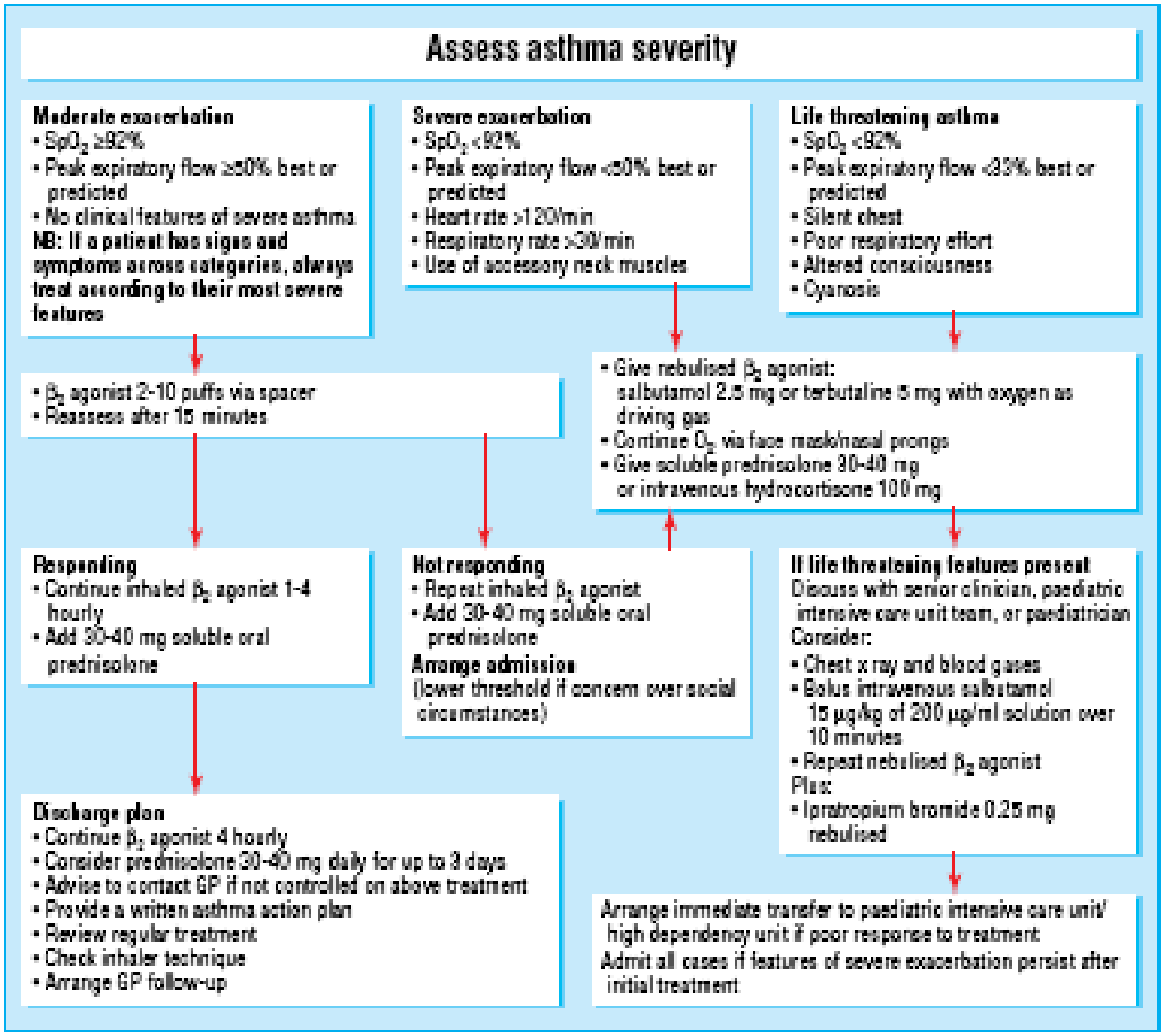
How computers help make efficient use of consultations

