## Bureau of Health Information

# Emergency Departments

## Hospital Quarterly:
Performance of
NSW public hospitals

### April to June 2011

More than half a million patients attended public hospital emergency departments (EDs) during April to June 2011, 3% more than during the same quarter last year but only 2% more than two years ago at the start of the swine flu epidemic.

Compared with the same quarter last year, ambulance arrivals have increased by 4%, reflecting the general increase in ED attendances. Emergency admissions increased by 7,509 cases (+7%) since the same quarter last year and by 10,007 since two years ago (+9%).

The Bureau has not reported any ED performance measures in this report while it identifies new ways to report on patients' journeys through the ED.

Initial analysis by the Bureau suggests there may be differences across hospitals in the way ED information is recorded. These differences could make it difficult to compare hospitals.

As a result, the Bureau has made a decision not to report on ED performance in the September issue of *Hospital Quarterly*. We are conducting a more extensive analysis to understand these differences and improve the way we report performance information to support fairer hospital comparisons.

The Bureau expects to complete this analysis and revise how we report on ED performance in time for the December issue of our *Hospital Quarterly* report.

The next issue of *Hospital Quarterly* will include performance measures from April to June 2011 and July to September 2011 quarters to ensure the availability of time series information.

This is one of three *Hospital Quarterly* modules. For the Elective Surgery and Admitted Patients modules visit www.bhi.nsw.gov.au

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| From April to June 2011 ... | Same period last year ... | The difference ... |
|---|---|---|
| There were **512,592** visits to NSW emergency departments | **496,182** visits | **16,410** (+3%) |
| **127,486** people travelled to the emergency department by ambulance | **122,200** people | **5,286** (+4%) |
| There were **119,507** admissions to hospital from emergency departments | **111,998** admissions | **7,509** (+7%) |

# Emergency department journeys

When a person needs care in a public hospital emergency department (ED) they begin what is called a 'patient journey'. These journeys can involve many different pathways, but most follow a similar pattern, regardless of whether or not the patient arrives in an ambulance.

Upon arrival, patients are triaged (typically by a registered nurse) and allocated to one of five categories depending on how urgently they require care. Each triage category has a maximum recommended time in which the patient should wait to be seen by a healthcare professional and treatment should begin.

What happens next depends on the clinical needs of the patients but will often entail a more detailed assessment followed by treatment.

After treatment, they leave the ED or are admitted to hospital. Figure 1 summarises patient journeys through NSW EDs during the April to June quarter.

There were more than half a million attendances at NSW public hospital EDs during the quarter (Figure 2). The majority of these were considered 'emergency attendances' and the remaining 15,072 patients arrived for planned or prearranged visits. Among this latter group, 1,707 were admitted to hospital via the ED.

A breakdown of emergency attendance figures shows that almost half of all emergency attendances (45%) were categorised as potentially serious (triage 4), 31% were categorised as potentially life threatening (triage 3), 15% were in the lowest urgency category (triage 5) and 9%

Figure 1:   Summary of patient journeys through NSW emergency departments

The thickness of each arrow is approximately proportional to the number of NSW emergency department patients in each category. The arrows are coloured by triage level.

