has been published but may no longer reflect current pressures [1,2]. We aimed to identify a set of criteria able to reliably predict likelihood of admission to a critical care unit in a large UK tertiary care centre.
Methods Consecutive patient referrals were prospectively enrolled in a review cohort. Data were collected using a predefined case report form (CRF). The CRF included information on the referral, acute physiological parameters, hospital length of stay (LOS), demographic and functional status, dependency and comorbidities. Logistic regression was performed to identify factors predicting admission, employing STATA [3].
Results Between 17 July and 27 November 2011, 201 patients were referred to critical care, of whom 85 (42.7%) were declined. Median age (interquartile range) was 67 (54 to 79) years, 121 (60.8%) were male, median LOS (interquartile range) was 1 (1 to 3) day. Age, gender, ethnic origin, LOS, referral reason, and markers of acute physiological derangement did not impact on likelihood of admission to critical care. Odds ratios (95% CIs) for admission were 3.1 (1.72 to 5.56) for exercise tolerance >100 yards (P <0.001), 3.03 (1.56 to 5.89) for self-caring status (P = 0.001), 0.38 (0.2 to 0.71) for house-bound status (P = 0.003), 0.28 (0.1 to 0.76) for wheelchair-bound status (P = 0.013), 0.41 (0.23 to 0.74) for cardiovascular (P = 0.003), 0.36 (0.18 to 0.72) for renal system (P = 0.004), 0.34 (0.14 to 0.85) for malignant (P = 0.021), and 0.49 (0.25 to 0.94) for neurological (P = 0.033) comorbidities, respectively.
Conclusion Our data suggest that critical care admission decisions are made based mainly on the assessment of patients' pre-morbid state and functional capacity, rather than on the extent of acute physiological derangement. This behaviour is more consistent with the application of a prioritization model, defining those patients who will benefit most from critical care admission (Priority 1) to those who will not benefit at all (Priority 4) and consistent with pressured resources, rather than an objective parameters model or a diagnostic model [1].

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P509

Intensive care services in Hungary 2000 to 2010: an analysis of bed numbers, occupancy rates, case mix and economics

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Introduction The purpose of this study is to describe the changes in pattern of intensive care (ICU) use over a 10-year period in Hungary. We attempt to analyze national data in order to improve resource use.
Methods A retrospective analysis of national data provided by the hospitals for reimbursement of care to the National Healthcare Fund of Hungary between 2000 and 2010.
Results The total number of active hospital beds decreased by 33.4% (from 65,532 to 44,300); however, the number of ICU beds increased by 9.8% (from 1,189 to 1,306) between 2000 and 2010. As a result, the percentage of ICU beds to hospital beds increased from 1.89% in 2000 to 2.95% in 2010. The ICU bed occupancy rate ranged between 58.43% and 63.78%; it showed no correlation with the case mix index (r^2 = 0.2799). The number of ventilator days increased from 28.9% to 66.1%; it showed good correlation with the case mix index (r^2 = 0.9125). Analysing 2010 data, we found significantly lower mortality in level III units (30 ± 18%) compared to level II (51 ± 20%) and level I (56 ± 19%) care (P = 0.001 and 0.003), without significant differences in case mix index (Table 1). The mean ICU bed occupancy rate was 59.5% (SD ±12%), and length of hospital stay was 12.3 (SD ±3.0) in 2010. Geographic distribution of ICU beds per 100,000 population ranged between 7.3 and 27.4 (nationwide 12.9/100,000); it showed no correlation with regional gross domestic product values (r^2 = 0.4593).
Conclusion Our data suggest that intensive care beds are not utilized; a progressive level of care does not function and also there are unnecessary regional differences in intensive care provision in Hungary.

Table 1 (abstract P509). Distribution of intensive care services in 2010

National data, 2010	Total number of units	Total number of beds	Case mix index (mean ± SD)	*P* value
University hospitals (level III)	10	412	7.67 (± 4.06)	0.204
County hospitals (level II)	30	584	8.08 (± 2.89)	0.376
City hospitals (level I)	39	280	6.05 (± 1.97)	0.093

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Data acquisition for the UK Critical Care Minimum Data Set: validation of a computer model for automatic calculation from an electronic patient record

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Introduction This study reports the accuracy of a computer and a manual system at collecting data for the UK Critical Care Minimum Data Set (CCMDS). This is required by the Department of Health to compare performance, to facilitate funding and to plan future resource provision. There are 14 data fields in the mandatory dataset, and the full compliment extends to 34 fields. At present this is collected manually, which is laborious and subjective. We use an electronic patient record (Innovian, Draeger, Germany) to store all the measured patient observations and laboratory results. We have written a program to interrogate Innovian for the CCMDS data, thereby reducing the administrative time.
Methods A stratified sample of 50 patients' data (elective and emergency surgical and medical patients) was analysed. Both manual and computer systems collected the mandatory 14 items of the CCMDS. This consists of six demographic variables (for example, admission date, discharge date, date of birth) and eight organ support variables (for example, duration of either advanced or basic cardiovascular, respiratory, renal or neurological support or duration of level 2 or 3 support). Where the computer and manual systems returned different values, a blinded physician analysed the patient records and created a gold standard value. The frequency of these differences was analysed.
Results Both computer and manual systems returned all the required data, giving a total of 700 data variables. Different values were returned for 183 (26%) variables. The systems had good concordance in the demographic variables, with only 4/300 (1.3%) discrepancies between the computer and manual systems. In the organ support variables, there were 179/400 (45%) discrepancies. Days of renal support had most concordance, with discrepancies in 3/50 patients (6%). Days of level 2 support had least concordance, with discrepancies in 37/50 patients (76%). Overall, the computer method returned the correct variable for 544 (78%) variables, where the manual system returned the correct variable on 591 (84%) variables.
Conclusion This study shows that both computer and manual data collection methods could be improved, but at present both have similar accuracy. This may be because the criteria for some organ support can be subjective (for example, risk of deterioration), which can be interpreted in different ways between manual data collectors but not by a computer. We plan to rewrite the computer program, aiming for >95% concordance with the gold standard.

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To admit or not to admit? The suitability of critical care admission criteria

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Introduction During the 2010/2011 winter the H1N1 influenza pandemic placed increased demand on critical care services, prompting our department to devise a modified triage tool for the ICU to be implemented at a time of exceptional bed crisis [1]. Scoring systems such as APACHE or Sequential Organ Failure Assessment