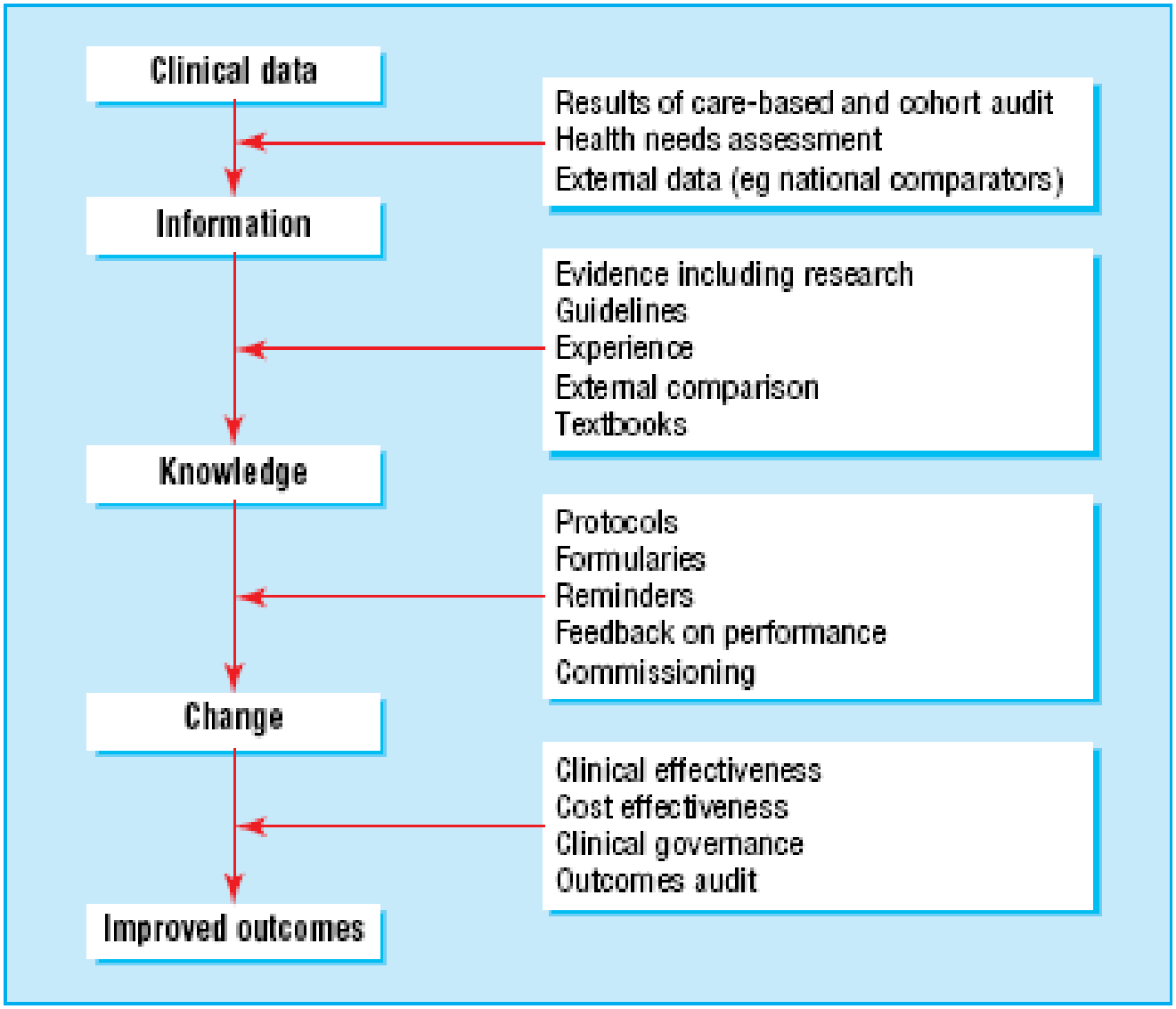
Patrick Murphy is a 5 year old boy who has been brought to the accident and emergency department with status asthmaticus. He is cyanosed with a poor respiratory effort

Data to be recorded for acute medical admissions

- Patient's registered general practice details
- Admission details (administrative)
- Reason for clinical encounter
- Presenting problem
- History of presenting problem
- Current diagnoses, problems
- Drugs, allergies, and diets
- Past illnesses, procedures, and investigations
- Social circumstances
- Functional state
- Family history
- Systems review
- Examination results
- Results of investigations
- Overall assessment and problem list
- Management plan
- Intended outcomes
- Information given to patient and carers



Acute asthma management flow chart for children >5 years in accident and emergency department. Adapted from Scottish Intercollegiate Guidelines Network, guideline 63 (www.sign.ac.uk/guidelines/fulltext/63/index.html)



Turning clinical data into improved patient outcomes

Continuity of care*

For patients and their families the experience of continuity is the perception that providers know what has happened before, that different providers agree on a management plan, and that a provider who knows them will care for them in the future. For providers, the experience of continuity relates to their perception that they have sufficient knowledge and information about a patient to best apply their professional competence, and they have the confidence that their care inputs will be recognised and pursued by other providers.

