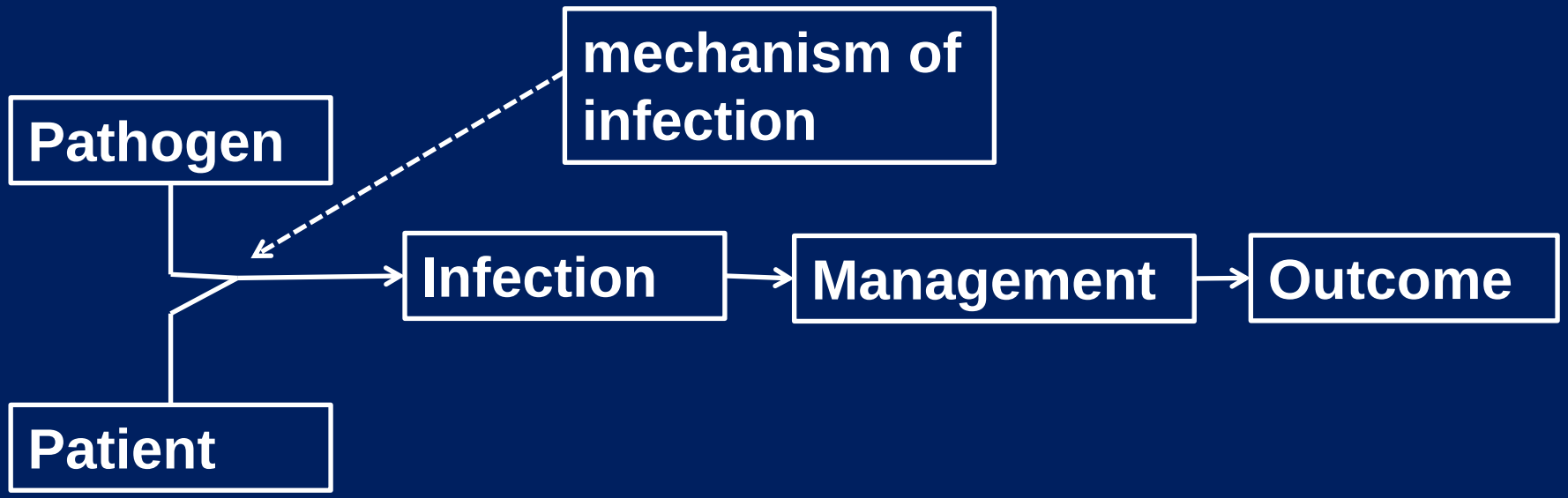