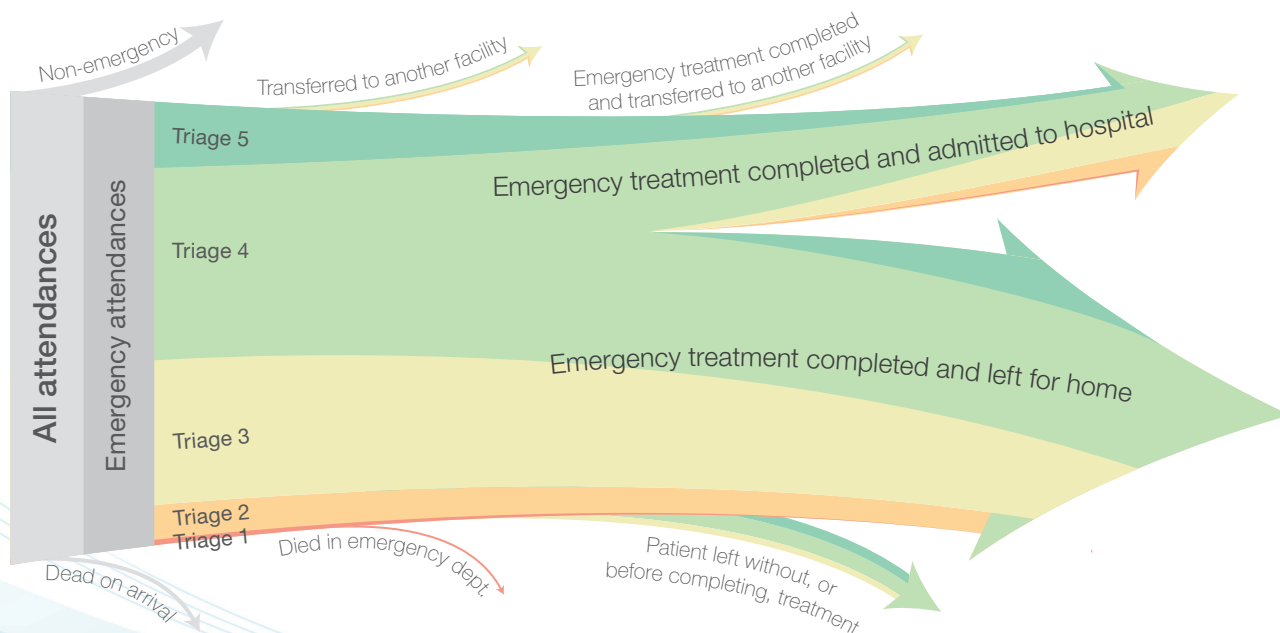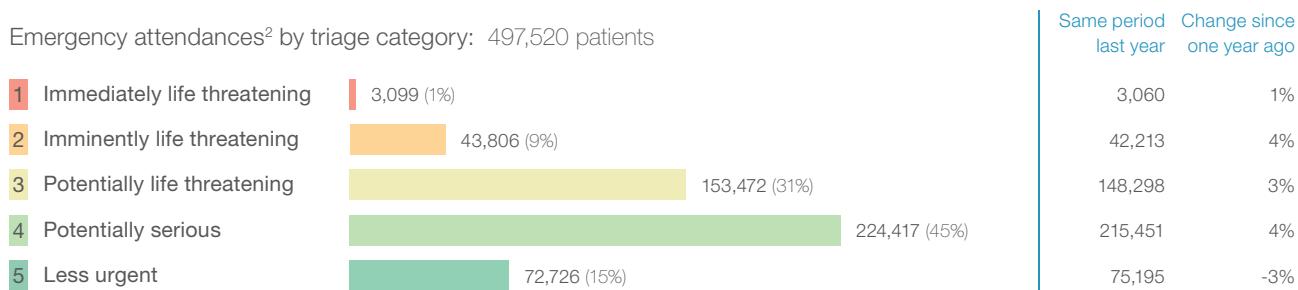| | |
|---|---|
| Triage 1 | Immediately life threatening |
| Triage 2 | Imminently life threatening |
| Triage 3 | Potentially life threatening |
| Triage 4 | Potentially serious |
| Triage 5 | Less urgent |



Non-emergency

Transferred to another facility

Emergency treatment completed and transferred to another facility

All attendances

Emergency attendances

Triage 5

Triage 4

Emergency treatment completed and admitted to hospital

Triage 3

Emergency treatment completed and left for home

Triage 2

Triage 1

Dead on arrival

Died in emergency dept.

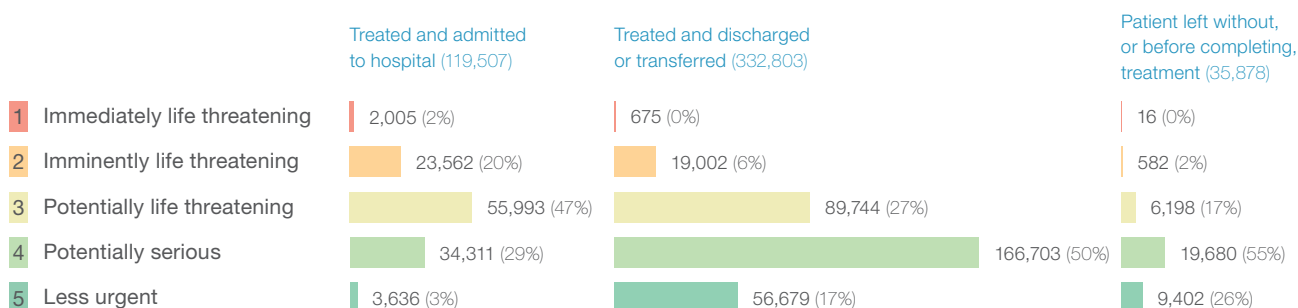Patient left without, or before completing, treatment