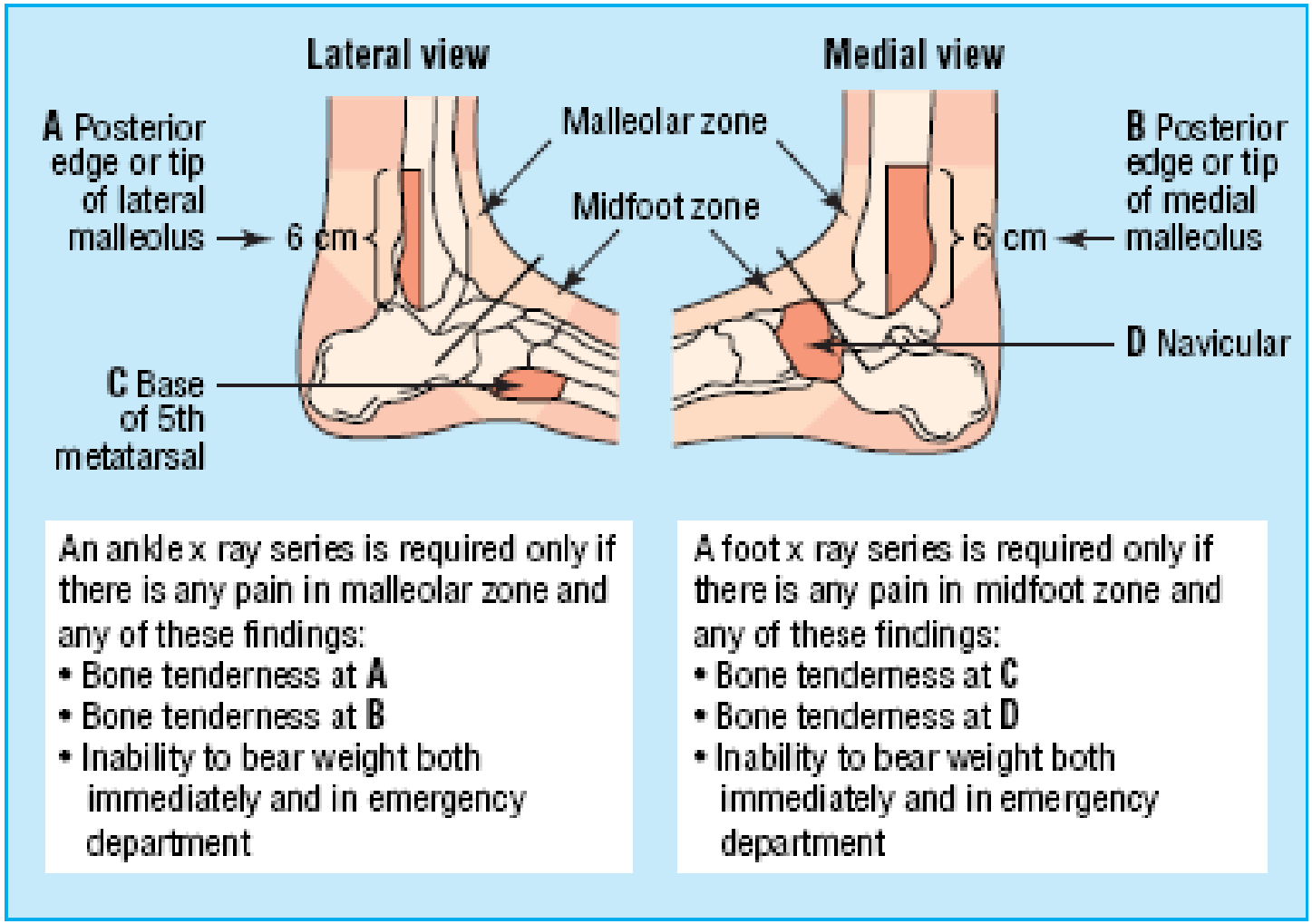
*From Haggerty JL, Reid RJ, Freeman, GK, Starfield BH, Adair, CE, McKendry R. Continuity of care: a multidisciplinary review. *BMJ* 2003;327:1219-21

Classification, coding, and nomenclature

- Classification is a method for systematically grouping something—for example, diseases. In most classifications, classes are designated by codes, which allow aspects of the things to be captured (a systematic arrangement of similar entities on the basis of certain characteristics)
- A code is usually a unique numeric or alphabetic representation of items in a classification
- Nomenclature is a system of naming used in a branch of knowledge. Medical nomenclature attempts to standardise the names used for patient findings, diseases, interventions, and outcomes

Secondary uses of data captured during consultations

- Reminders and decision support
- Communication of clinical data between healthcare workers—for example, discharge summaries, referrals, ordering, and requests
- Identifying and monitoring the health needs of a population
- Reducing bureaucracy while managing and funding care delivery
- Enabling reporting of externally specified health statistics—for example, for infection control
- Effective and efficient resource allocation and healthcare management
- Research
- Education
- Local clinical audit and governance



Ottawa ankle rules for use of radiography in acute ankle injuries. Adapted from Stiell IG, et al. *JAMA* 1994;271:827-32

Factors predicting a future risk of developing near-fatal or fatal asthma

- Socioeconomic deprivation
- Previous near fatal asthma—for example, previous ventilation or respiratory acidosis
- Previous admission for asthma, especially if in past year
- Requiring three or more classes of asthma medication
- Overuse of β_2 agonist
- Repeated attendance at accident and emergency department for asthma care, especially if in past year
- Brittle asthma
- Poor adherence to drug regimen