ICNARC developments

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Scope

- Dataset
- IT platform
- Activities

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Scope

- Dataset

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More a revelation than revolution...

Data

Burden

ROI

Guidelines for the
Provision of Intensive
Care Services
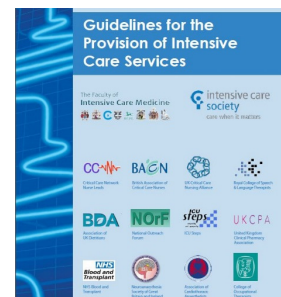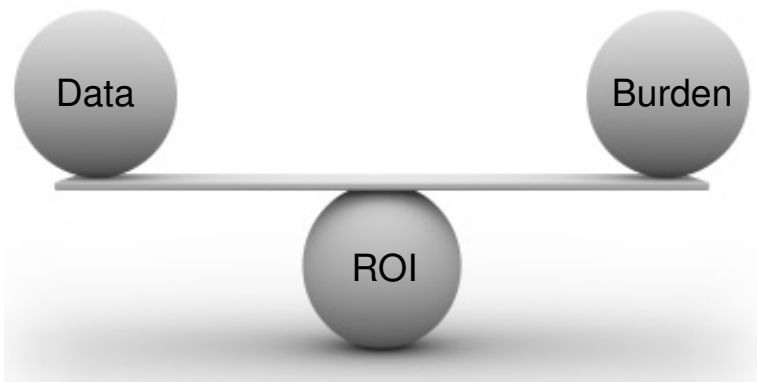
Identifiers

- Move to NHS number as key identifier
  - with more sophisticated validation
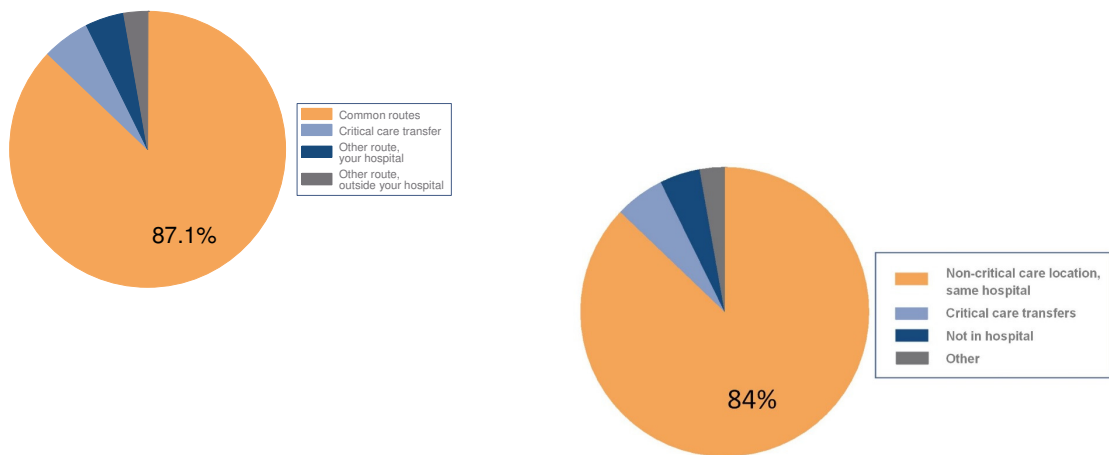- Replace Date of birth with age (years)

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Hospital admission

- Date/Time (hour of presentation/admission) to your hospital
- Date/Time presentation (if ED your hospital)

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Decision to admit to/discharge from critical care unit

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Source of admission/Location following discharge

87.1%

- Common routes
- Critical care transfer
- Other route, your hospital
- Other route, outside your hospital

84%

- Non-critical care location, same hospital
- Critical care transfers
- Not in hospital
- Other

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Source of admission

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Emergency Department, your hospital

Theatre, your hospital (previously ED/Not in hospital)

Theatre, your hospital (previously on Ward)

Ward, your hospital

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Trajectory

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Physiological parameter	Score						
	3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO₂ Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO₂ Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

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Treatment goals at admission

- Active care
- Pre-surgical preparation
- Stabilisation and monitoring
  – active care not thought to be appropriate
- End-of-life care

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Treatment goals and limitations

- Collect data on treatment limitations
  – at admission
  – during unit stay
  – at discharge (e.g. not for readmission)
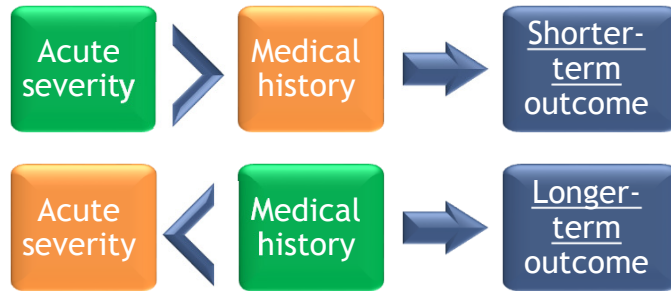- At/during - not for intubation/IMV, DNACPR, not for dialysis, other