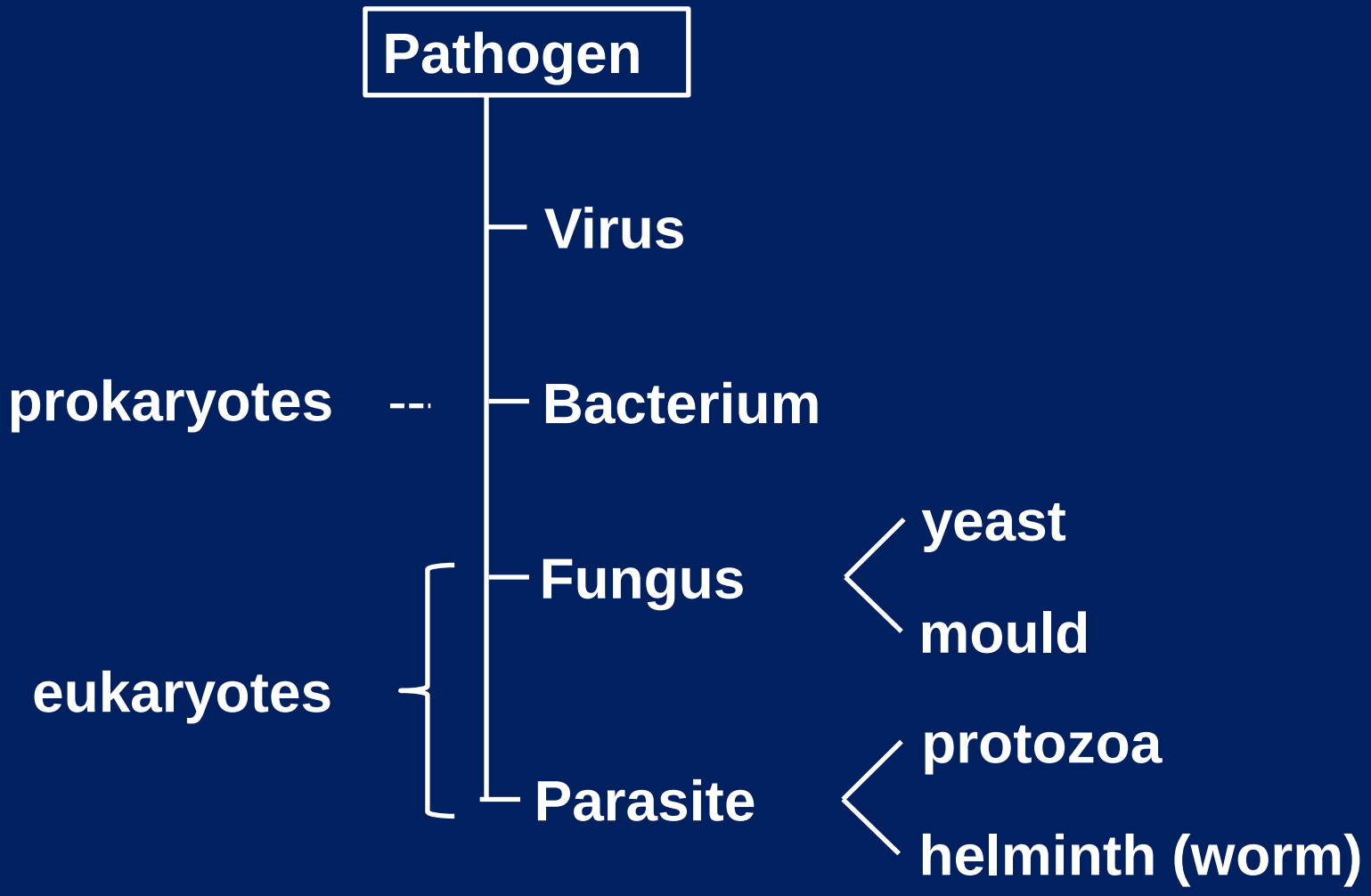
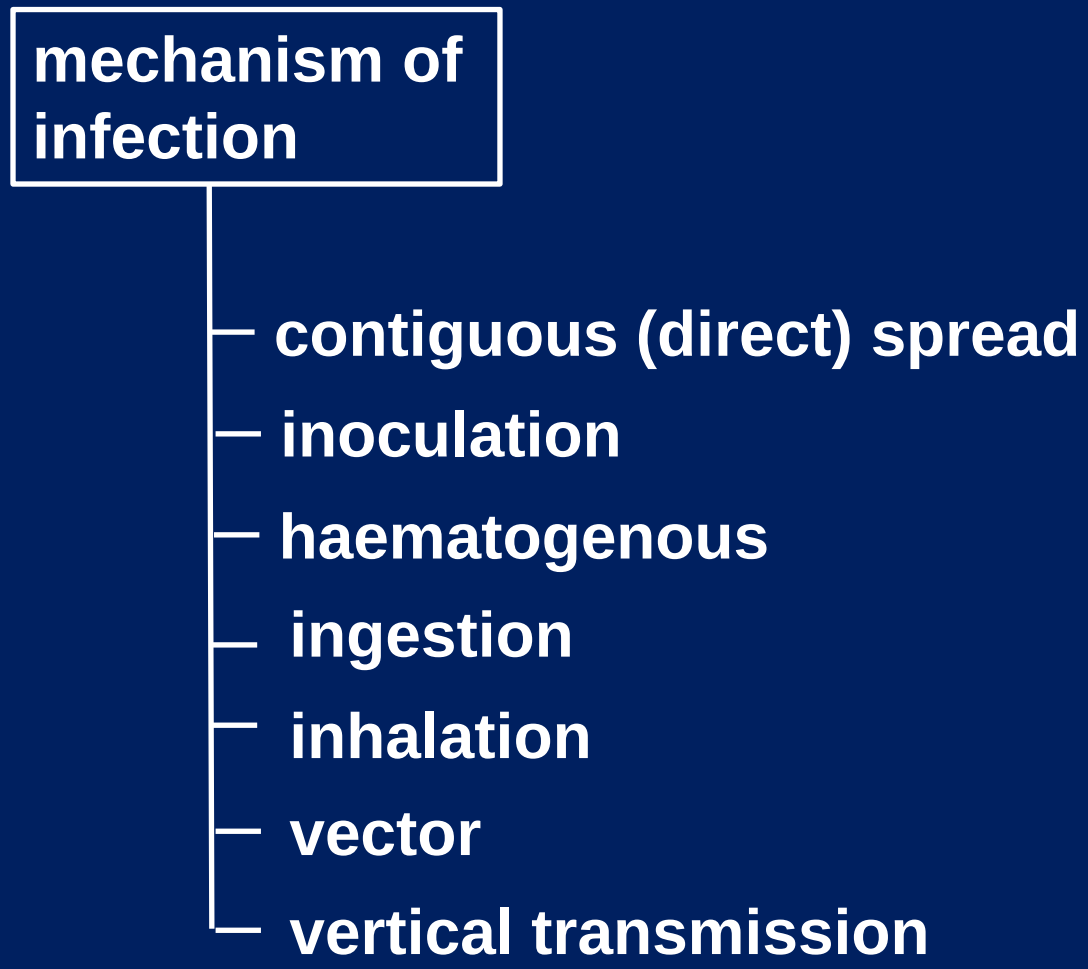
