)
- 311,989 recordings of a relevant diagnostic code.

### **CIPS: Number of FCEs**

There were 439,846 CIPS of which:

- 311,989 (71%) contained one FCE
- 101,357 (23%) contained two FCEs
- 18,771 (4%) contained three FCEs
- 7,729 (2%) contained four or more FCEs.

### **CIPS: Main diagnosis**

In the 439,486 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 61,993 (14%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis is attributed to the first FCE, then 59,512 CIPS contained a first or only FCE with the diagnosis as follows:

- 44,784 in single FCE CIPS
- 1,699 in first but not last FCE when multiple FCEs in a CIPS
- 13,029 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis is attributed to the last FCE then 59,943 CIPS contained a last or only FCE with the diagnosis as follows:

- 44,784 in single FCE CIPS
- 2,130 in last but not first FCE when multiple FCEs in a CIPS
- 13,029 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 61,993 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 351 (0.6%) were recorded neither in the first or last FCE.
- 59,512 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 96% of CIPS in which a FCE has the diagnosis as the main one.
- 59,943 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 97% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 101,357 CIPS containing two FCEs:
  - 13,188 (13%) code in one FCE
  - 88,169 (87%) code in both FCEs.
- 18,771 CIPS containing three FCEs:
  - 1,829 (10%) coded in one FCE
  - 3,092 (16%) coded in two FCEs
  - 13,850 (74%) coded in all three FCEs.

### **CIPS: Other main diagnoses**

When diabetes was not coded as the main diagnosis in at least one FCE, the diagnoses that were coded as the main diagnosis on the last or only FCE in a CIPS (on more than 10,000 occasions) were:

- I50. 34,857
- I20. 30,936
- I21. 21,196
- R07. 19,085
- J44. 16,134
- J22. 15,497
- I64. 13,074
- J18. 13,027
- N39. 12,931.

## **FRACTURED NECK OF FEMUR: ELECTIVE ADMISSIONS**

### **Basic facts**

Only patients aged over 65 were included. The diagnostic codes included in this analysis were:

- S72.0
- S72.1
- S72.2
- S72.9.

The key totals in the analysis were:

- 2,794 continuous in-patient spells (CIPS)
- 3,101 recordings of a relevant diagnostic code.

### **CIPS: Number of FCEs**

There were 2,794 CIPS of which:

- 2,406 (86%) contained one FCE
- 212 (8%) contained two FCEs
- 113 (4%) contained three FCEs
- 63 (2%) contained four or more FCEs.

### **CIPS: Main diagnosis**

In the 2,794 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 1,899 (68%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis was attributed to the first FCE, then 1,660 CIPS contained a first or only FCE with the diagnosis as follows:

- 1,556 in single FCE CIPS
- 52 in first but not last FCE when multiple FCEs in a CIPS
- 52 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis was attributed to the last FCE then 1,742 CIPS contained a last or only FCE with the diagnosis as follows:

- 1,556 in single FCE CIPS
- 134 in last but not first FCE when multiple FCEs in a CIPS
- 52 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 1,899 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 105 (5%) were recorded neither in the first or last FCE.
- 1,660 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 87% of CIPS in which a FCE has the diagnosis as the main one.
- 1,742 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 92% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 212 CIPS containing two FCEs:
  - 103 (49%) code in one FCE
  - 109 (51%) code in both FCEs.
- 113 CIPS containing three FCEs:
  - 46 (41%) coded in one FCE
  - 35 (31%) coded in two FCEs
  - 32 (28%) coded in all three FCEs.

### **CIPS: Other main diagnoses**

When fractured neck of femur was not coded as the main diagnosis in at least one FCE, the diagnosis that was coded as the main diagnosis on the last or only FCE in a CIPS (on more than 100 occasions) was:

- Z50.327

## STROKE: ELECTIVE ADMISSIONS

### Basic facts

The diagnostic codes included in this analysis were:

- I61
- I62
- I63
- I64.

