



## City Research Online

### City, University of London Institutional Repository

---

**Citation:** Williams, S. J. & Radnor, Z. (2018). Using bandwidths to visualize and improve patient pathways. *Public Money & Management*, 38(1), pp. 21-28. doi: 10.1080/09540962.2018.1389495

This is the supplemental version of the paper.

This version of the publication may differ from the final published version.

---

**Permanent repository link:** <https://openaccess.city.ac.uk/id/eprint/20693/>

**Link to published version:** <https://doi.org/10.1080/09540962.2018.1389495>

**Copyright:** City Research Online aims to make research outputs of City, University of London available to a wider audience. Copyright and Moral Rights remain with the author(s) and/or copyright holders. URLs from City Research Online may be freely distributed and linked to.

**Reuse:** Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

---

---



**FIGURE 1.**

**Use of Hooke's Law for the concept of Bandwidths thinking**

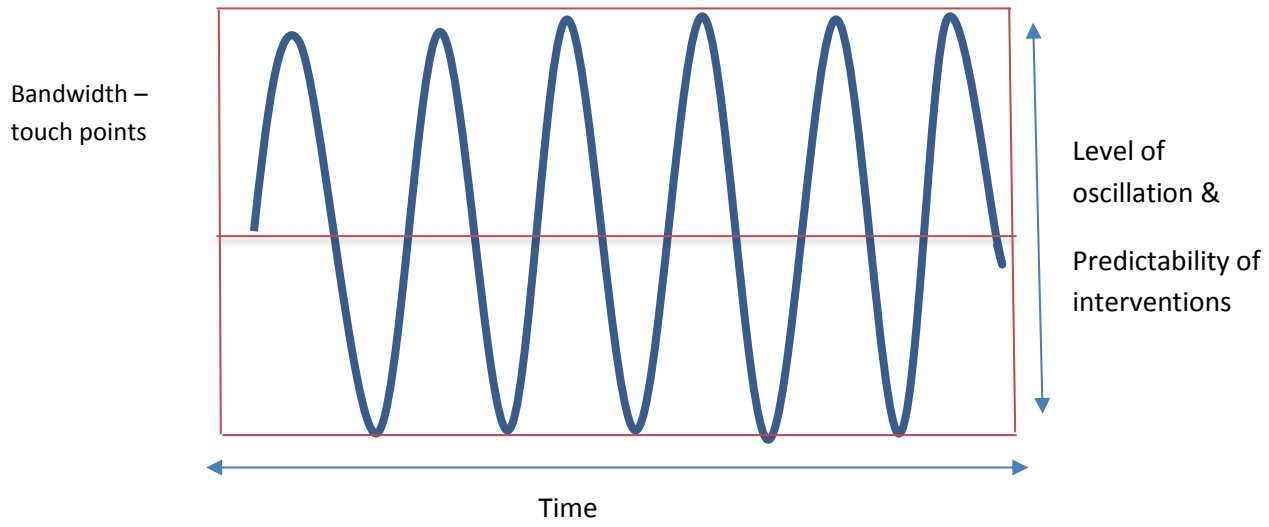
The greater the strain put on the spring the tighter the coils



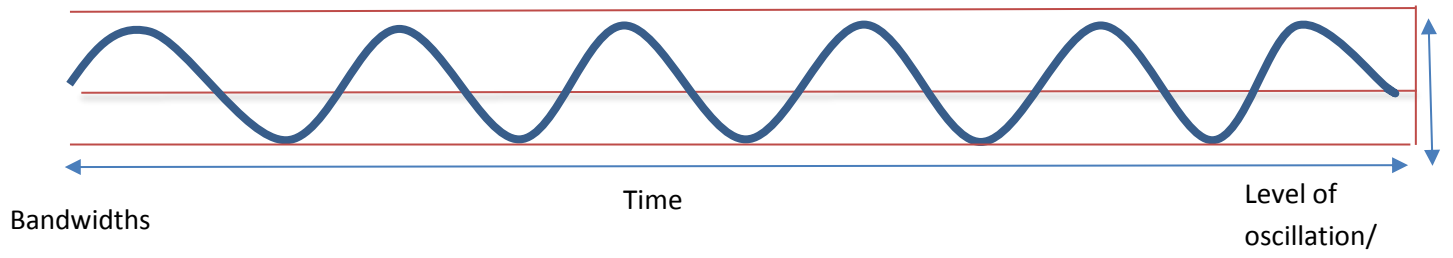
For bandwidths and oscillations the spring is turned on its side