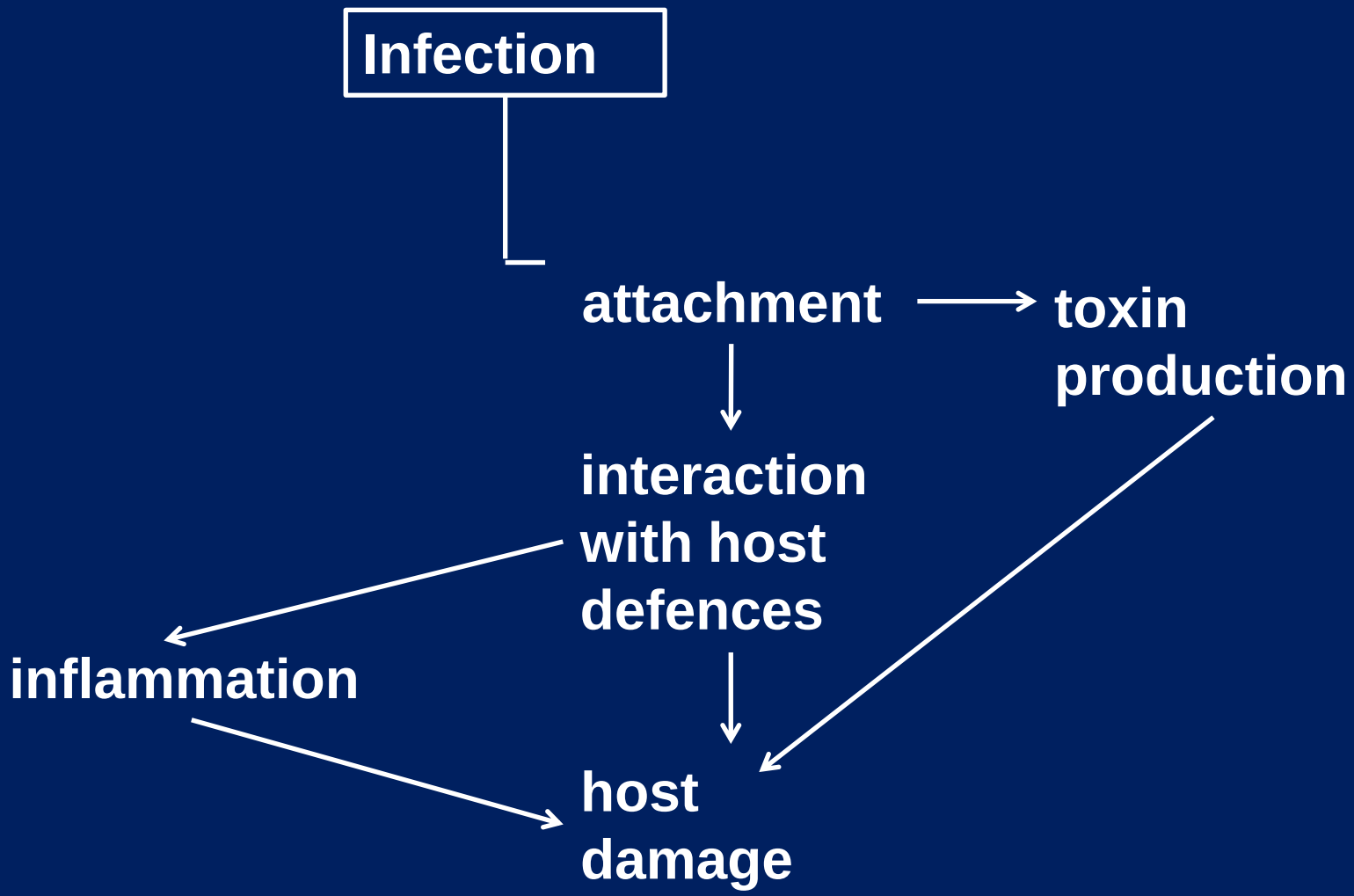
An Infection Model