## Figure 2:   Attendances at NSW emergency departments, April to June 2011

All attendances:[1]  512,592 patients

Emergency attendances[2] by triage category:  497,520 patients

| | | Same period last year | Change since one year ago |
|---|---|---|---|
| 1 | Immediately life threatening | 3,099 (1%) | 3,060 | 1% |
| 2 | Imminently life threatening | 43,806 (9%) | 42,213 | 4% |
| 3 | Potentially life threatening | 153,472 (31%) | 148,298 | 3% |
| 4 | Potentially serious | 224,417 (45%) | 215,451 | 4% |
| 5 | Less urgent | 72,726 (15%) | 75,195 | -3% |

Emergency attendances by triage category and mode of separation:[3]  488,188 patients

| | | Treated and admitted to hospital (119,507) | Treated and discharged or transferred (332,803) | Patient left without, or before completing, treatment (35,878) |
|---|---|---|---|---|
| 1 | Immediately life threatening | 2,005 (2%) | 675 (0%) | 16 (0%) |
| 2 | Imminently life threatening | 23,562 (20%) | 19,002 (6%) | 582 (2%) |
| 3 | Potentially life threatening | 55,993 (47%) | 89,744 (27%) | 6,198 (17%) |
| 4 | Potentially serious | 34,311 (29%) | 166,703 (50%) | 19,680 (55%) |
| 5 | Less urgent | 3,636 (3%) | 56,679 (17%) | 9,402 (26%) |

1.   All attendances at the emergency department including emergency and non-emergency.
2.   All emergency attendances (emergency presentation and unplanned return visits for a continuing condition) with a recorded triage category.
3.   All emergency attendances with a recorded triage category, excluding attendances with a mode of separation of 'transferred prior to treatment', 'dead on arrival' or 'died in ED'.
Note:   All percentages rounded to whole numbers and therefore percentages may not add to 100%.
Note:   Emergency department activity includes 87 facilities for which electronic data are reported. This covers approximately 85% of NSW emergency department activity.
Source:   Health Information Exchange, NSW Health. Data extracted on 20 July 2011.

were imminently life threatening (triage 2). Immediately life threatening (triage 1), the most urgent category, represents less than 1% of all people triaged in emergency departments.

## The three main ED patient journeys

Almost seven in 10 patients (67%) who were triaged during the quarter received treatment in the ED but were not subsequently admitted to that hospital. They were most likely to come from the potentially serious category (triage 4).

More than two in 10 (24%) were treated in ED and admitted to the same hospital, and were most likely to have a potentially life-threatening condition (triage 3). Less than one in 10 (7%) left the ED without, or before completing, treatment and these people were most likely to come from the least urgent categories (triage 4 and 5). Patients have a number of reasons for leaving before completing treatment, including being dissatisfied with the care they received or their reason for visiting resolved without treatment from staff.

## Emergency attendances over time

Annually, ED attendance numbers are highest during October to December and lowest during April to June. In keeping with the usual seasonal pattern, ED attendances in the April to June 2011 quarter decreased from the level recorded for January to March 2011 (Figure 3), down by 13,629 to 512,592 visits (-3%).

Attendances for this quarter were 3% higher than the same quarter one year ago (496,182) but only 2% higher than the same period two years ago (501,932), the quarter immediately before the swine flu peak in July to September 2009.

## Arrivals by ambulance

A quarter (25%) of all people who attended NSW EDs during April to June 2011 were transported there by ambulance (Appendix 1), a total of 127,486 patients.

The overall number of patients delivered to emergency departments by ambulances has increased by 4% since the same quarter last year and by 5% since the same quarter two years ago.

In the April to June 2010 quarter, 25% of patients (122,200) arrived by ambulance and during the same period in 2009, 24% (121,372 patients) arrived this way.

