



# UK Diagnostics Forum: Improving the evidence for diagnostic tests Industry Perspective

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# The issue:

Unplanned hospital admissions: challenge to payers / clinicians

**5,135,794 emergency hospital admissions in England in 2009/10 – Hospital Episodes Statistics (HES)**

**37% increase in emergency hospital admissions over last 10 years**

**For cancer patients – haematological, lung and urological tumours are highest users of emergency cancer bed days**

#### Resources and references

[www.rightcare.nhs.uk/atlas/downloads/nonPBC\\_AoV\\_2011.pdf](http://www.rightcare.nhs.uk/atlas/downloads/nonPBC_AoV_2011.pdf)

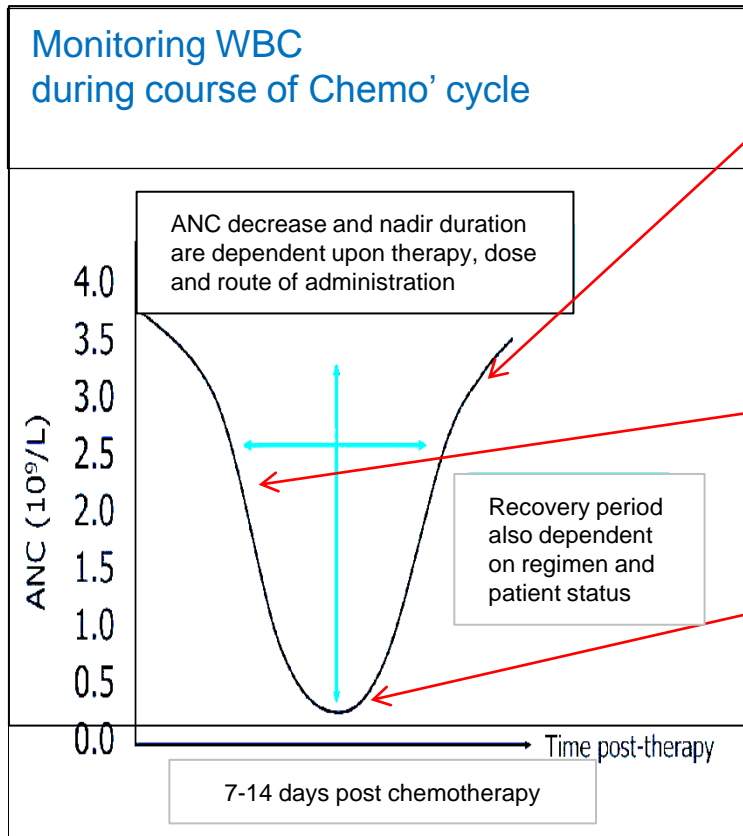
[www.cqc.org.uk/sites/default/files/media/documents/ip11\\_national\\_summary\\_final.pdf](http://www.cqc.org.uk/sites/default/files/media/documents/ip11_national_summary_final.pdf)

[www.kingsfund.org.uk/document.rm?id=9524](http://www.kingsfund.org.uk/document.rm?id=9524)

[www.ncepod.org.uk/2007report1/Downloads/EA\\_report.pdf](http://www.ncepod.org.uk/2007report1/Downloads/EA_report.pdf)

[www.rcplondon.ac.uk/sites/default/files/documents/hospitals-on-the-edge-report.pdf](http://www.rcplondon.ac.uk/sites/default/files/documents/hospitals-on-the-edge-report.pdf)

## The approach – monitoring White Blood Count in home to reduce chemotherapy adverse events: avoid hospital admissions



### WBC indicates:

- when ready for treatment
- early recovery – enables earlier scheduling for next course