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Obstetric data

- Exploring data linkage to NMPA
  - 'Admission currently/recently pregnant' and gestation retained
- *Exploring accuracy of obstetric data in NMPA*

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Dropping data

- Pre-admission biochemistry and haematology
  - collected as potential replacement/substitution when first 24 hour unit values unavailable
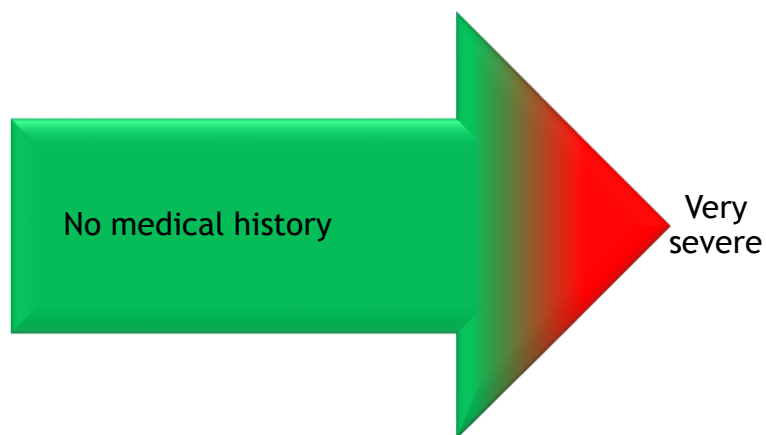 - assessed in risk modelling
  - not useful
  - use multiple imputation

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Medical history

- Currently only collect very severe chronic conditions

| Acute severity | > | Medical history | → | Shorter-term outcome |

| Acute severity | < | Medical history | → | Longer-term outcome |

- Insufficient detail for modelling longer-term outcomes (e.g. mortality at one year)

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Introduce grading and new conditions

No medical history → Very severe

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Grading

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No medical history → Some medical history → Very severe

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New conditions

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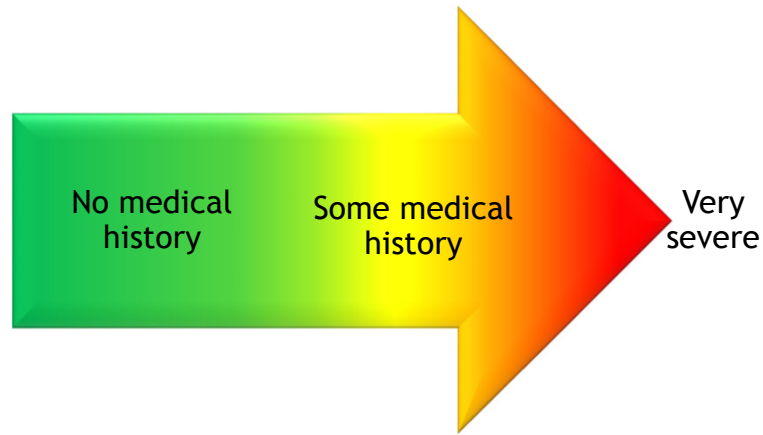
1. Essential hypertension
2. Diabetes mellitus
3. Chronic obstructive pulmonary disease
4. Alcohol dependence
5. Chronic renal failure
6. Chronic angina
7. Drug dependence
8. Obstructive sleep apnoea
9. Rheumatoid arthritis
10. Thrombo-occlusive disease of brain

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Clinical frailty

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Surgery/procedures

- Capture both surgical and procedural data irrespective of location
- Separate surgical and procedural data from reason for admission
  - drop first tier of ICNARC Coding Method (ICM)

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Sepsis-3/SOFA

- Add vasoactive drug(s) and serum bilirubin
- Record maximum infusion rate for given vasoactive drug(s) in first 24 hours

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APAPCHE III and IV

- Add albumin and bilirubin

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Organ support (daily – as module)

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- Collect daily organ support data
- Median unit LOS=3 calendar days

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Data linkage

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Scope

- Dataset
- IT platform

IT platform – "Platform X"

- Direct data upload
- Online data validation
- Customise data validation report
  (e.g. delay outcome queries in early stages)
- More efficient processing
- Paperless
- Potential (future...) to add optional modules and
  host specific ad-hoc audits and future research studies
- Current status...

Scope

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- Dataset
- IT platform
- Activities

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Activities

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- Network Quality Reports (2 per year)
- Direct access to Network's units Quarterly Quality Reports (via IT platform)
- Ad hoc analyses requests (paid for)
- Training – workshops and webinars
- Network meeting presentations
- Visits to/meetings at ICNARC
- Day-to-day customer services (e.g. queries, participation, SSQD dashboard checks, etc.)

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Activities

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- Inequitable customer services
- No standard service
- Service(s) not resourced
- Potential to do more (e.g. Annual Network CMP Meeting, etc.)

- Comments/reflections/ideas – the floor is yours...???

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