Figure 3:   Attendances at, and admissions from, NSW emergency departments, April 2009 to June 2011



| | Apr-Jun 2009 | Jul-Sep 2009 | Oct-Dec 2009 | Jan-Mar 2010 | Apr-Jun 2010 | Jul-Sep 2010 | Oct-Dec 2010 | Jan-Mar 2011 | Apr-Jun 2011 |
|---|---|---|---|---|---|---|---|---|---|
| Attendances | 501,932 | 517,812 | 515,159 | 508,179 | 496,182 | 507,844 | 535,783 | 526,221 | 512,592 |
| Admissions* | 111,170 | 115,952 | 112,310 | 107,783 | 113,556 | 118,724 | 120,124 | 118,650 | 121,214 |
| Emergency Admissions* | 109,500 | 114,328 | 110,538 | 106,326 | 111,998 | 117,041 | 118,383 | 116,982 | 119,507 |
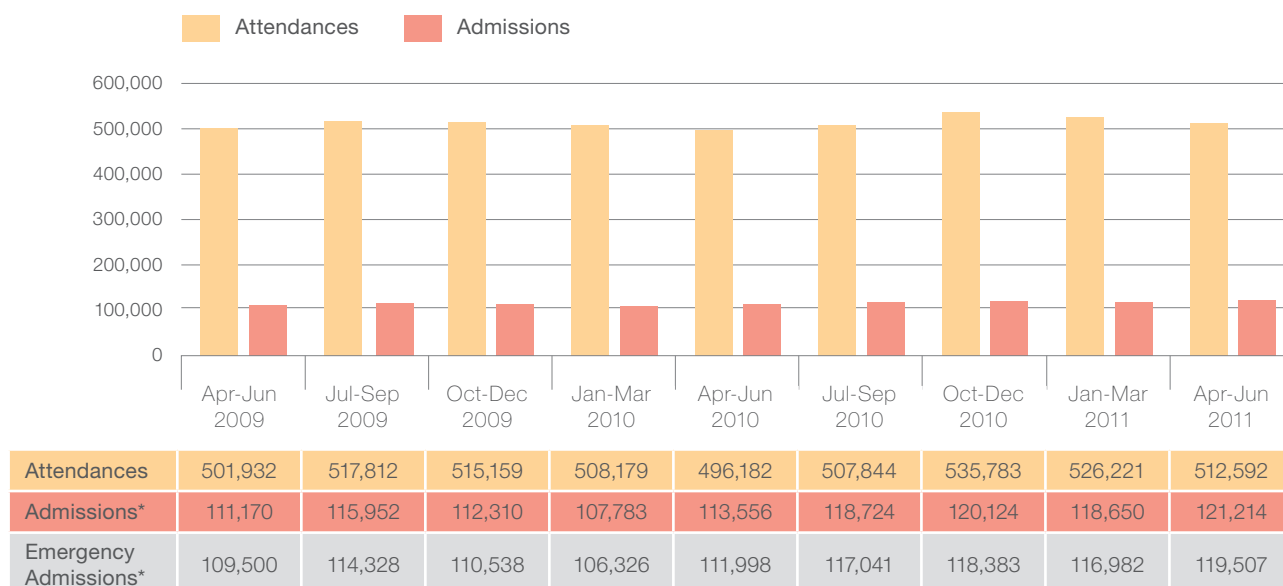
(*)   Admissions refers to all admissions through the emergency department. Emergency admissions refers only to those patients attending for an emergency or unplanned presentation, and who have a recorded triage category.

Note:   Emergency department activity includes 87 facilities for which electronic data are reported. This covers approximately 85% of NSW emergency department activity.

Note:   Numbers might differ slightly from those previously reported by the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data were extracted from the emergency department information system.

Source:   Health Information Exchange, NSW Health. Data extracted on 20 July 2011.