### Detection of rapid fall in WBC:

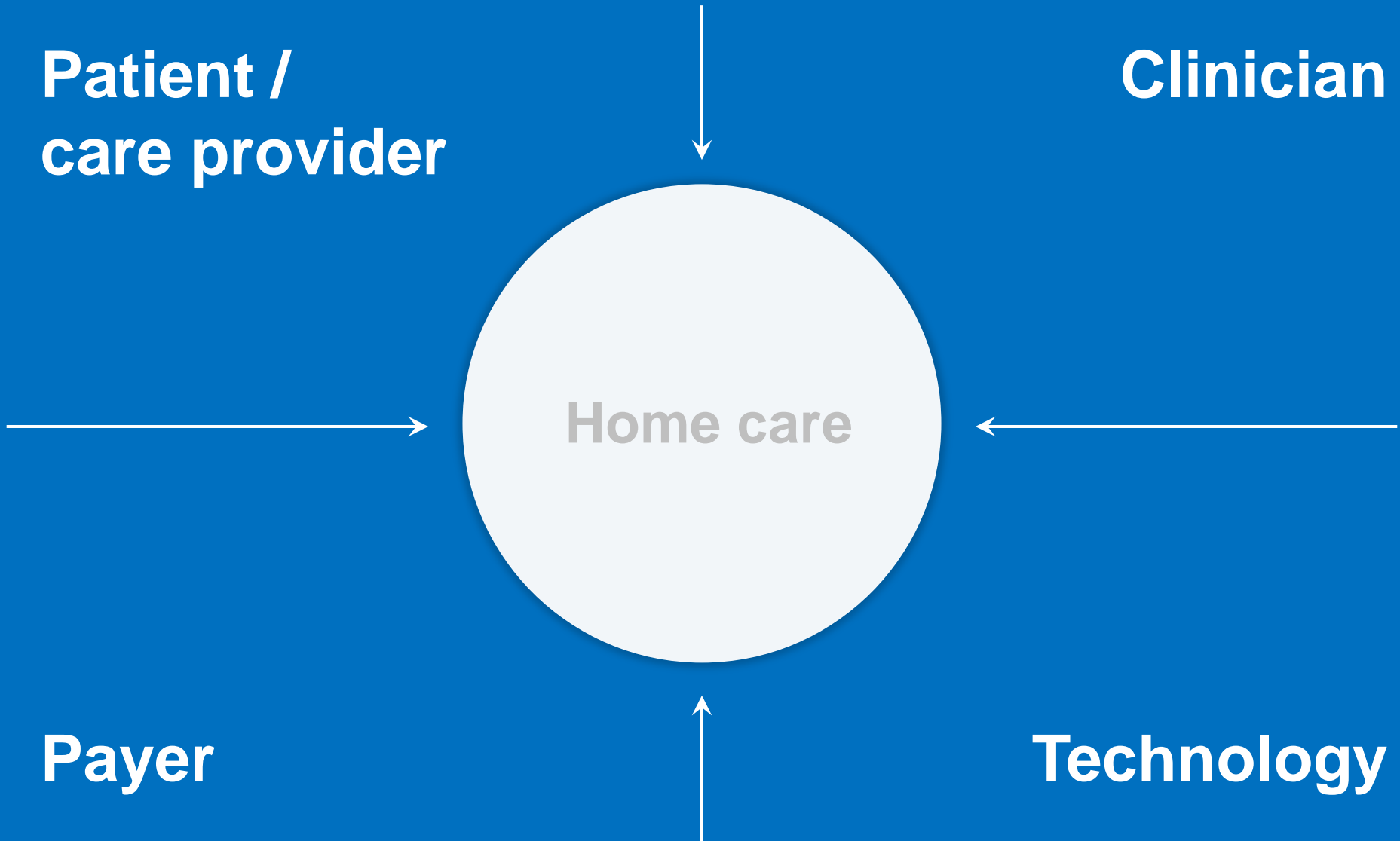
- enables intervention with growth factors

### Depth of fall in WBC:

- if too low – enables intervention with IV antibiotics – **avoid infection and hospitalisation (10-20 day length of stay)**
- if too shallow - surrogate indication of whether chemotherapy having an effect.

# Drivers impacting uptake of 'disruptive' technology

Example: RPM with Cancer



# Drivers impacting uptake of 'disruptive' technology

Example: RPM in home healthcare

Clinician

## Patient / care provider

- Is the patient motivated to test at home?
- Is the patient capable of carrying out the test?
- Will the patient understand the testing and monitoring regime?
- Does testing fit in with the patient's life style?
- Can issues seen with home vital signs monitoring be minimised?
- Is bi-directional connectivity to clinician (plus interpretation) an issue?

Payer

Technology

# Drivers impacting uptake of 'disruptive' technology

Example: RPM in home healthcare

Patient /  
care provider



- Does RPM at home address clinician's needs?
- Does RPM free up clinician's resources?
- Does clinician believe RPM results as reported by the patient?
- Is the RPM assay clinically accepted in the medical community?
- Does the clinician want to see all the data or just exceptions reports?
- Is the clinician able to provide feedback to their patients?

**Clinician**

Payer

Technology

# Drivers impacting uptake of 'disruptive' technology

Example: Point-of-care-testing in home healthcare

Patient /

Clinician

- Is the RPM biomarker assay recognised?
- Does the Hospital laboratory endorse it?
- Will the testing be reliable & reproducible?
- What QC is involved?
- What feedback does the patient get that testing is OK?
- Connectivity: Mobile or home-based?
- What training is required / ease of use / “plug & play”?
- What fail safe / error codes?
- Portability & durability?

**Technology**

Payer

## Drivers impacting uptake of 'disruptive' technology

Example: RPM in home healthcare

Patient /

Clinician

- Who pays for new care pathway?
- Has the use of home testing been proven clinically & at what cost?
- What are the outcomes: benefits to payer and patient?
- Will it reduce “my” costs and/or improve patients quality of life?
- What is my investment cost payback time:
  - Patients changing insurers < 3 years in USA
    - No payback if > 2 years
  - Benefit now or in next budget year?

Payer

Technology



# Case study: RPM with patients on chemotherapy

Have shown:

- Patients can reliably use in the home
- Clinicians endorse approach
- Technology works – Laboratory support
- Cost effective

But.....

- Still need to find who pays & how (budget)
- How implemented (who owns process in NHS?)