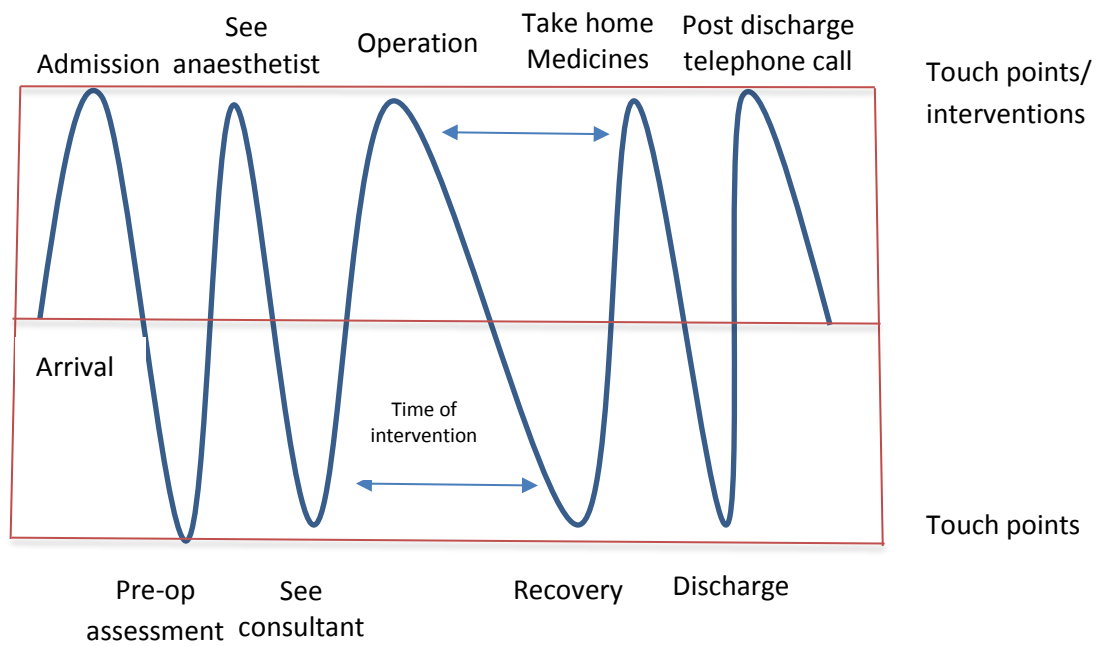
**FIGURE 2. An example of a highly standardised and stable pathway**