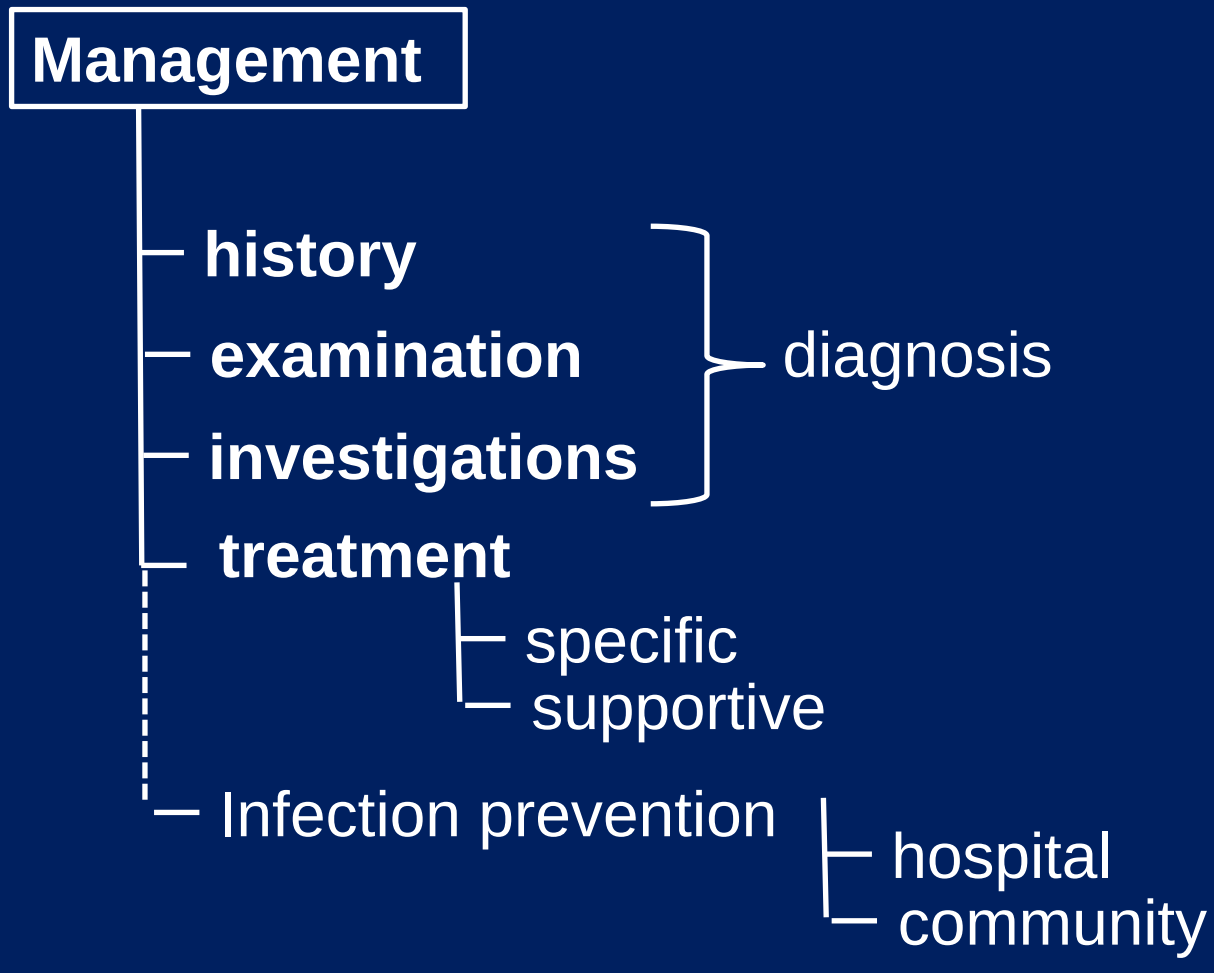

mechanism of infection
Pathogen
Infection
Management
Outcome
Patient

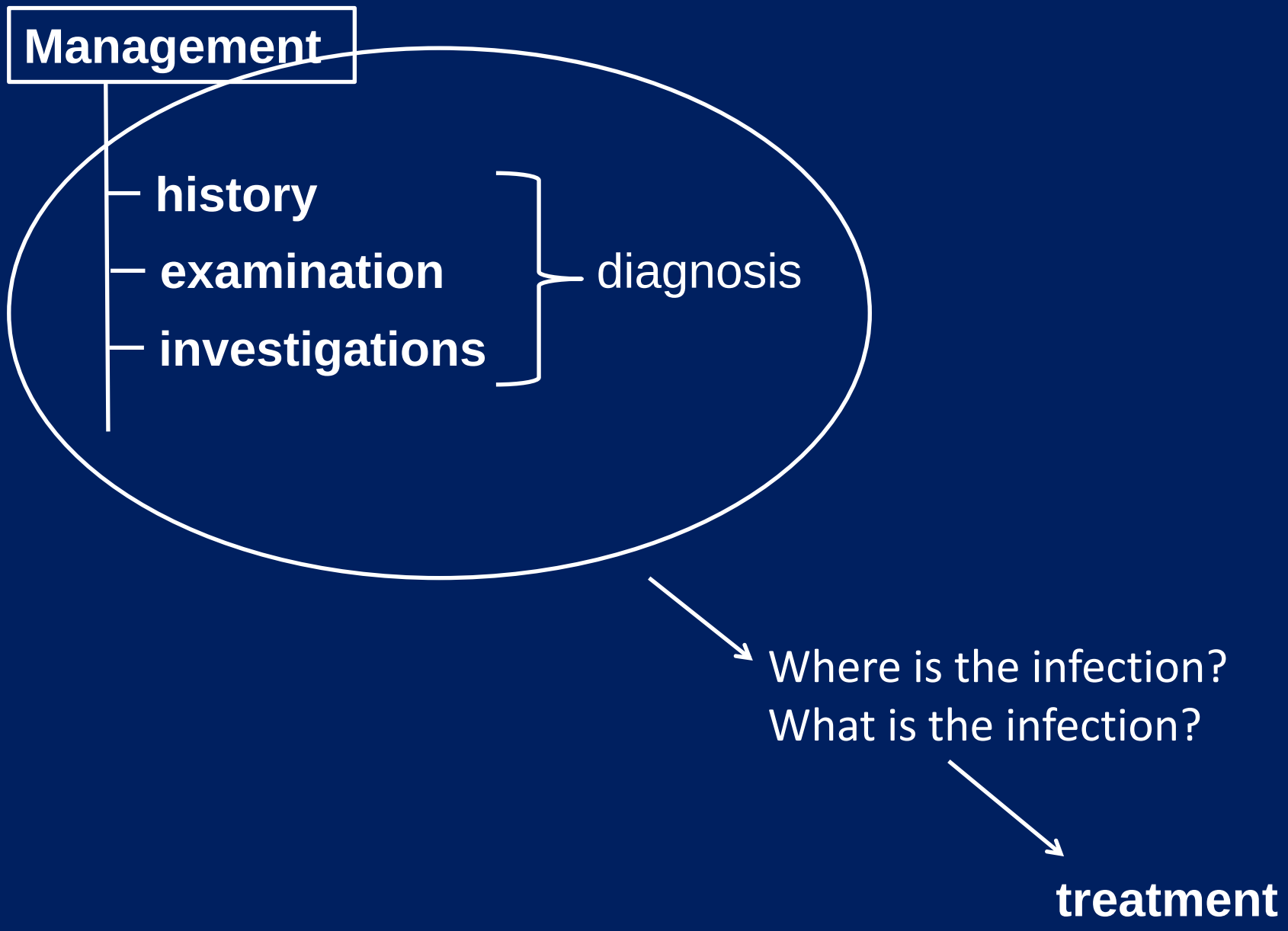

Pathogen
Virus
prokaryotes
Bacterium
Fungus
yeast
mould
eukaryotes