The key totals in the analysis were:

- 11,067 continuous in-patient spells (CIPS)
- 12,339 recordings of a relevant diagnostic code.

### CIPS: Number of FCEs

There were 11,067 CIPS of which:

- 9,725 (88%) contained one FCE
- 872 (8%) contained two FCEs
- 298 (3%) contained three FCEs
- 172 (1%) contained four or more FCEs.

### CIPS: Main diagnosis

In the 11,067 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 5,929 (54%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis was attributed to the first FCE, then 5,425 CIPS contained a first or only FCE with the diagnosis as follows:

- 5,099 in single FCE CIPS
- 65 in first but not last FCE when multiple FCEs in a CIPS
- 261 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis was attributed to the last FCE then 5,826 CIPS contained a last or only FCE with the diagnosis as follows:

- 5,099 in single FCE CIPS
- 466 in last but not first FCE when multiple FCEs in a CIPS
- 261 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 5,929 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 38 (0.7%) were recorded neither in the first or last FCE.
- 5,425 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 91% of CIPS in which a FCE has the diagnosis as the main one.
- 5,826 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 98% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 872 CIPS containing two FCEs:
  - 381 (4%) code in one FCE
  - 491 (56%) code in both FCEs.
- 298 CIPS containing three FCEs:
  - 89 (30%) coded in one FCE
  - 85 (29%) coded in two FCEs
  - 124 (41%) coded in all three FCEs.

### **CIPS: Other main diagnoses**

When stroke was not coded as the main diagnosis in at least one FCE, the diagnoses that were coded as the main diagnosis on the last or only FCE in a CIPS (on more than 300 occasions) were:

- Z75. 614
- Z50. 465
- I25. 310.

## ACUTE MYOCARDIAL INFARCTION: ELECTIVE ADMISSIONS

### Basic facts

The diagnostic codes included in this analysis were:

- I21
- I22.

The key totals in the analysis were:

- 5,062 continuous in-patient spells (CIPS)
- 6,131 recordings of a relevant diagnostic code.

### CIPS: Number of FCEs

There were 5,062 CIPS of which:

- 3,858 (76%) contained one FCE
- 734 (15%) contained two FCEs
- 315 (6%) contained three FCEs
- 155 (3%) contained four or more FCEs.

### CIPS: Main diagnosis

In the 5,062 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 2,186 (43%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis was attributed to the first FCE, then 1,582 CIPS contained a first or only FCE with the diagnosis as follows:

- 1,444 in single FCE CIPS
- 20 in first but not last FCE when multiple FCEs in a CIPS
- 118 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis was attributed to the last FCE then 2,034 CIPS contained a last or only FCE with the diagnosis as follows:

- 1,444 in single FCE CIPS
- 472 in last but not first FCE when multiple FCEs in a CIPS
- 118 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 2,186 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 132 (6%) were recorded neither in the first or last FCE.
- 1,582 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 72% of CIPS in which a FCE has the diagnosis as the main one.
- 2,034 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 93% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 734 CIPS containing two FCEs:
  - 335 (46%) code in one FCE
  - 399 (54%) code in both FCEs.
- 315 CIPS containing three FCEs:
  - 80 (25%) coded in one FCE
  - 103 (33%) coded in two FCEs
  - 132 (42%) coded in all three FCEs.

### **CIPS: Other main diagnoses**

When acute myocardial infarction was not coded as the main diagnosis in at least one FCE, the diagnosis that was coded as the main diagnosis on the last or only FCE in a CIPS (on more than 200 occasions) were:

- I25. 662.

## ASTHMA: ELECTIVE ADMISSIONS

### Basic facts

The diagnostic codes included in this analysis were:

- J45 and J46

The key totals in the analysis were:

- 206,756 continuous in-patient spells (CIPS)
- 209,427 recordings of a relevant diagnostic code.