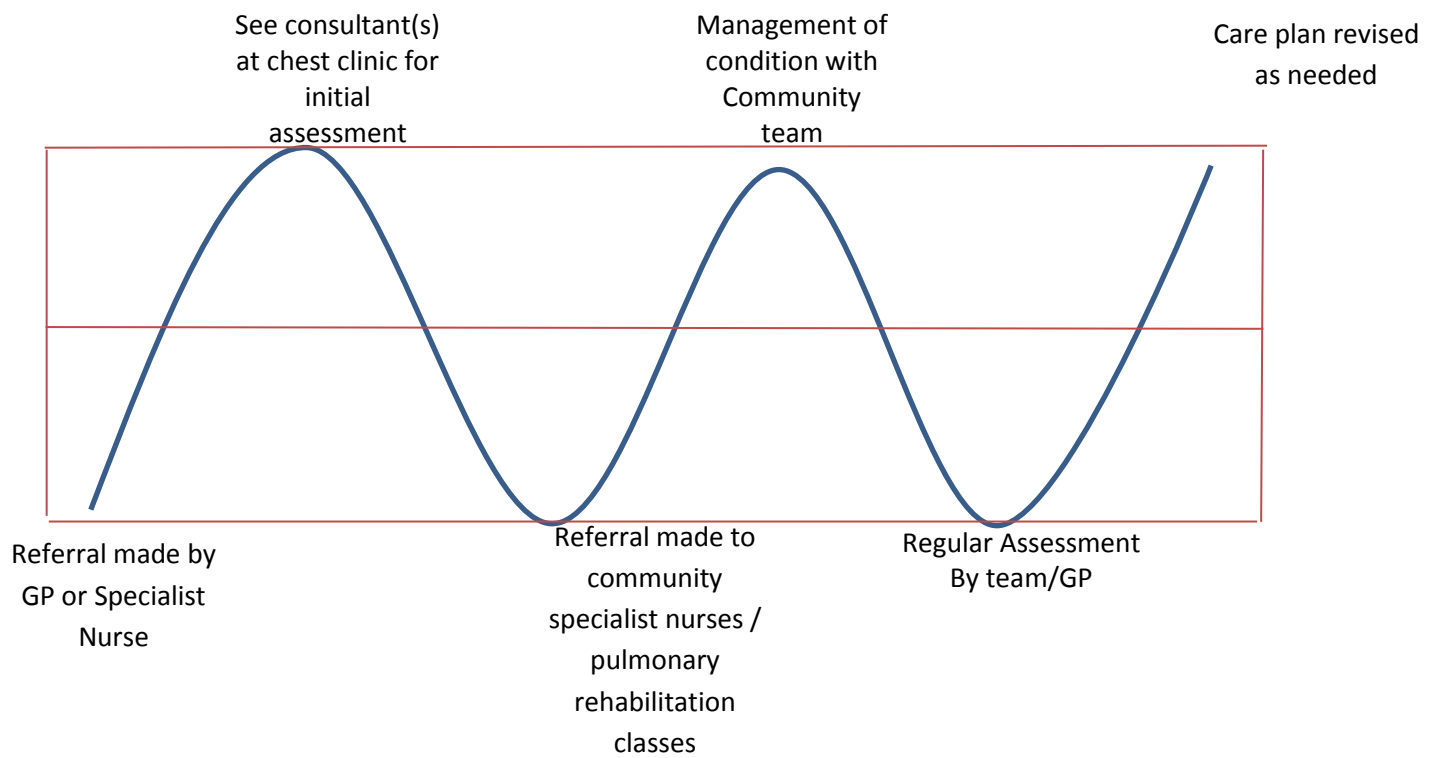
**FIGURE 3. An example of a pathway with less standardisation and certainty**



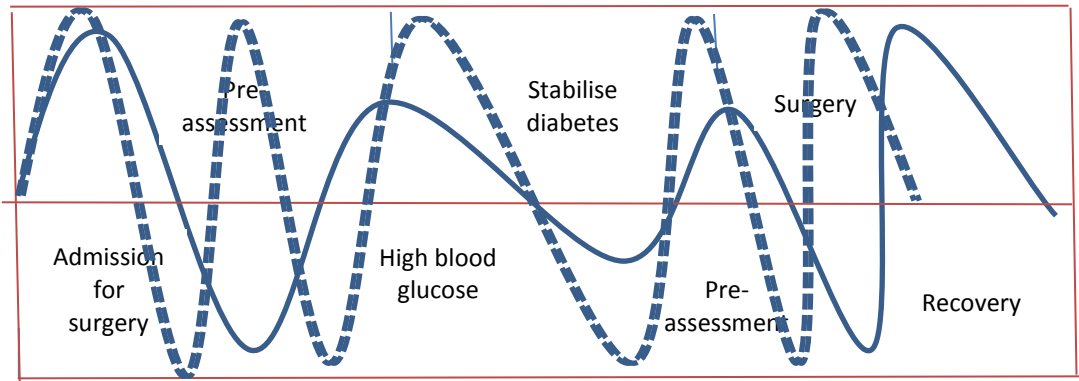
**FIGURE 4. Expected Bandwidth for Elective day-case surgery patient**



**FIGURE 5. Typical bandwidth for management of COPD**



**FIGURE 6. Bandwidth illustrating unexpected delays and interventions due to a patient crossing pathways**



Key: — Example of bandwidth map for combined pathway for patient having day surgery with a long-term condition (Diabetes)  
- - - Example of bandwidth map for expected pathway for patient having day surgery