Parasite
protozoa
helminth (worm)

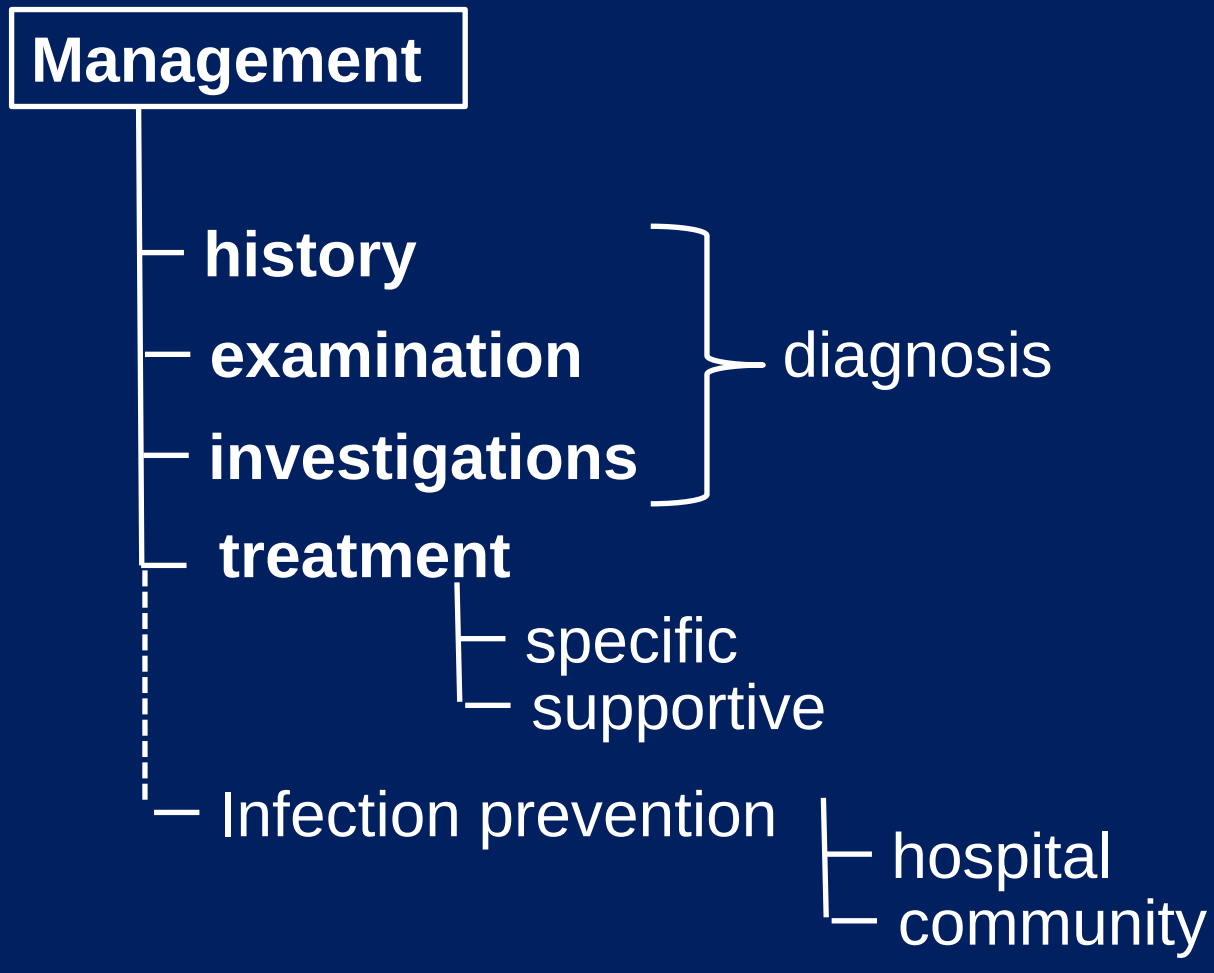

Patient
Person
age
gender
physiological state
pathological state
social factors
Time
calendar time
relative time
Place
current
recent

