

# Predicting Demand

What?

Why?

How?

When?

Thoughts presented today reflect input from members of the Bite size project, and I am grateful to them for their contribution. However, this will be primarily my interpretation of the issues as we unfortunately did not progress the electronic discussion as fully as we might have

As I suspected specific practical solutions on how to predict demand were not easily identifiable or readily available. The focus will therefore be on a consideration of the principles involved.

I shall be deliberately posing more questions than answers

The starting point for the debate was 2 broad questions:

Are you aware of any major developments planned in the next 12 months or 5 years?

If so can you suggest any tools or data needed to allow a rational prediction of impact on blood use?

## Definition

- **Responsive reaction**
  - **Assessment**
  - **Feedback**
  - **Flexibility**
  - **Reliability**
  - **Deliverability**
  - **Efficiency**

**stock management**

The responses to my initial questions indicated a need to clarify the meaning of predicting demand

It appears there is an inclination, and I seem to remember it also as part of the workshops last year, to merge or confuse predicting demand with stock management. Judith's classic rendition of the Tesco banana story seems to me to represent an expert approach to the latter and illustrates what can be achieved through standardisation of approach, immediate feedback on use (stock levels) and a linked coordinated centralised distribution organisation. This is what I would term responsive reaction and is dependent on a range of factors, all of which need to be in place to support effective stock management.

You have to have a mechanism for identifying what you have and where it is (assessment) and that information must be able to get back to the organisation in an appropriate time frame to be of any use (feedback)

The system must then have the ability to react, and to be effective it must have these additional characteristics

This is Stock Management

## Definition

- **Prospective assessment**
  - Geographical
  - Temporal
  - Technological
  - Developmental
  - Incidental
  - Commercial

**predicting demand**

The issue of predicting demand is somewhat different, and includes the assessment, which stock management systems contribute to, but is more importantly about trying to look into the future – prospective speculation if you like!

So what factors might be relevant for our crystal ball performance?

Do we want to do it on a local, regional, national or even international level?

Are we looking to predict on an hourly, daily, weekly or annual basis

What are the technological restrictions that influence the planning process, such as the shelf life of blood components, the logistics of collection?

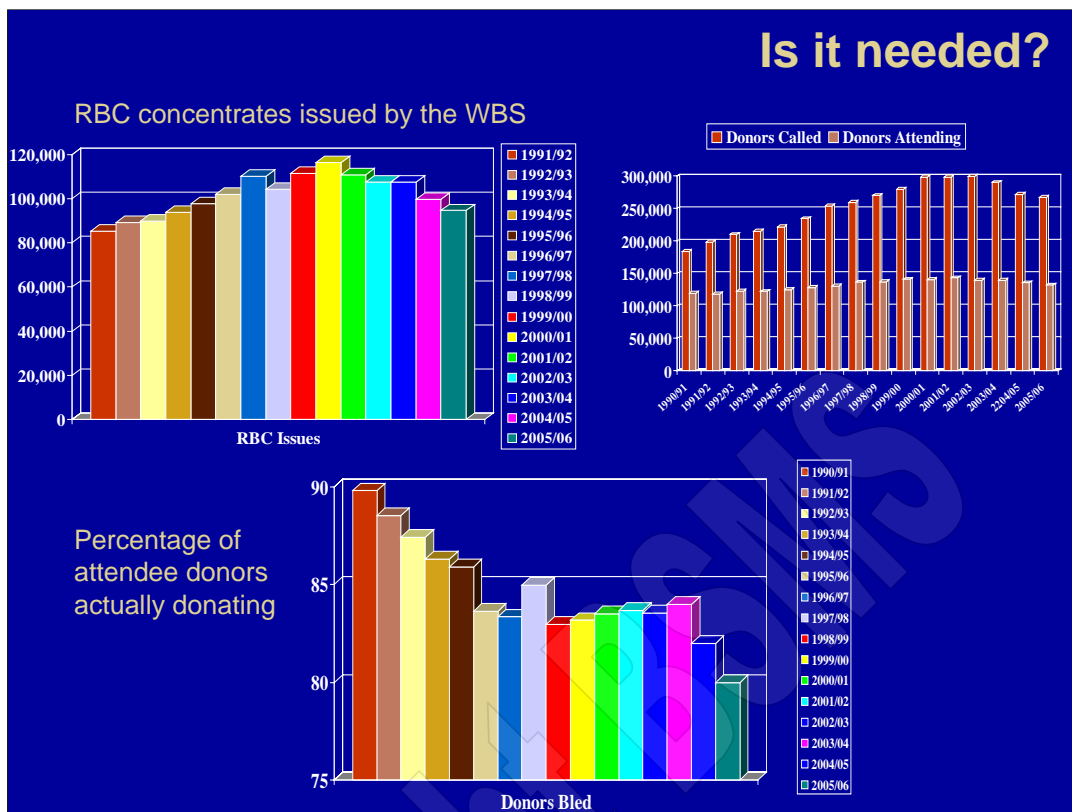
would this make planning on a monthly basis appropriate?

Ideally we would want to know what was on the horizon from the clinical perspective, and how it could impact on a need for blood and components. We would also have to consider those things we cannot plan for, the emergencies/disasters

And whatever the supposed future might hold, this can always be overturned, derailed or redirected as a consequence of commercial pressures.

So do we need to worry about trying to predict demand might?

Would we be better off concentrating on the stock management end, developing the technology to allow us to do this much better and in a more responsive way?



Demand appears to be falling

Cumulative data from Wales for the last 15 years shows we are issuing less

And we know that our donor base remains pretty static so we should be able to continue to meet demand without any trouble, shouldn't we?

However, data also shows that the numbers of donors who actually get bled when they do attend has dropped from nearly 90% 15 years ago to only 80% for 2005. It is likely this level will fall further with increasing donor deferral criteria, and so we may well need to have a more prospective targeted approach to donors that is much more dependent on accurate predictions of demand than the current reactive system.

## Tools

- **Denominator data**
  - National initiatives
  - Technological advances
- **Historical data**
  - Trend setting
  - External influences
- **Monitoring data**
  - BSMS
- **Comissioning data**

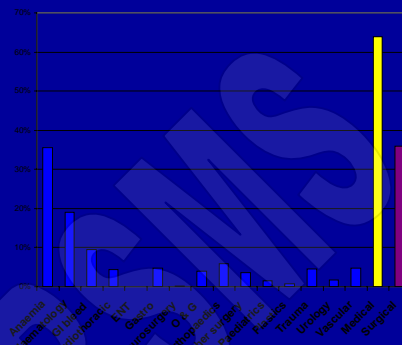


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# Limitations

- Denominator data
  - Where does blood go ?
  - STEP/WEPT
- Terms of reference
  - Geographical
  - Temporal
- Commissioning
  - Local or regional, not national
- Economics /politics
  - Planning open to change
- Incidental

Where does Blood Go  
Welsh Data 2004



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## Should we ? Can we? If so, How?

- **Local level**
  - Yes, yes, ?
- **Regional level**
  - Yes, ?, ?
- **National level**
  - ?, ?, ?