## Appendix 1: Activity measures for NSW emergency departments, April to June 2011

| | Attendances | Admissions | Ambulance |
|---|---|---|---|
| **New South Wales** | | | |
| Total **New South Wales** | 512,592 | 121,214 | 127,486 |
| **Central Coast Local Health District** (CCLHD) | | | |
| Gosford Hospital | 13,465 | 4,275 | 4,515 |
| Wyong Hospital | 13,379 | 2,373 | 3,754 |
| Total **CCLHD** | 26,844 | 6,648 | 8,269 |
| **Far West Local Health District** (FWLHD) | | | |
| Broken Hill Base Hospital | 6,028 | 487 | 663 |
| Total **FWLHD** | 6,028 | 487 | 663 |
| **Hunter New England Local Health District** (HNELHD) | | | |
| Armidale and New England Hospital | 4,004 | 802 | 770 |
| Belmont Hospital | 5,738 | 890 | 1,540 |
| Calvary Mater Newcastle | 7,420 | 2,361 | 2,331 |
| Cessnock District Hospital | 4,359 | 430 | 446 |
| Gunnedah District Hospital | 2,625 | 209 | 214 |
| Inverell District Hospital | 2,359 | 296 | 431 |
| John Hunter Hospital | 16,477 | 5,317 | 5,138 |
| Kurri Kurri District Hospital | 1,832 | 89 | 101 |
| Maitland Hospital | 10,258 | 1,968 | 2,104 |
| Manning Base Hospital | 5,772 | 1,389 | 1,812 |
| Moree District Hospital | 2,496 | 300 | 303 |
| Muswellbrook District Hospital | 2,005 | 221 | 375 |
| Narrabri District Hospital | 1,246 | 235 | 193 |
| Singleton District Hospital | 2,944 | 336 | 340 |
| Tamworth Base Hospital | 9,896 | 1,839 | 1,732 |
| Other **HNELHD** | 12,097 | 1,286 | 1,631 |
| Total **HNELHD** | 91,528 | 17,968 | 19,461 |
| **Illawarra Shoalhaven Local Health District** (ISLHD) | | | |
| Bulli District Hospital | 1,690 | 0 | * |
| Milton and Ulladulla Hospital | 3,302 | 300 | 426 |
| Shellharbour Hospital | 6,482 | 747 | 1,560 |
| Shoalhaven and District Memorial Hospital | 8,518 | 1,383 | 2,213 |
| Wollongong Hospital | 13,584 | 4,543 | 4,622 |
| Total **ISLHD** | 33,576 | 6,973 | 8,823 |
| **Mid North Coast Local Health District** (MNCLHD) | | | |
| Coffs Harbour Base Hospital | 7,533 | 2,010 | 2,022 |
| Kempsey Hospital | 5,126 | 629 | 840 |
| Port Macquarie Base Hospital | 7,677 | 1,792 | 2,042 |
| Total **MNCLHD** | 20,336 | 4,431 | 4,904 |

| | Attendances | Admissions | Ambulance |
|---|---|---|---|
| **Murrumbidgee Local Health District** (MLHD) | | | |
| Griffith Base Hospital | 5,061 | 750 | 737 |
| Wagga Wagga Base Hospital | 8,287 | 2,015 | 2,131 |
| Total **MLHD** | 13,348 | 2,765 | 2,868 |
| **Nepean Blue Mountains Local Health District** (NBMLHD) | | | |
| Blue Mountains District Anzac Memorial Hospital | 4,400 | 481 | 775 |
| Hawkesbury District Health Service | 5,075 | 1,123 | 1,042 |
| Lithgow Health Service | 3,203 | 283 | 544 |
| Nepean Hospital | 13,054 | 4,392 | 4,060 |
| Total **NBMLHD** | 25,732 | 6,279 | 6,421 |
| **Northern NSW Local Health District** (NNSWLHD) | | | |
| Grafton Base Hospital | 5,769 | 962 | 777 |
| Lismore Base Hospital | 7,077 | 2,135 | 2,036 |
| Murwillumbah District Hospital | 3,705 | 444 | 341 |
| The Tweed Hospital | 9,805 | 3,148 | 1,854 |
| Total **NNSWLHD** | 26,356 | 6,689 | 5,008 |
| **Northern Sydney Local Health District** (NSLHD) | | | |
| Hornsby and Ku-Ring-Gai Hospital | 7,784 | 1,894 | 2,072 |
| Manly District Hospital | 5,281 | 1,392 | 1,278 |
| Mona Vale and District Hospital | 6,844 | 1,595 | 1,814 |
| Royal North Shore Hospital | 14,665 | 5,544 | 4,118 |
| Ryde Hospital | 6,208 | 1,530 | 1,821 |
| Total **NSLHD** | 40,782 | 11,955 | 11,103 |
| **Sydney Children's Hospitals Network** (SCHN) | | | |
| Sydney Children's Hospital | 9,526 | 1,287 | 613 |
| The Children's Hospital at Westmead | 12,340 | 2,900 | 1,084 |
| Total **SCHN** | 21,866 | 4,187 | 1,697 |
| **South Eastern Sydney Local Health District** (SESLHD) | | | |
| Prince of Wales Hospital | 11,399 | 3,862 | 3,537 |
| St George Hospital | 15,999 | 5,363 | 4,834 |
| Sutherland Hospital | 11,724 | 2,592 | 3,254 |
| Sydney Eye Hospital | 4,647 | 151 | 35 |
| Sydney Hospital | 4,419 | 377 | 929 |
| Total **SESLHD** | 48,188 | 12,345 | 12,589 |
| **South Western Sydney Local Health District** (SWSLHD) | | | |
| Bankstown / Lidcombe Hospital | 10,905 | 3,410 | 4,066 |
| Bowral and District Hospital | 4,455 | 681 | 862 |
| Camden Hospital | 2,934 | * | 16 |
| Campbelltown Hospital | 13,781 | 3,603 | 3,685 |
| Fairfield Hospital | 7,749 | 1,544 | 1,719 |
| Liverpool Hospital | 15,377 | 5,900 | 5,517 |
| Total **SWSLHD** | 55,201 | 15,145 | 15,865 |