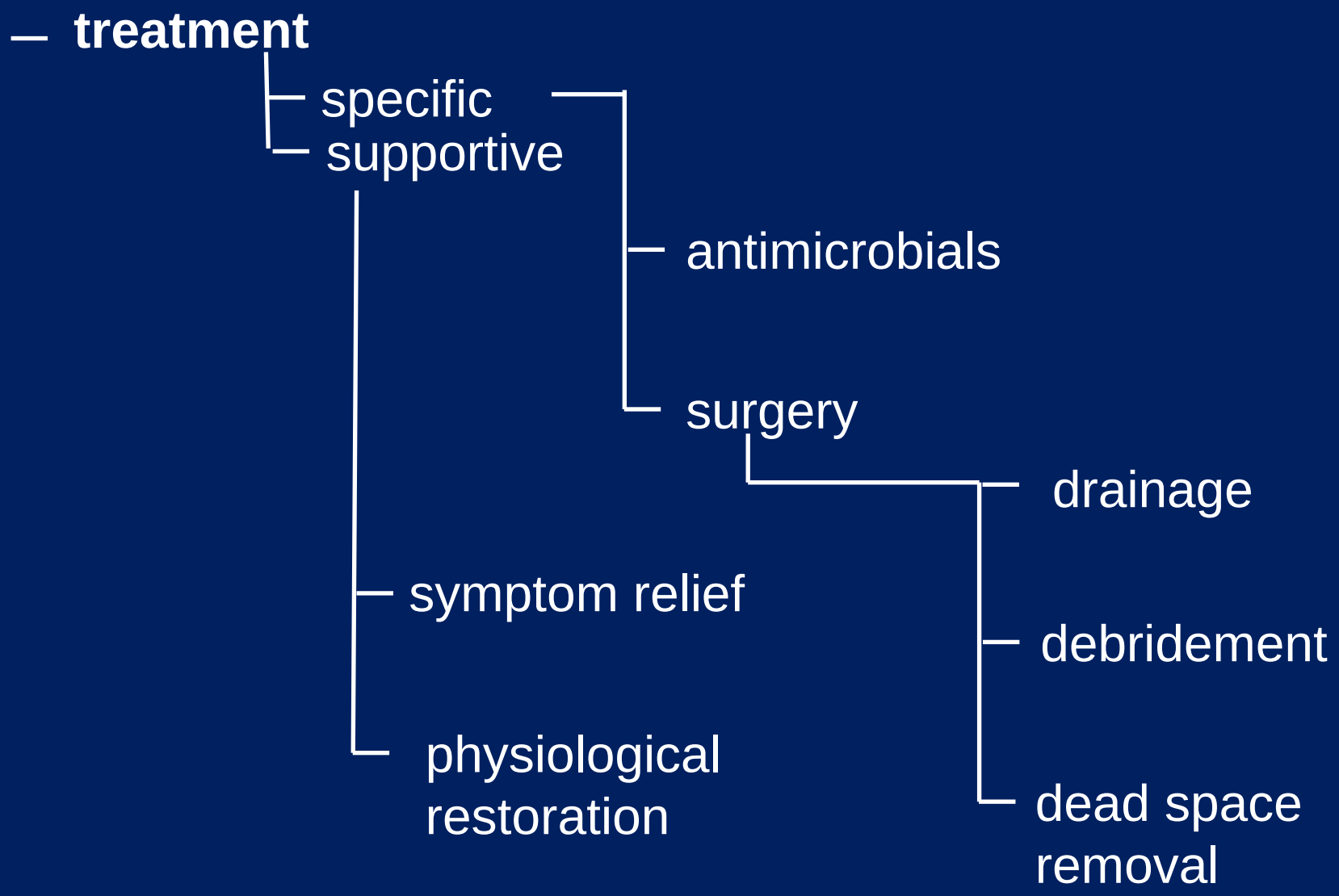

mechanism of infection
contiguous (direct) spread
inoculation
haematogenous
ingestion
inhalation
vector
vertical transmission