### CIPS: Number of FCEs

There were 206,756 CIPS of which:

- 204,692 (99%) contained one FCE
- 2,064 (1%) contained two or more FCEs.

### CIPS: Main diagnosis

In the 206,756 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 3,836 (2%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis was attributed to the first FCE, then 3,787 CIPS contained a first or only FCE with the diagnosis as follows:

- 3,730 in single FCE CIPS
- 10 in first but not last FCE when multiple FCEs in a CIPS
- 47 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis was attributed to the last FCE then 3,821 CIPS contained a last or only FCE with the diagnosis as follows:

- 3,730 in single FCE CIPS
- 44 in last but not first FCE when multiple FCEs in a CIPS
- 47 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 3,836 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 5 (0.1%) were recorded neither in the first or last FCE.
- 3,781 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 99% of CIPS in which a FCE has the diagnosis as the main one.
- 3,821 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 99% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 1,074 CIPS containing two FCEs:
  - 269 (25%) code in one FCE
  - 805 (75%) code in both FCEs.

### **CIPS: Other main diagnoses**

When asthma was not coded as the main diagnosis in at least one FCE (in 98% of cases), the diagnoses that were coded as the main diagnosis on the last or only FCE in a CIPS were numerous.

## **DIABETES: ELECTIVE ADMISSIONS**

### **Basic facts**

The diagnostic codes included in this analysis were:

- E10
- E11
- E12
- E13
- E14.

The key totals in the analysis were:

- 301,781 continuous in-patient spells (CIPS)
- 319,057 recordings of a relevant diagnostic code.

### **CIPS: Number of FCES**

There were 301,781 CIPS of which:

- 295,475 (98%) contained one FCE
- 6,306 (2%) contained two or more FCEs.

### **CIPS: Main diagnosis**

In the 301,781 CIPS, the diagnosis was recorded as the main diagnosis in at least one FCE in 62,189 (21%). When analysing data based on CIPS there are two possible definitions of main diagnosis, namely:

- first diagnosis in first or only FCE
- first diagnosis in last or only FCE.

If main diagnosis was attributed to the first FCE, then 61,951 CIPS contained a first or only FCE with the diagnosis as follows:

- 61,473 in single FCE CIPS
- 141 in first but not last FCE when multiple FCEs in a CIPS
- 337 in both first and last FCEs when multiple FCEs in a CIPS.

If main diagnosis was attributed to the last FCE then 61,990 CIPS contained a last or only FCE with the diagnosis as follows:

- 61,473 in single FCE CIPS
- 180 in last but not first FCE when multiple FCEs in a CIPS
- 337 in both first and last FCEs when multiple FCEs in a CIPS.

In summary there were:

- 62,189 CIPS in which the diagnosis is recorded as the main one in any FCE, of which 58 (0.1%) were recorded neither in the first or last FCE.
- 61,951 CIPS in which the diagnosis is recorded as the main one in the first FCE, representing 99.6% of CIPS in which a FCE has the diagnosis as the main one.
- 61,990 CIPS in which the diagnosis is recorded as the main one in the last FCE, representing 99.7% of CIPS in which a FCE has the diagnosis as the main one.

### **CIPS: Number of FCEs with code anywhere on the record in CIPS**

The numbers of FCEs, containing the diagnostic codes, in CIPS with two or three FCEs were:

- 3,212 CIPS containing two FCEs:
  - 673 (21%) code in one FCE
  - 2,539 (79%) code in both FCEs.
- 2,476 CIPS containing three FCEs:
  - 214 (9%) coded in one FCE
  - 453 (18%) coded in two FCEs
  - 1,809 (73%) coded in all three FCEs.

### **CIPS: Other main diagnoses**

When diabetes was not coded as the main diagnosis in at least one FCE, the diagnoses that were coded as the main diagnosis on the last or only FCE in a CIPS (on more than 5,000 occasions) were:

- H26. 19,036
- I25. 13,765
- H25. 8,890
- C67. 5,112.