| | Attendances | Admissions | Ambulance |
|---|---|---|---|
| **Southern NSW Local Health District** (SNSWLHD) | | | |
| Goulburn Base Hospital | 4,382 | 787 | 765 |
| Total **SNSWLHD** | 4,382 | 787 | 765 |
| **St Vincent's Health Network** (SVHN) | | | |
| St Vincent's Hospital, Darlinghurst | 9,935 | 3,005 | 3,618 |
| Total **SVHN** | 9,935 | 3,005 | 3,618 |
| **Sydney Local Health District** (SYDLHD) | | | |
| Canterbury Hospital | 8,409 | 1,718 | 2,257 |
| Concord Hospital | 8,582 | 2,546 | 2,606 |
| Royal Prince Alfred Hospital | 15,577 | 4,081 | 4,967 |
| Total **SYDLHD** | 32,568 | 8,345 | 9,830 |
| **Western NSW Local Health District** (WNSWLHD) | | | |
| Bathurst Base Hospital | 5,960 | 887 | 1,003 |
| Dubbo Base Hospital | 6,735 | 1,767 | 1,550 |
| Orange Base Hospital | 6,803 | 1,422 | 1,308 |
| Total **WNSWLHD** | 19,498 | 4,076 | 3,861 |
| **Western Sydney Local Health District** (WSLHD) | | | |
| Auburn Hospital | 6,007 | 922 | 1,499 |
| Blacktown Hospital | 8,670 | 2,193 | 2,942 |
| Mount Druitt Hospital | 7,891 | 878 | 2,206 |
| Westmead Hospital (all units) | 13,856 | 5,136 | 5,094 |
| Total **WSLHD** | 36,424 | 9,129 | 11,741 |

(*)   Values suppressed due to small numbers and to protect privacy.

Note:  Emergency department activity includes 87 facilities for which electronic data are reported. These facilities account for approximately 85% of NSW emergency department activity.

Note:  Admissions refers to all admissions through the emergency department, not just emergency patient admissions.

Source:  Health Information Exchange, NSW Health. Data extracted on 20 July 2011. Ambulance arrival data provided by the NSW Ambulance Service on 20 July 2011.

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# About the Bureau

The Bureau of Health Information provides the community, healthcare professionals and the NSW Parliament with timely, accurate and comparable information on the performance of the NSW public health system in ways that enhance the system's accountability and inform efforts to increase its beneficial impact on the health and wellbeing of the people of NSW.

The Bureau is an independent, board-governed statutory health corporation. The conclusions in this report are those of the Bureau and no official endorsement by the NSW Minister for Health, the NSW Department of Health or any other NSW public health organisation is intended or should be inferred.

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