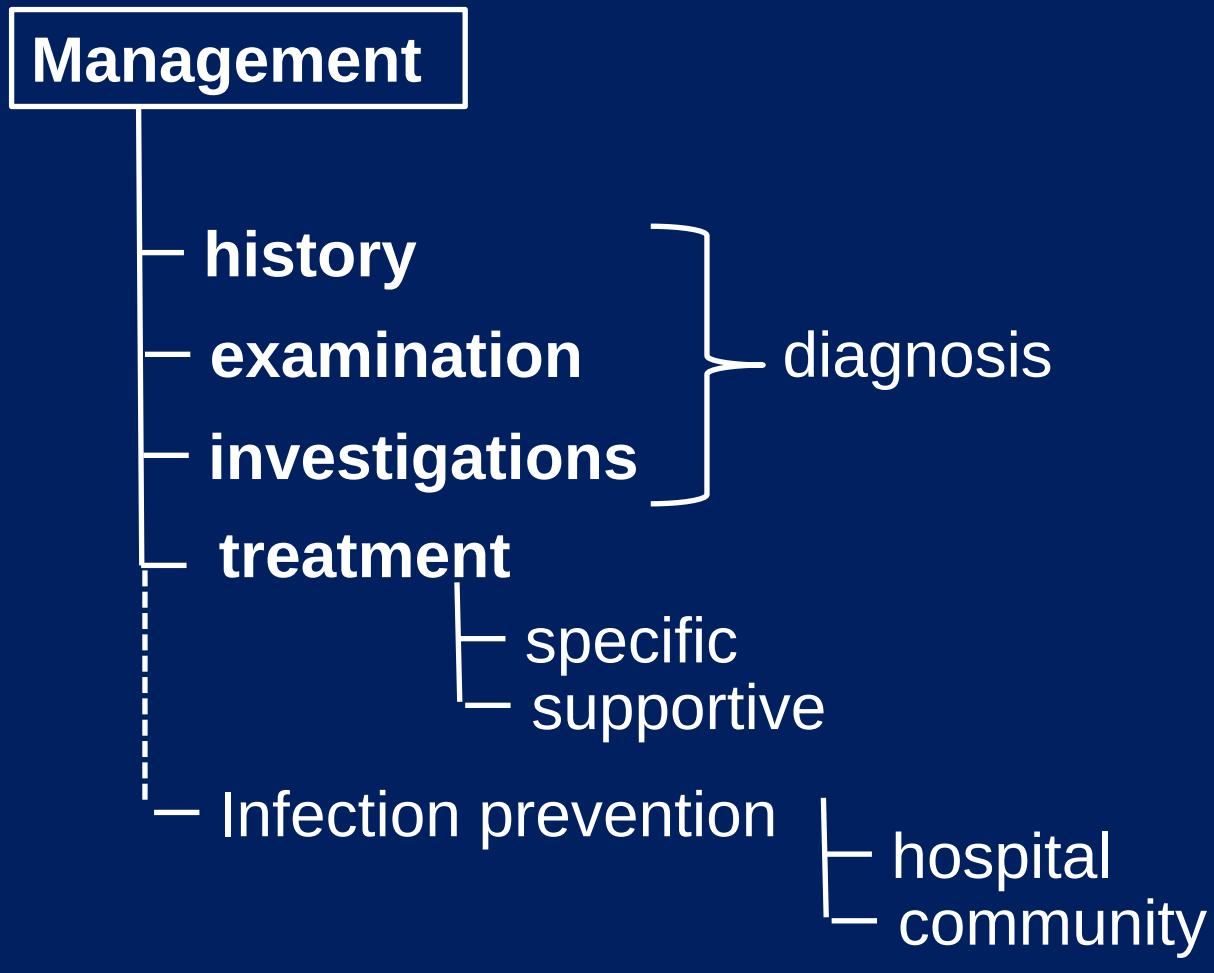

Infection
attachment
toxin production
interaction with host defences
inflammation
host damage


Management
history
examination
investigations
diagnosis
treatment
specific
supportive
Infection prevention
hospital
community


Management
history
examination
investigations
diagnosis
Where is the infection?
What is the infection?
treatment


Management
history
examination
investigations
diagnosis
treatment
specific
supportive
Infection prevention
hospital
community

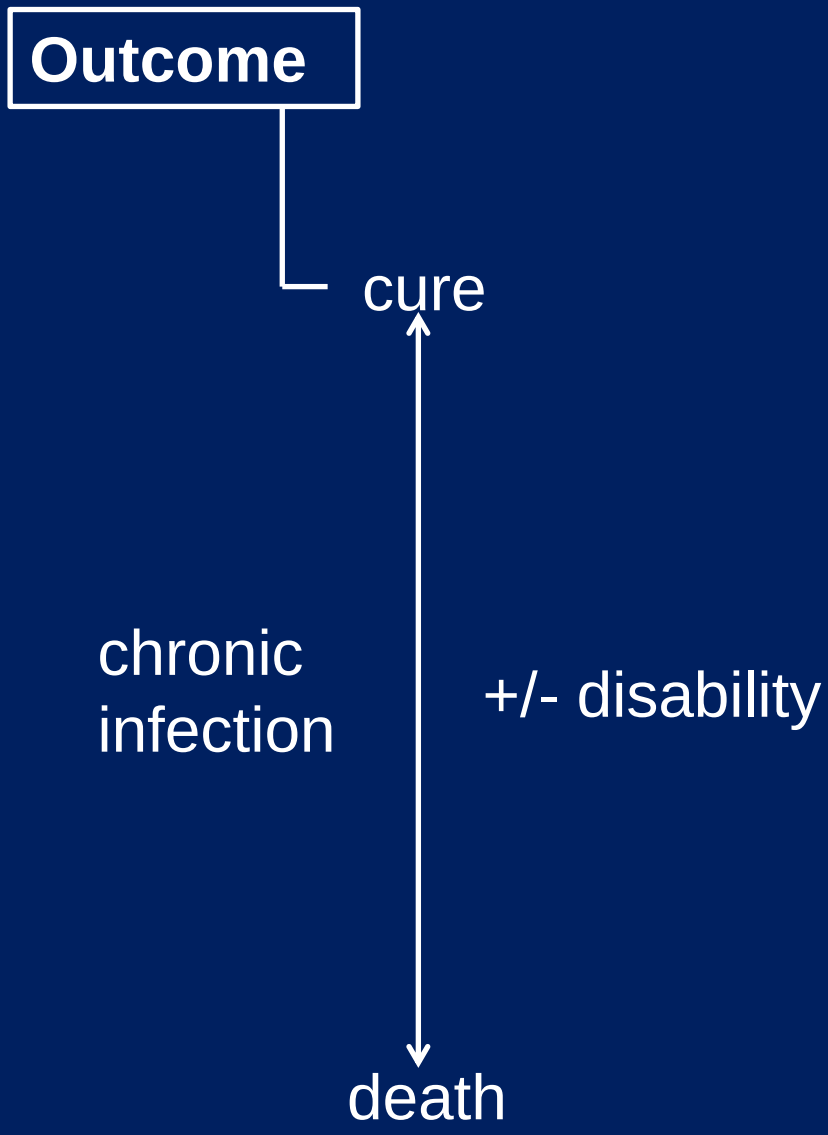

treatment
specific
supportive
antimicrobials
surgery
drainage
debridement
dead space removal
symptom relief
physiological restoration

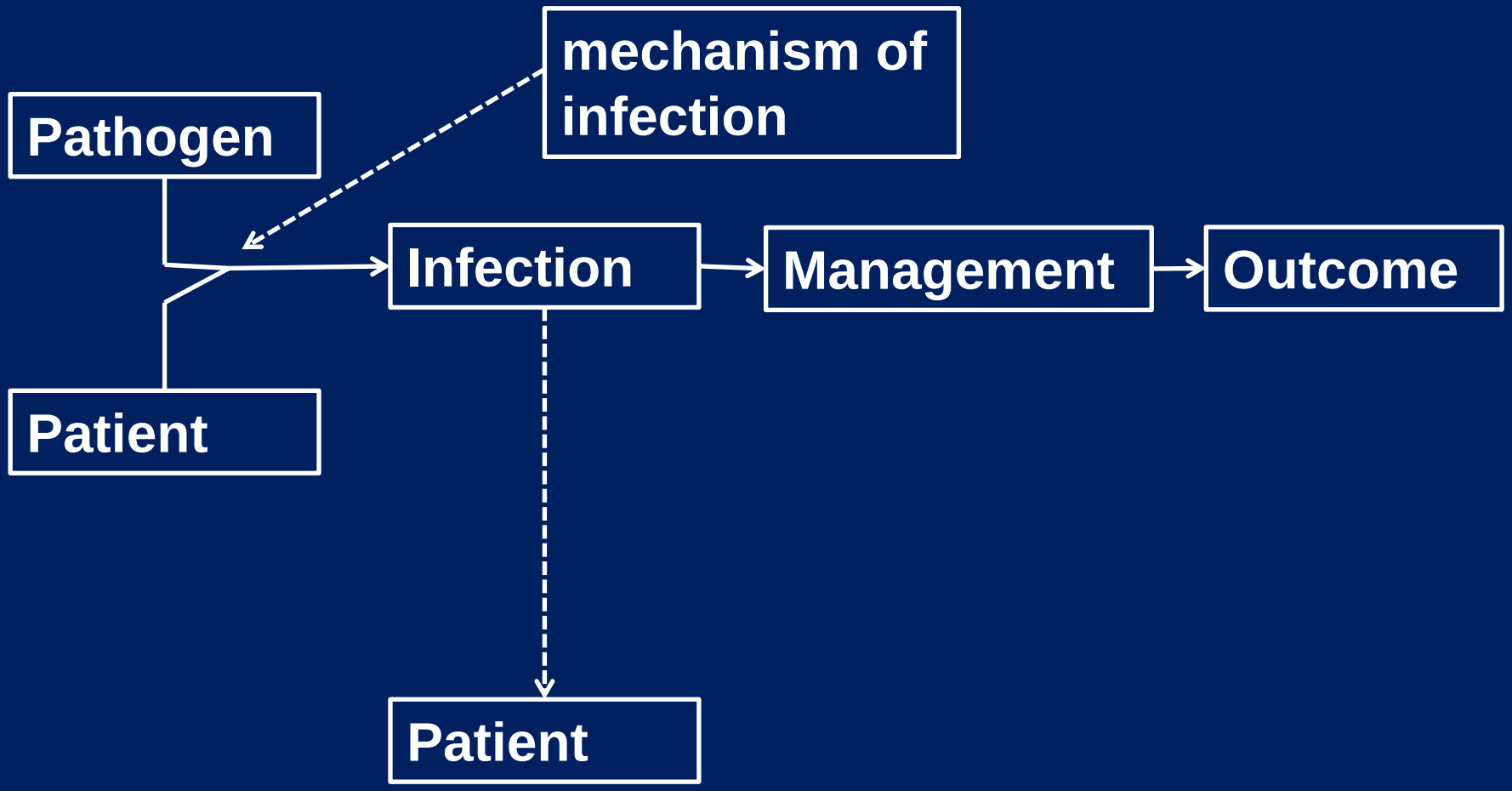

Management
history
examination
investigations
diagnosis
treatment
specific
supportive
Infection prevention
hospital
community

- Infection prevention
  - hospital
  - community

prevent infection transmission to

- other patients
- staff
- other contacts


Outcome
cure
chronic infection
+/- disability
death


mechanism of infection
Pathogen
Infection
Management
Outcome
Patient
Patient

Summary

- This is a simplification of infection processes
- Future lectures will elaborate on this model using a range of infections as examples
- Think about infections that you have encountered and how they fit this model
- Exceptions are important!